



## **Assessment of Rural Infrastructural Development Projects in Ondo State: Case Study of Ondo State Community and Social Development Agency**

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### **Authors' contributions**

*This work was carried out in collaboration between both authors. Author BOA designed the study, wrote the protocol and wrote the first draft of the manuscript. Author BOA reviewed the experimental design and all drafts of the manuscript. Authors BOA and MOA managed the analyses of the study. Authors BOA and MOA performed the statistical analysis. Both authors read and approved the final manuscript.*

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### **ABSTRACT**

This study was conducted to assess the impact of rural infrastructural projects in Ondo State using the bottom-up approach (Community Drive Development) through the Ondo State Community and Social Development Agency (ODCSDA). A multi-stage sampling technique was used. In the three(3) senatorial districts that constitute Ondo State, six (6) local government areas (LGAs) were randomly selected from existing eighteen (18) LGAs on the basis of two (2) LGAs from each of the senatorial district, and six (6) Communities were purposively selected from each of the selected LGAs based on the presence of fully completed and functional projects. Ten (10) respondents were randomly selected in each of the communities making a total sample size of sixty (60) respondents. A likert scale perception tool was used to investigate respondents' level of project identification, project planning and implementation, socio-economic impacts of projects and its sustainability. Descriptive

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statistic, Pearson correlation and Relative Importance Index (RII) were used for analysis. Results showed that more than eighty percent (80%) of the respondents were fully involved in project identification, planning and implementation in their respective communities. Level of community contribution and participation project identification, planning and implementation, location of project, standard of project implemented were found to have positively affected their perception of project sustainability. Study also showed that community participation and sustainability of infrastructural projects were significantly related.

*Keywords: Community; projects; infrastructure; participations.*

## 1. INTRODUCTION

The traditional way of life of the African people especially in the rural areas is the type in which the population shares a feeling of togetherness. There is a common feeling of solidarity, reciprocity and maximum cooperation between all the social groups that is not commonly observed among the respective urban people. This strength had been drawn upon to improve rural communal development projects. Pooling resources locally for development projects in the communities was common and popular in rural areas of Nigeria [1]. There had been a strong social capital through the various voluntary and social group formed to meet specific needs and interests of the communities. Notable ones are rotational credit scheme for funding farming activities and cooperative farm labor. In this way the communities accumulated financial and human capital within the communities to facilitate development activities. The Community Driven Development Approach was considered a major mechanism for ensuring the mass participation of poor rural dwellers in the poverty reduction and growth promoting development process of the country. In this context, Community and Social Development Project (CSDP) aligns with the World Bank's commitment to poverty reduction, by permitting the rural poor of Nigeria to access improved social infrastructure and natural resources services. The vision of the entire approach is based on five main dimensions which are: Empowering the community, empowering the local government, realigning the centre, improve accountability and transparency building capacity to be able to take hold of their developmental efforts. Poverty had been a major issue in the Sub Saharan African over the years, which had been receiving attention from both national governments and donor agencies. African Development Bank, the World Bank and the United Nations Development Programme launched the social dimensions of adjustment initiatives, with the objective to assist participating countries to integrate poverty

reduction into their structural adjustment programmes and development plans in 1988. Although the programme specifics may vary from one country to another, many share common features and characteristics. Such features include identification of the poor, targeting particular geographical areas where most of the poor are believed to live, advocacy for NGOs and local community participation in project planning and implementation. Other features are specific project selection criteria, some degree of decentralization in decision-making and institutional arrangements with emphasis on quick disbursement of funds in financing small-scale projects intended to address the needs of the poor. For a long time, top-down planning was seen as the way to implement political choices in efforts to improve living standards in Nigeria. However, this had mainly led to the development of infrastructure that failed to match community needs and thus unable to impact on socio-economic well-being of the rural dwellers, largely as result of weak administrative capacity, lack of transparency and accountability in the use of public funds, the disconnect between the decision-makers and beneficiaries and the lack of community-based project planning. It is on this basis that this study set out to assess the recent rural development efforts of Ondo State government, to redress the existing anomalies and fill the gaps created by the lack of consultation between government agencies and rural communities before developmental projects are initiated and implemented. In 2009, the Ondo State government launched a programme called Community and Social Development Project (CSDP). These projects popularly referred to as Ondo State Community and Social Development Projects (ODCSDP) are sited in more than 87 rural communities within the last four years. Such projects include; basic health centres, town halls, modern markets, schools, roads, culverts, bridges, rural electrification, and cottage industries among others. Specifically, the community people decide on the projects to be implemented, actively involved in project

execution and monitoring, and fully take charge after delivery to guarantee its sustainability. The issue of citizen participation is deeply inherent in the very concept of community infrastructural development which emphasizes that whatever is done to improve the welfare of the people must elicit the enthusiasm and wholehearted participation of such people [2]. It is on the basis of this proposition that the following specific research questions and issues were raised for better understanding of the existing situation.

- i. Are the beneficiaries of developmental projects involved in projects identification?
- ii. To what extents are they involved in planning and implementation process?
- iii. What are the socio-economic impacts of the projects on the beneficiaries' in the communities? and
- iv. What perception do they hold regarding the sustainability of the projects?

### 1.1 Objectives of the Study

The general objective of the study is to explore and assess the impact of rural infrastructural development projects in Ondo State through Ondo State Community and Social Development Agency. While the specific objectives are to;

- i. Examine the level of beneficiaries involvement in projects identification;
- ii. Determine the extent of people's involvement and participation in planning and implementation of the projects;
- iii. Assess the socio-economic impact of the project on the beneficiaries' in the communities and;
- iv. Examine the perception of the people's on the sustainability of the projects .

### 1.2 Research Hypothesis

The null hypothesis tested is stated thus;

H<sub>0</sub>: There is no significant relationship between community's participation and sustainability of infrastructural projects;

## 2. METHODOLOGY

Population for this study is made up of project participants (Community Project Management Committee Members) and non-project participants (Community Members) who were stakeholders and beneficiaries of Ondo State Community and Social Development Projects

(ODCSDP) selected from six (6) Local government areas from the three (3) senatorial districts of Ondo State. Six (6) communities are purposively selected from the selected local government areas based on the presence of fully completed and functioning projects and ten (10) respondents (five project participants and five non-project participants) are randomly selected from each of the communities, making a total sample size of sixty (60) respondents. A Semi-structured questionnaire (open and close-ended questions) is developed as the data collection instrument. The primary data that is used in this study are collected through interview with respondents. Both descriptive and inferential statistics are used to analyze data collected from the field. Frequency, percentage, mode and mean are used for the descriptive data.

### 2.1 Relative Importance Index (RII)

This method is usually used to determine the importance of factor relative to others. This method is applied to determine the relative importance of challenges of community participation in infrastructural development and the perception of the community on the sustainability of the projects. The four point scale ranging is adopted and transformed to relative importance indices (RII) for each factor and challenges as follows:

$$RII = \frac{\sum W}{A \times N}$$

W= weighting given to each factor by respondents (1 to 4); A= the highest weight (i.e 4 in this case); and N= total number of respondents. RII value ranges from 0 to 1 (0 not included).The higher the value of RII, the more important the factor.

### 2.2 Simple Linear Correlation Coefficient

Pearson Correlation analysis is used to describe the strength and direction of the linear relationship between two variables. This method is used for analysis and testing of the research hypothesis. Its coefficient is a statistical measure of the strength of a monotonic relationship between these paired data and calculated using:

$$r = \frac{\sum xy - \frac{\sum x \sum y}{n}}{\sqrt{(\sum x^2 - \frac{(\sum x)^2}{n})} \sqrt{(\sum y^2 - \frac{(\sum y)^2}{n})}}$$

### 3. RESULTS AND DISCUSSION

A total number of usable responses received for this analysis were fifty-four (54), representing 90% expected response rate. The age distribution of the respondent, 21 – 30 years and 51 – 60 years age groups were least represented with 14.8% each, of the entire population. The other age categories were uniformly distributed across the sampled respondents with percentage ranging between 22.2% and 24.1%. This implies that men and women of active and productive age are still preponderant in the rural area of Ondo State. This could be due to the inherent nature of an average Ondo State person who would prefer to stay back in the rural communities farming than to migrate to the cities searching for menial jobs or non-profitable ventures. Largely 72.2% of the respondents were male and (27.8%) of the respondents were female, this shows that, male generally show more interest in activities that entails community involvement and participation. Majority (over 65%) of the respondents had a minimum of a secondary school education, with tertiary education forming the bulk of the respondents. These results show that rural people in the study area actually valued education and it further shows that the respondents were sufficiently enlightened so as to appreciate the importance of involvement and participation in community project delivery. Also the result conforms to the studies of Fawole et al. [3], Epebinu [4] and Adesida et al. [5] that high literacy level can enhance participation and better understanding of any initiative programme. Majority of the respondents are currently married (61.1%) which confirms the belief that the institution of marriage is still valued in the rural communities than in the urban areas. Over 20% of the respondents have been involved in one marriage or the other, which depicts that these categories of respondents are laden with one or more various marital responsibilities as regarding their families and several people depending on them for survival. They are directly involved with economic and social development challenges confronting the community.

#### 3.1 Level of Beneficiaries' Involvement in Project Identification

When considering whether a project is the most critical need of the community, majority of the respondents are always involved (48.8%) while few (11.1%) of the respondents are often involved once in a while or when the need arises.

Community-based meetings among community members as regards the kind of project to be considered as critical and important for the growth of the community before implementing the project is essential in determining the sustainability of the project and the economic impact of the project. This result supports the assertion of Reid [6] that participation in community development projects leads to ownership and sustainability. Majority (50%) of the respondents are involved in one way or the other in these previous meetings where ideas are shared before implementation. Table 2 shows statistics of the level of beneficiaries' involvement in project identification. The data shows that majority of the respondents (beneficiaries) with mean (3.89) the most in project identification when considering the projects as the critical needs of the communities than other stages of project identification. Beneficiaries' involvement in final ranking of the project for selection also reflects a high level of involvement with mean (3.85). While, previously sharing opinion in the need for the project with community members is ranked least as regards beneficiaries' involvement in terms of project identification with mean (3.46). This can be addressed by encouraging more interaction among community members before project identification and selection as supported by Okunlola [1].

**Table 1. Socio-economic characteristics of respondents**

Characteristics	Frequency	Percentage (%)
<b>Age group</b>		
21-30	8	14.8
31-40	13	24.1
41-50	12	22.1
51-60	8	14.8
Above 60	13	24.1
<b>Sex</b>		
Male	39	72.2
Female	15	27.8
<b>Level of education</b>		
Non- formal	8	14.8
Primary	9	16.7
Secondary	25	16.3
Tertiary	12	22.1
<b>Marital status</b>		
Single	10	18.5
Married	33	61.1
Separated	4	7.4
Divorced	3	5.6
Widow (er)	4	7.4

Source: Field Survey (2015)

### **3.2 Extent of People's Involvement and Participation in Planning and Implementation of Projects**

Host community members were saddled with the responsibilities of taking charge and being in control of the project(s) during the implementation of the project(s) and at the completion of it. 63% of the respondents admitted that they are always involved in this responsibility, while the remaining of 37% was often involved. The Community Project Management Committee Members (CPMC) and Sub-Committee Members were given the responsibility to formulate their Community Development Plan (CDP), to be signatory to project account, sought for service providers, purchase materials/labor, monitor, keep records of all work done and all works relating to the project implementation. A larger percentage of the respondents testified to the fact that they contributed money for the project execution and delivery. Majority (77.8%) of the respondents confirmed that they were actively and always involved in contributing their hard earned money for the project delivery as the project require 10% contribution either in cash or labor/material from participatory communities, 55.6% of the respondents confessed that they are always involved during consultation on what kind of infrastructural development projects to be embarked on within their communities. Infrastructural development projects monitoring, both at the executing stage and at completion were witnessed by all the respondents. Even though 72.2% of the respondents were always involved while 25.9% of the respondents were often involved, only 1.9% of the respondents confirmed that they rarely involved in the monitoring of the projects. In terms of contributing the labor and the material required for the project delivery, the project requires 10% contribution from the community members either as cash or labor/material, 70.3% were always involved while 27.8% were often involved. The idea of contributing one's labor and material for the project delivery is aimed at empowering the community members and also saving cost on the project, due to low amount of money charged for labor and materials. Only a respondent was rarely involved in this, 98.1% of the respondents were involved in contributing labor or material respectively to the implementation of the projects.

Table 3 shows the statistics and relative importance index (RII) of the level of

community's participation and extent of people's involvement, the community's participation and involvement in infrastructural development in terms of monetary contribution for the project delivery was ranked as first with relative importance index of 0.94. The monetary contribution that is regarded as 'self-help' expected as the quota of the community in executing the project. This is usually at an agreed percentage (usually 10%) between the implementing agency and the host community, having the agency taking a lion share of the total contribution. Contributing labor/material for the project during the execution stage of the project was ranked second on the scale of the community's participation and extent of people's involvement in infrastructural development with a relative importance index of 0.93, closely ranked to the first important factor.

Monitoring of the project (RII = 0.91) and Joint Plan (RII = 0.91) were jointly ranked as third most important index on the relative scale in terms of the host community's participation and involvement in infrastructural development project execution and delivery while assume control was ranked next with RII of 0.87. Delegation of authority comes sixth, which is reflected by the low RII = 0.80 scored by the host community in terms of delegation of authority for the project, the delegation of authority by the host community as an extent in participation and involvement of the community Consultation was ranked last with a RII of 0.76.

It is obvious that community participation can be successful in cases where the community has genuinely been part of the process. Olaleye [7] examined the determinants of citizens' participation in community development through self-help project; the study established that self-help project is an organ of national and community development programme, which has improved the conditions of rural communities.

### **3.3 Socio-Economic Impacts of the Projects on Beneficiaries**

There are several socio-economic impacts that beneficiaries of a community project can derived, data showed that the execution of the infrastructural projects within the community led to a drastic reduction in water-borne diseases and other diseases, especially communicable diseases with RII of 0.91. This reflected that most of the projects executed have to do directly or indirectly with the focus of maintaining the public

health of the community. Infrastructural projects like clinic, safe drinking water (borehole), drainages etc.

Acquiring additional skill was ranked second with RII of 0.88 while reduction in rural-urban migration was ranked third with RII of 0.87. The Table 4 below also reflects that increase in school enrolment and increase in income level were ranked fourth and fifth on the ladder of socio-economic impact felt within the host communities as a result of the project(s) executed within the communities with RII of 0.81 and 0.77 respectively.

### 3.4 Perception of the People on the Sustainability of the Projects

The respondents strongly agree that the community members were favorably disposed to the location of the projects with population of 98.1%, meaning that they have easy access to the projects location and can easily trek to project site without complain of long distance, 98.1% of the respondents agree and strongly agree that community members had never witnessed projects of such high standard like the ODCSDA projects before, 92.6% agreed that ODCSDA projects executed in the communities were well secured and maintained through raising of central maintenance working committee and charging of users of facilities for

its regular maintenance, 85.1% of the respondents strongly agree and agree that communities should make provision for adequate security by engaging local professional hunters who help in keeping surveillance on the infrastructure against theft and damages and funds for projects maintenance since government release fund directly to the community's CPMC members for project execution.

The conclusion drawn from the statistical data in Table 5 displayed below reveals that the respondents were favorably disposed to the location of the projects (mean = 3.81). This shows that the projects were conveniently located in the communities and as such, people would not complain of long distance from home or awkwardness of location, this was ranked first. This is expected to engender continuous patronage and sustainability of the projects. The mean score for the perception which states that the communities had never witnessed projects of such high standards like the ODCSDA projects before, showed favorable response with mean (3.63). This indicates that rural people appreciate good and qualitative infrastructure in their domain and will likely ensure their maintenance and sustainability, this was ranked as second. The perception that ODCSDA projects in the communities will be well secured and maintained was ranked third with mean (3.40). This will serve as encouragement for government to

**Table 2. Statistics showing the level of beneficiaries' involvement in project identification**

<b>Beneficiaries involvement</b>	<b>Mean</b>	<b>Std. deviation</b>	<b>Sum of weight</b>	<b>Rank</b>
Considering project as the most critical need of the community	3.89	.317	210	1
Sharing opinion in the need for the project with community members	3.46	.573	187	3
Involved in final ranking of the project for execution	3.85	.492	208	2

Source: Field Survey, 2015

**Table 3. Statistics showing the level of community's participation and involvement in infrastructural development**

<b>Community participation</b>	<b>Mean</b>	<b>Std. deviation</b>	<b>Sum</b>	<b>RII</b>	<b>Rank</b>
Joint plan	3.63	.487	196	0.91	3
Contributing money	3.74	.521	202	0.94	1
Delegation of authority	3.43	.690	172	0.80	6
Consultation	3.04	.643	164	0.76	7
Contributing labor/materials	3.70	.500	200	0.93	2
Assume control	3.48	.720	188	0.87	5
Monitoring the project	3.63	.623	196	0.91	3

Source: Field Survey, 2015

**Table 4. Statistics showing the socio-economic impacts of projects on beneficiaries**

Socio-economic impacts of projects	Mean	Std. deviation	Sum	RII	Rank
Increase income level	3.09	.896	167	0.77	5
Acquired additional skill	3.52	.666	190	0.88	2
Reduction in rural-urban migration	3.46	.818	187	0.87	3
Reduction in water-borne and other diseases	3.65	.828	197	0.91	1
Increase in school enrolment	3.24	.799	175	0.81	4

Source: Field Survey, 2015

**Table 5. Statistics showing the perception of the people on the sustainability of the projects**

Perception on project sustainability	Mean	Std. deviation	Sum	Rank
Favorably disposed to project location	3.81	.392	206	1
Never witnessed such project before	3.63	.487	196	2
Projects well secured and maintained	3.40	.603	177	3
Community to provide funds and security	3.31	.722	179	4

Source: Field Survey, 2015

**Table 6. Correlation showing the relationship between community’s participation and sustainability of infrastructural projects**

Variable	R	P	Remark
Community’s participation	.408	.030	Sig.
Sustainability of infrastructural projects	.408	.030	Sig.

Sig. at  $P < 0.05$ ;  $r = .408$ , Source: field survey, 2015

execute other needful projects in such communities as people see the projects as their own and not government properties. While the perception that communities should provide security and funds for projects regular maintenance since government released the fund to community’s CPMC members was favorable with mean (3.31). They believed that provision of security for the projects after the completion of the projects is also efficient for sustaining the projects, while they will raise funds for its regular maintenance and sustainability through user’s charging fees, monthly contribution, and freewill donation from philanthropists in the communities.

Table 6 below shows the relationship between community’s participation and sustainability of infrastructural projects using simple linear correlation coefficient. The significance probability for the relationship, p is 0.030 and Correlation, r is 0.408, which describes a positive relationship between Community’s Participation and Sustainability of Infrastructural Project. Theron [8] remarked that community participation should lead to sustainable development. Community participation and sustainability involves local choice because people are the local experts, in line with the idea of an indigenous knowledge system.

#### 4. CONCLUSION AND RECOMMENDATIONS

This study revealed that majority of the respondents were fully involved in project identification, planning and implementation in their respective communities. The study also showed that community participation and sustainability of infrastructural projects were significantly related. However there should be concerted efforts towards strengthening community participation in infrastructural development now that it is realized that it could be another strategy to transform the rural communities. The study recommends ODCSDA approach as worthy of emulation by government at all levels and every development partners in their quest for rural development. Furthermore, Community leaders should encourage more interaction among community members before project identification and selection for effective community participation in projects implementation.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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