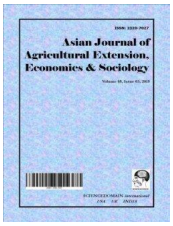

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Effects of Community Participation on the Sustainability of Rural Infrastructure in Ondo State, Nigeria

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Authors' contributions

This work was carried out in collaboration between both authors. Author IEA designed the study, the methodology and wrote the first draft of the manuscript. Author JOO affirmed the methodology and corrected the first draft of the manuscript. Author IEA did the data analysis and wrote the final draft of the manuscript. Author JOO corrected and certified the final draft of the manuscript. Both authors read and approved the final manuscript.

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ABSTRACT

In Nigeria, project sustainability has always been a serious issue. The evolvement of participatory approach to community development in the country is expected to improve infrastructural development and sustainability of the facilities. The study was carried out to examine the effects of rural households' participation on the sustainability of rural infrastructural development in Ondo State. A structured interview schedule was used to elicit information from 144 respondents randomly selected from 12 communities that benefitted from IFAD/ Niger Delta Development Commission Community-based project. The results were analysed using frequency counts, percentages, likert scale and Pearson Product Moment Correlation. The study revealed that majority of the respondents were adequately informed and participated in the implementation of

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projects carried out by IFAD/ NDDC in their various communities. Rural households contributed to the projects through the payment of counterpart funds, replacement of damaged project parts, provision of labour, security at project site by community police group called vigilante groups, thus protecting the properties, fencing of projects, and attending regular meetings to review project performance and problems. The effects of community participation in the project include – increased sense of belonging and ownership of infrastructure; sustainability of projects and increased level of commitment to communal work. From the study, age, status and gender has no significant relationship to participation in the Community Development based Projects. It is important that community involvement and participation in the design, planning, implementation and monitoring of community project should be encouraged in community projects to ensure its sustainability.

Keywords: Participation; sustainability; household; community-driven development.

1. INTRODUCTION

The cornerstone of community-based development initiatives is the active involvement of a defined community in all aspects of project design and implementation. Community participation involves a proactive process in which the beneficiaries influenced the development and management of development projects, rather than receiving a share benefit [1,2]. Community participation creates an enabling environment for sustainability by allowing users to select the level of services for which they are willing to pay, to guide key investment and management decision and commit resources in support of these choices [3]. When beneficiaries also make decisions, participation becomes a self-initiated action, which is known as the exercise of voice and choice or empowerment [4].

Participation is expected to result in better design and execution of projects, better targeted benefits, more cost effective and timely delivery of projects inputs and more equitably distributed project benefits. Community Driven Development (CDD) approach contributes to building the capacity of rural communities to articulate their needs and to support a clearer and more constructive dialogue between the various actors, thus explicitly targeting improved local governance. According to [5,6], CDD approach builds a long-term strategy for poverty reduction through infrastructural provisions. This provides the template for livelihood activities and changing the culture of dependency with quick technical fixes of community projects.

Community-based development projects are designed to open up, develop or enhance the growth of beneficiary communities. It relies on communities to use their social capital to organize themselves and participate in development processes. Thus, concepts such as participation, community, and social capital are critical to how community participation is conceptualized and implemented.

In the past a lot of development projects have been carried out by past governments in Nigeria but, it has not produced significant changes in the livelihood of the people [7]. Some of the projects were abandoned while some of those completed are in deplorable state because they were not utilized by the end users or not maintained. The reason for these could be attributed to supply driven approach where the stakeholders were not involved in the need analysis, selection of the projects, implementation, monitoring. The consequence is that most of the projects are not sustainable because there was no sense of ownership. It is therefore important that there should be a paradigm shift from approaches that has not alleviated poverty among the people. In recent time the International Fund for Agricultural Development (IFAD)/Niger Delta Development Commission/Federal Government of Nigeria embarked on implementation of some projects in Ondo state using the Community Driven Development approach. Some of the projects have been completed and in use while others are at completion stage. In view of the above, the study was carried out to study the effects of community participation on the sustainability of rural infrastructure in Ondo State, Nigeria.

As a result, the following questions were addressed; What are the projects being carried out by IFAD/Niger Delta Development Commission in the rural areas of the state?, to what extent are the rural households involved in the need analysis, project selection, planning, execution, monitoring and evaluation of the

community-based projects? What are the factors influencing effective participation of rural households in Community-Based projects in the state?

1.1 Objectives of the Study

The broad objective of the study was to examine the effects of community participation in the sustainability of rural infrastructure in Ondo State.

The specific objectives of the study were to:

1. Examine the level of participation of rural households in the design, planning, execution and implementation of the projects.
2. Determine the extent of rural households' contributions to community development projects
3. Examine the effect of household participation on the projects' sustainability in the study area
4. Identify the factors affecting participation of respondents in the selected Community-based development projects.

2. METHODOLOGY

A multi-stage sampling technique was utilized in the study. There are 18 Local Government Areas (LGAs) in Ondo State, Nigeria. The first stage involves the selection of nine (9) out of Eighteen (18) LGAs in the state that benefitted from IFAD/ Niger Delta Development Commission Community-Based projects. The second stage involves random selection of four LGAs out of the nine benefiting LGAs for the study. These are Odigbo, Ondo East, Idanre and Okitipupa LGAs. From reports only three communities from each LGA benefitted from IFAD/Niger Delta Development projects, hence all the three communities were purposively selected making a total of twelve communities. The communities are: Odigbo LGA- *Kajola Ojurin, Igbinsin Oloto and Oloruntedo communities* Ondo East LGA -*Kolawole, Asontan and Orisunbare communities* Idanre LGA - *Abalaka, Oniyewu and Egbeda Idanre communities* and Okitipupa LGA -*Lipere Okoligha, Araromi Ayeke and Ebijagun communities.* The fourth stage involves random selection of twelve respondents from each community, thus making a total sample size of one hundred and forty four (144) respondents.

Both primary and secondary data were utilized in the study. The primary data was obtained with the aid of pre-tested and validated interview schedule. A test-retest method was also used to ascertain the reliability of the instrument. Focus Group Discussion was also carried out to further obtain information from the respondents. The secondary data were obtained from Journals, text books, reports, mimeographs, internet and other relevant published sources. Descriptive statistics such as frequency counts, percentages, means, and chi square analysis was carried out.

3. RESULTS AND DISCUSSION

3.1 Personal Characteristics of Respondents

Table 1 shows the age distribution of the respondents. About 8.3% of the respondents were below 20 years of age, 39.6% were within 20-40 years of age, 31.3% were within 41-60 years of age while 20.8% were above 60 years of age. It could be inferred that majority of the respondents are still young and at their productive age hence they could participate effectively in community-based development projects if given the opportunity. Findings show that majority of the respondents (61.8%) were male while 38.2% were female, this could increase the level of involvement of the community members because most of the male members household heads may have influence on participation of their members in the community projects.

Table 1 revealed that 84.7% of the respondents were married, 7.6% were single, and 4.9% were widowed while 2.8% were divorced. The implication of this is that most of the respondents are married and can influence the household size and number of those participating in community development projects. The study shows further that 18.8% of the respondents had primary education, 41% had secondary education while 27.1% had tertiary education. However, 13.2 percent of the respondents have no formal education. It could be deduced that a greater percentage (68.1%) of the respondents pass through basic and advanced education {Secondary and Tertiary} at different levels hence are expected to be experienced and have proper understanding of communal efforts. According to [8] educational levels are highly significant in the extent, intensity and pattern of participation.

Table 1. Distribution of respondents according to personal characteristics

Variable	Frequency	Percentage
Age		
< 20	12	8.3
20 – 40	57	39.6
41- 60	45	31.3
> 60	30	20.8
Gender		
Male	89	61.8
Female	55	38.2
Marital status		
Single	11	7.6
Married	122	84.7
Divorced	4	2.8
Widowed	7	4.9
Educational qualification		
Tertiary education	39	27.1
Secondary education	59	41
Primary education	27	18.8
No formal education	19	13.2

Source Field Survey, 2009 HI=Highly Involved, I=Involved, U=Undecided, NI=Not Involved

3.2 Level of Involvement in Project Implementation

The level of participation of the respondents through the construction of market stalls, construction of drainage system to control erosion and environmental degradation; and provision of cassava processing machine shows a high level of significance. The implication is that the cassava processing will provide room for the marketability of cassava where the market stalls will serve as a marketing platform for the produce and the drainage facility provided will reduce environmental degradation. Table 2 shows the depth of respondents' involvement in project implementation. Construction of bridges (x=2.57), skill acquisition projects (x=2.64), construction of classroom blocks (x=2.85) and provision of boreholes and accessories (x=2.03) respectively were not significant. From Table 2, the respondents were highly involved in the construction of town hall, maternity centre, classroom blocks, and construction of drainages for erosion control and establishment of Oil Palm Processing mill. However the mean score for construction of drainage system to control erosion (x=3.38), market stall (x=3.15), foot bridges (x=3.04), rehabilitation of boreholes (x=3.40) and renovation of classroom (x=3.41) were the highest. The reason for the above could be attributed to the fact that they were the felt needs of the communities and members contributed counterpart funds and in some instances provided the required labour and materials utilized for the projects. The mean results of the respondents' depth of involvement shows that the respondents were not involved as such, in the provision of borehole and accessories. This might be due to technicalities required for construction of borehole, it is an area that requires an expert to carry out moreoverr drilling machine will be required which is not within the ambit of the local people. The provision of boreholes and accessories are direct functions of the IFAD/NDDC projects scheme experts but the community members work with the experts to have the project accomplished. The communities were only required to identify the project, provide counterpart fund, work with the experts, monitor the project but not to be directly involved in construction of boreholes hence, the low level of involvement of rural communities in its implementation.

3.3 Contribution of Rural Households to Ensure Sustainability of CBDP

The participation of rural households in CDD is reflected in their contribution towards the various projects. Table 3 revealed that about eighty two percent of the respondents contributed to CDBP projects through regular attendance of meetings where decisions on issues like community needs assessment, project priority setting, Community Development Plans, implementation strategies and sustainability plans were formulated and decided. Participation in the decision making meetings by the beneficiaries provide the

opportunity for the beneficiaries to be carried along, get their input, their commitment and build the spirit of ownership in them. From the result in the Table 3, majority of the respondents (71.5%) contribute to the payment of counterpart fund which implies commitment to the project and desire to get out of poverty. About 79.9% were involved in labour work that is contributing their services to on-going activities most especially in the area of construction like markets, buildings, bridges e.t.c. About 80.6% contributed to user charges which had been agreed upon and fixed at the community meetings for the maintenance and sustainability of the projects. Involvement of community members in the aforementioned areas promoted sense of ownership among the stakeholders and it has become a strong factor in sustainability of the projects as they are most willing to ensure that projects are adequately maintained. The result supports the assertion of [9,10,11] that participation in community development projects leads to ownership and sustainability.

3.4 Factors Affecting Respondents Participation in the Project

Despite the benefits of the project there were some factors that limited the participation of members of the community and sustainability. The participation of the respondents in the community based natural resources management was affected by some factors (Table 4). About 49.3% of the respondents disagreed that educational level of respondents affected their participation, 39.6% strongly disagreed, 4.2% agreed with the statement and only 1.4% were in strong agreement with the statement. This implies that, the educational background of most of the respondent is not a barrier to their participation in the CBDP. This could be because the project is socially inclusive in line with the principles of CDD and both respondents with formal and non-formal education are beneficiaries of the project. From the study, 44.4% of the respondents strongly disagreed that age affect their participation in the project, 37.5% also disagree while 7.6% strongly agreed and disagreed respectively. The implication of this is that both the young and the old can effectively participate in the project and work towards the sustainability of the projects.

The statement that 'CBDP project is meant for the wealthy people' is inappropriate among the respondents. About 47.2% of the respondents strongly disagree with the statement, 47.2% disagree while 5.6% were undecided From this result, it is clear that the economic status of the respondents does not affect their participation since a larger percentage of the respondent disagreed with the fact that CBDP project is meant for the wealthy. Participation of the respondents through payment of counterpart fund which was contributed by all in the community and not limited to the wealthy alone could have been responsible for the response of the beneficiaries and this is a strong factor for ownership and sustainability.

The effects of gender differences on respondent's involvement in CBDP project were also studied. It was found that gender has little or no effect on respondent's participation. About 50% of the respondents disagreed and 45.1% strongly disagreed with the statement that CBDP project is meant for the male sex instead of female sex only. The respondents also asserted that there was no gender bias in implementation of the micro- projects. About 60% strongly agreed and 73% agreed that there was no gender bias during implementation. This is because the women, men and youths participate fully in all aspect of implementation like volunteer and labour work. Table 4 indicated that there was no gender discrimination in monitoring and evaluation of the project. This is because 54.2% strongly disagreed and 43.1% disagreed with the statement that there was gender discrimination in monitoring and evaluation of the micro projects. The result support (8), that in most Community and Social Development Projects in Kwara, Oyo and Osun states Nigeria, there was gender equality in monitoring and evaluation of the micro projects in the states and this enhanced compliance with project design and quality of work done. One of the reasons why past projects failed in Nigeria could be attributed to the fact that most of the projects are selectively located based on relationship with the project management team. However, it was found out in the study that majority of the respondents (53.5%) disagreed that their communities participated in the projects because of their relationship with the management of IFAD/NDDC. During the Focus Group Discussion (FGD) members of the communities asserted that the project team visited their communities mobilised and sensitised them, while 45.1% strongly disagree and 0.7% were undecided. The results confirm the statement that 'all persons are actively welcomed, regardless of colour, age, race, prior community involvement, level of education, occupation, personal reputation, handicap, religion, or any other factor'.

Table 2. Level of involvement in projects' implementation

Project type	DIF(%)	IF(%)	UF(%)	SIF(%)	NIF(%)	Total F(%)	Mean F(%)
Repair of footbridges	46(31.94)	42(29.17)	23(15.97)	8(5.56)	25(17.36)	508	3.53
Construction of maternity centre	55(38.19)	24(16.67)	24(16.67)	11(7.64)	30(20.83)	495	3.44
Construction of mini- town hall	53(36.81)	26(18.06)	24(16.67)	11(7.64)	30(20.84)	493	3.42
Construction of mini- town hall	53(36.81)	26(18.06)	24(16.67)	11(7.64)	30(20.84)	493	3.42
Provision of cassava processing machine	45(31.25)	30(20.83)	35(24.31)	8(5.56)	26(18.06)	492	3.42
Renovation of classroom buildings	49(34.03)	27(18.75)	31(21.53)	8(5.56)	29(20.14)	491	3.41
Rehabilitation of boreholes	44(30.56)	32(22.22)	31(21.53)	11(7.64)	26(18.06)	489	3.40
Provision of palm oil mill processor	57(39.58)	19(13.19)	21(14.58)	18(12.50)	29(20.14)	489	3.40
Erosion control	55(38.19)	21(14.58)	24(16.67)	11(7.64)	33(22.92)	486	3.38
Distribution of improved varieties of cassava cuttings	56(38.89)	20(13.89)	21(14.58)	14(9.72)	33(22.92)	484	3.36
Construction of drainage system	46(31.94)	25(17.36)	29(20.14)	20(13.89)	24(16.67)	481	3.34
Construction of market stalls	49(34.03)	17(11.81)	21(14.58)	20(13.89)	37(25.69)	449	3.15
Construction of footbridges	33(22.92)	29(20.14)	29(20.14)	17(11.81)	36(25)	438	3.04
Construction of classroom blocks	48(33.33)	13(9.03)	11(7.64)	14(9.72)	58(40.28)	411	2.85
Skill acquisition projects	44(30.56)	07(4.86)	07(4.86)	25(17.36)	61(42.36)	380	2.64
Construction of bridges	26(18.06)	19(13.19)	15(10.42)	35(24.31)	49(34.03)	370	2.57
Provision of boreholes & accessories	25(17.36)	04(2.78)	08(5.56)	21(14.58)	86(59.72)	293	2.03

**Source Field Survey, 2009 HI=Highly Involved, I=Involved, U=Undecided, NI=Not Involved*

Table 3. Contribution of rural households to ensure sustainability of CBDP

Project type	Frequency	Percentage
Participation in decision making meetings	118	81.94
Labour	115	79.9
Provision of security	112	77.8
Provision of fence for projects	92	63.9
vigilante group to monitor projects	50	34.7
Participatory decision making	117	81.3
Project monitoring & evaluation	115	79.9
Contribution of user fees	116	80.6

**Source Field Survey, 2009*

Table 4. Factors affecting respondents participation

Statements	Strongly agree		Agree		Undecided		Strongly disagree		Disagree	
	Freq	%	Freq	%	freq	%	freq	%	freq	%
Level of participation in CBDP is affected by age	11	7.6	11	7.6	4	2.8	54	37.5	64	44.4
Participation in CBDP is determined by level of education	2	1.4	6	4.2	8	5.6	57	39.6	71	49.3
CBDP project is meant for the wealthy people	0	0	0	0	8	5.6	68	47.2	68	47.2
The CBDP is meant for the male sex only.	3	2.1	2	1.4	2	1.4	65	45.1	72	50
CBDP implementation is not gender biased in any aspects	73	50.7	62	43.1	7	4.9	0	0.0	2	1.4
CBDP project is gender biased in Monitoring and evaluation	0	0	1	0.7	3	2.1	62	43.1	78	54.2
Respondent do not understand teaching language	0	0	0	0	2	1.4	60	41.7	82	56.9
The communities were selected based on relationship with project coordinators	1	0.7	0	0	1	0.7	65	45.1	77	53.5

**Source Field Survey*

Table 5. Chi Square analysis between the socio-economic characteristics of the respondents and their participation in community based development projects

Variable	X^2 Cal	X^2 Tab	df	Decision
Age	18.1	12.1	3	S
Marital status	0.3	2.8	3	N.S
Sex	0.7	4.6	1	N.S
Income	0.2	1.7	3	NS
Educational status	13.1	8.9	3	S
Occupation	0.3	2.1	4	NS
Head of household	0.7	4.6	1	NS
Family size	13.4	9.5	4	S
Status in the community	5.23	2.5	5	S

3.5 Influence of Socio–economic Characteristic on Respondents Participation in Community Development Projects

Result of Chi Square analysis in Table 5 above revealed that age ($_X^2$=18.8), educational status (x^2=13.03), family size (x^2 =13.4) and the status (x^2=5.23) of respondents in the community influenced their level of participation in the community development projects. This was attributed to the fact that the youths and the educated respondents having realized the benefits of the projects were zealous and showed high level of commitment to the project. The result confirmed (3) and (6) assertion that education and age are strong factors that influence participation in community development projects.

4. CONCLUSION

The study revealed the advantages of creating an enabling environment for the community members to actively participate at all levels of project development thereby achieving sustainable community-based development in rural communities in Nigeria. From the study it was affirmed that gender inclusiveness was a very important factor that enhanced participation of the stakeholders in the projects as both male and female were involved in all the process from project identification to implementation, monitoring and evaluation.

The households contributed counterpart fund, provided labour during construction work and also form themselves into groups to protect the facilities as revealed in the study. The result of the study has shown that youth between 20-40 years were the most active group that participated in the project through effective participation in decision making and manpower during project implementation.

More rural dwellers should be involved in planning and implementation of community development projects by governments, non-governmental organizations and donor agencies to enhance sustainability of projects. Counterpart contribution of the host community must be a condition before the community can enjoy any government or NGO supports, this will create a platform for community ownership and sustainability measures.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Adejo O. Participatory rural appraisal: Tools, techniques, types and applications. A paper presented at Community Social and Development Programme (CSDP) FCT, Abuja, workshop on Participatory Rural Appraisal Techniques. 2014;2.
2. Paul B. Community participation in development projects. World Bank Discussion Paper No. 6. Washington DC: World Bank; 1987.
3. Sara J, Katz T. Making rural water supply sustainable: Reports on the impact of project rules. Washington, DC: UNDP/World Bank Water and Sanitation for Health Program; 1998.
4. Ghazala M, Vijayendra R. (2004): Community based and driven development: A critical review, the World Bank Research Observer. Available:Http://www.wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2004/07/19/000012009_20040719154730/Rendered/INDEX/29662.txt
5. Okunlola JO. Concepts and principles of community driven development approach, a paper presented at the conference on participating budgeting for community development. 2012;2-4.
6. Okunlola JO, Mafimisebi TE. Sociology of use of medicinal plants and plant medicines for sustainable agricultural developments in Nigeria in Miracles of Ethno-Botany; Socio-Economic Aspects *eds*. Hosamai P.A and Sandeepkumar K. Published by Bio Science Prakashan, Karnataka, India. 2013;14-140.
7. Antonio GF. The European Response to the Challenges of Water and Sanitation in Developing Countries. In TRIBUNE, the Document of European Commission; 2005.
   Available:http://www.brgm.fr/dcenews
8. Epebinu OO. The Effect of Niger Delta Development Commission on Rural Community in Ilaje Local Government Area of Ondo State. M. Tech. Thesis, Department of Agric Economics and

Extension, Federal University of Technology, Akure, Ondo State; 2012.

9. Fitamo M. Community based organizations (CBO) and development in Ethiopia. M.A Thesis. University of Cape Town, Cape Town, South Africa; 2003.
10. Reid JN. How People Power Brings Sustainable Benefits to Communities, USDA Rural Development, Office of Community Development. 2010;2.
11. Okunlola JO. Social protection management in community social and development programme a paper presented at community social and development programme (CSDP) FCT, Abuja, workshop on Participatory Rural Appraisal Techniques. 2014;4.

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