



EFFECTS OF COMMUNITY AND SOCIAL DEVELOPMENT PROJECTS ON WELFARE OF RURAL FARM FAMILIES IN NIGER STATE, NIGERIA

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ABSTRACT

This study examined the effect of community and social development projects (CSDP) on welfare of rural farm families in Niger State, Nigeria. A multi-stage sampling technique was used to select 300 beneficiaries. Structured questionnaire and interview schedule were used to collect primary data and analysed using descriptive and inferential statistics. The result revealed mean age of 42 years while majority (97.3%) of the beneficiaries acquired formal education with mean household size of 8 people. Majority (84.0%) of the beneficiaries were members of cooperative societies. The effect of CSDP intervention in health sector includes; number of children enrolment in schools ($z = 8.94$), number of students studying science courses ($z = 5.93$) all increased but distance to schools ($z = -18.11$) was reduced. The effect of CSDP intervention in water sector include; time taken to get water ($z = -7.34$), number of reported water-borne diseases ($z = -32.84$), cost of buying water ($z = -3.83$) all reduced but number of people using borehole water ($z = 7.63$) increased. The effect of CSDP intervention in transport sector includes; number of vehicle plying the road per day ($z = 10.40$) increased but time taken to travel ($z = -15.58$) was reduced. The effect of CSDP intervention in health sector includes; number of medical staff deployed ($z = 2.96$), number of people seeking medical counseling ($z = 2.54$) were increased while distance to health center ($z = 6.42$) was reduced. On perception, the results revealed that provision of educational facilities ($\bar{X} = 2.17$), water supply to the community ($\bar{X} = 2.20$), provision of healthcare facilities ($\bar{X} = 2.28$) and provision of motor able roads ($\bar{X} = 2.19$) were perceived to be effective. Meanwhile, intervention such as provision of agricultural inputs ($\bar{X} = 1.35$) and provision of extension services ($\bar{X} = 1.25$) were perceived not to be effective. Poor mobilization and time consuming rank 1st and 2nd in terms of severity of the problems while problem of site location rank lowest 12th. The study concluded that CSDP had significant effect on the income of the beneficiaries as well as on their welfare. It was recommended that extension agents should increase their contacts in order to reach out to large number of farmers for greater mobilization and participation in the project; also the program should be scaled up in other Local Government Areas (LGAs) of the State and the project should have flexible policy that removes bureaucracy for easy access to micro-projects.

Keywords: Community, Farm families, Multi-stage, Project, Welfare.



INTRODUCTION

The Community-Driven Development (CDD) approach has become a key strategy used by both government and development partners in programme development (Gillespie, 2004). Khwaja (2001) observed that projects managed by communities were more sustainable than those managed by local governments because of its better maintenance. However, Kleimeer (2000) and Mosses (1997) reported that CDD projects that lacked external, institutional, financial and technical support are not sustainable. Ghazala and Vijayendra (2013) reported that, community and social development project is a partnership between communities and State Agencies on poverty reduction. CSDP is a scaled up version of community poverty reduction project (CPRP) and it is a World Bank assisted project that aims at assisting States to fight poverty by empowering the poor through provision of social services.

Many of the target beneficiaries were not involved in the developmental decisions that affect their lives and therefore did not have sense of ownership thereby making such projects faulty (Farrington and Slater, 2006). The CSDP approach is propelled by its potential to develop projects and programmes that are sustainable and responsive to local priorities, empower local communities to manage and govern their own development programmes and more effectively target poor and vulnerable groups. It has been revealed that, in egalitarian communities with open and transparent system of decision making, targeting is better with CSDP than with other development approaches using external project management. The objective of development is not only to increase income and reduce poverty, but also to expand people's real freedom. One of the principle of CSDP is social inclusion, this study therefore seek to determine the effect of CSDP on welfare of rural farm families. The issue of mainstreaming gender and vulnerable groups has also become topical in a bid to providing equal access to services rendered in any given community to ensure equitable distribution. The findings will improve policy design and implementing sustainable environmentally-friendly projects. The specific objectives were to:

- i. Describe the socio-economic characteristics of beneficiaries of the CSDP intervention;
- ii. Determine the effects of the CSDP intervention on welfare of farm families
- iii. Examine the beneficiaries' perception on the effectiveness of the roles performed by the CSDP on various sectors; and
- iv. Describe constraints faced by the beneficiaries of CSDP in the study area.

MATERIALS AND METHODS

The Study Area

The study was conducted in Niger State, Nigeria. The State is located between Latitudes 8°22'N and 11°30'N and Longitudes 3°30'E and 7°20' east of the Greenwich Meridian. Niger State has an estimated projected human population of 5,152,270 in 2017 with an annual growth rate of 2.7% (National Population Commission [NPC], 2017). The State covers a total land area of 74,244sq.km, which is about 8% of Nigeria's total land area. This makes the State the largest in the Country. The rainy season commences in April/May and ends in October/November with annual rainfall amount of between 1,000 mm to 1,600 mm. Major crops grown in the State include yam, cassava, cowpea, sorghum, maize and rice with natural and rich vegetation for grazing and forestry (NAMDA, 2014).

Sampling Technique and Sample Size

A multi-stage sampling technique was used for this study; Niger State has three Agricultural Development Programme (ADP) zones, namely; Zone A, B, and C. First stage involve purposive selection of three local government areas; one from each zones. Second stage involved selection of communities based on completed and functional Micro Projects (MPs).



Third stage involve selection of households which made up of sample size of 300. The CSDP interventions were in five (5) sectors, namely, education, water, health, transport and rural electrification. However, only four sectors have been completed and functional MPs in the State. For this study, only four sectors were considered.

Method of Data Collection and Analysis

Data were obtained from primary source. Socio-economic characteristics of the respondents were measured as follows: Age was measured in years. Sex was measured as male =1, female = 0; marital status was measured as married=1 and otherwise =0; education was measured in terms of number of years in schooling; occupation was measured as farming = 1 and otherwise =0; income was measured in Naira as estimated annual income; farm size was measured in hectares; household size was measured in numbers indicating the number of members of a household. Perception of roles of CSDP by beneficiaries was determined using a three point “Likert-scale” of very effective = 3, effective = 2, not effective =1 were used. The mean reference point was obtained by calculating $3+2+1=6$ and dividing by 3 to obtain 2. Any mean score less than 2 was adjudged as not beneficial, mean score of 2 and above was considered beneficial. Areas of CSDP intervention such as education, water, health care and transport in the communities was measured with descriptive statistics such as means, standard deviation and ranking. Constraints faced by CSDP beneficiaries were also measured using descriptive statistics. The data were subjected to a combination of both descriptive and inferential statistics. Objective i and iv were achieved using descriptive statistics. Objective iii was achieved using likert scale rating and objectives ii was achieved using double difference estimator (DDE). This is a standard programme evaluation tools used to measure potential programme impacts (Verner and Vener, 2005). It is given by equation 1:

$$DDE = \left[\frac{1}{p} \sum (Y1ia - Y1ib) \right] - \left[\frac{1}{c} \sum (Yoja - Yojb) \right] \quad \dots (1)$$

where;

P = number of participant

C = number of individual in a control group (non-participants),

DDE = the estimator, i.e., the difference between the average change in the income for the participant and non-participant groups. But for the purpose of this objectives, it is only information for participant were taken for before and after the program,

Y1ia = outcome variables of participant after the programme,

Y1ib = outcome variables of participant before the programme,

Yoja = outcome variables of non-participant after the programme,

Yojb = outcome variables of non-participant before the programme.

RESULTS AND DISCUSSION

Socio-economic Characteristics of the Respondents

The socio-economic variables examined were: age, gender, marital status, educational status, and household size, farming experience, farm size, and income, access to credit, extension visits and membership of cooperatives (Table 1). Mean age of the beneficiaries was 42 years. This implies that the beneficiaries were still in their productive stage of life. This finding is in agreement with the work of Okunade *et al.* (2005), who reported that majority of their respondents were within the active age. Majority (80.0%) of the beneficiaries were males. This implies that males are more involved in agricultural programme than female. This finding is in agreement with Okere and Shitu (2012) who reported that males dominated most agricultural programmes in Nigeria's rural communities which could be due to their roles as head of the family. Majority 74.7% of the beneficiaries were married. This implies that married



individuals are more into Community and Social Development Project CSDP than singles which could be due to the benefits derived from participating in CSDP. This finding is in agreement with the report of World Bank (2009), that marital status influences participation in programme activities, thus suggesting that married respondents are likely to be more productive because of their responsibility.

Educational level had mean of 12 years. This implies that each of the beneficiaries acquired at least secondary education which could be the reason for participation in CSDP. This result is in agreement with the findings of Nsonya and Nenna (2011) who reported that education is an advantage for participation in developmental programs.

Table 1: Socio-economic characteristics of the respondents (n = 300)

Variables	Frequency	Percentage
Age (Years)		
< 31	48	16.0
31 – 40	104	34.7
41 – 50	84	28.0
51 – 60	44	14.7
> 60	20	6.7
Mean	42	
Sex		
Male	240	80.0
Female	60	20.0
Marital status		
Single	52	17.3
Married	224	74.7
Widowed	24	8.0
Education level (Years)		
1 – 6	60	20.0
7 – 12	80	26.7
13 – 18	152	50.6
> 18	8	2.7
Mean	12	
Farming experience (Years)		
1 – 10	164	54.6
11 – 20	92	30.7
21 – 30	32	10.7
> 30	12	4.0
Mean	12.7	
Household size (Number)		
< 6	84	28.0
6 – 10	156	52.0
11 – 15	32	10.7
> 15	28	9.3
Mean	8	

Source: Field survey data, 2020



Table 1: Socio-economic characteristics of the respondents (n = 300) **Cont'd.**

Variables	Frequency	Percentage
Farm size (Hectares)		
< 3	172	57.4
3 – 5	88	29.3
> 5	40	13.3
Mean	3.9	
Occupation		
Farming	212	70.7
Others	88	29.3
Income (₦)		
< 100,001	92	30.7
100,001 – 200,000	68	22.7
200,001 – 300,000	48	16.0
300,001 – 400,000	28	9.3
> 400,000	64	21.3
Mean	280,000	

Source: Field survey data, 2020

From Table 1, the mean farming experience was 12.7 years. This result is in disagreement with Chikezie *et al.* (2012) who posited that, with many years of farming, farmers will be able to make sound decisions as regards to participating in agricultural programmes. Mean household size was 8 people, this implies that the beneficiaries had relatively large household sizes which could be a good source of family labour. Mean farm size of the beneficiaries was 3.9 hectares. This implies that most of the beneficiaries were medium scale farmers which could be a key factor for participation in CSDP. This is in agreement with the work of Chikezie *et al.* (2012) who reported that majority of their respondents were medium scale farmers. Majority 70.7% were into farming as an occupation. This means that farming is a means of their livelihood. Mean annual income of beneficiaries was ₦280,000, this implies that the beneficiaries earned more income which could be due to their participation in CSDP in the study which implies that participation in CSDP has positive effect on the income of the beneficiaries. This result is in agreement with Usman (2016) who reported that treated communities in her study were better off in terms of income as a result of CSDP intervention than the control communities.

Institutional Variables Assessed by Respondents

As presented in Table 2, the institutional variables assessed by the beneficiaries includes credit access, number of extension visit and cooperative membership. Majority (64.0%) of the beneficiaries had no access to credit which could be due to the fact that CSDP interventions are mostly in the area of infrastructural development rather than credit provision. Almost half (49.3%) of the beneficiaries had contact with extension agents between 5 - 10 times annually. This may probably be because extension services constitute a driving force for success of any agricultural development programs. Majority (84.0%) of the beneficiaries were members of cooperative societies as this could boost their cooperation.



Table 2: Institutional variables assessed by the respondents (n = 300)

Variables	Frequency	Percentage
Credit		
Access	108	36.0
No access	192	64.0
Extension contact		
< 5	120	40.0
5 – 10	148	49.3
> 10	32	10.7
Cooperative		
Member	252	84.0
Non member	48	16.0

Source: Field survey, 2020

Area of Community and Social Development Projects Intervention

The areas of intervention were education, water provision, transport through construction and rehabilitation of rural roads and healthcare facilities. The effect of CSDP intervention in health sector (Table 2) in the study area include; number of children enrolment in schools ($z = 8.94$), number of students studying science courses ($z = 5.93$) and utilizing library facilities ($z = 4.79$), all increased but distance to schools ($z = -18.11$) and time taken to reach schools ($z = -8.49$) were reduced. This result is in agreement with Tanko (2013) who reported that intervention of CSDP in the education sector impacted positively on school attendance. The effect of CSDP intervention in water sector in the study area include; time taken to get water ($z = -7.34$), number of reported water-borne diseases ($z = -32.84$), cost of buying water ($z = -3.83$), number of people fetching stream water ($z = -4.49$), and distance to water source ($z = -68.80$), all reduced but number of people using borehole water increase ($z = 7.63$). The effect of CSDP intervention in transport sector includes; number of vehicle plying the road per day ($z = 10.40$) increased but time taken to travel ($z = -15.58$) and cost of transportation ($z = -12.05$) were reduced. This result is in agreement with Muhammad (2012) who reported that CSDP intervention in transport sector had increased the number of vehicles plying roads, reduce average travel time to nearest town and average cost of transportation. The effect of CSDP intervention in health sector includes; number of medical staff deployed ($z = 2.96$), number of people seeking medical counseling ($z = 2.54$), people going for ante-natal ($z = 2.82$) and numbers going for child immunization ($z = 5.29$), were increased. This connotes a positive indicator of CSDP performance while distance to health center ($z = 6.42$) and time taken to the healthcare centers ($z = 11.70$) reduced. This finding is in agreement with the work of Muhammad (2012) who reported that the mean distance to healthcare centers provided by CSDP in the study area was drastically reduced.



Table 2: CSDP mean indices in various sector of rural farm families (n = 300)

Intervention on education sector	Before	After	Differences	Z-value
Distance to school (km)	1.9	1.1	-0.8	-18.11***
Time taken to school (minutes)	60	25	-35	-8.49***
Number of children in school	54	104	50	8.94***
Number of students studying sciences	30	96	66	5.93***
Students library attendance	26	76	50	4.79***
Intervention in water sector				
Time taken to fetch water (minutes)	30	6	-24	-7.34***
Number of reported water borne diseases	10	4	-6	-32.84***
Cost of buying water (₦)	140	40	-100	-3.83***
Number of people fetching stream water	231	140	-91	-4.49***
Distance to water source (km)	.8	0.2	-0.6	-68.80***
Number of people using borehole water	125	225	100	7.63***
Intervention on transport sector				
Number of vehicle plying road per day	20	54	34	10.40***
Time taken to travel (minutes)	60	18	-42	-15.58***
Cost of transportation (₦)	400	150	-250	-12.05***
Intervention on health sector				
Number of medical staff deployed	3	12	9	2.96***
Distance to healthcare centers (km)	4.0	1.5	-2.5	-6.42***
Time taken to healthcare centers (minutes)	60	20	-29	-11.70***
Number of people going for counseling	60	200	140	2.54***
Number of people going for anti-natal	20	120	100	2.82***
Number going for child immunization	56	106	50	5.29***

Note: ***significant at 1% level

Source: Field survey, 2020.

Perception of Respondents on the Role of Community and Social Development Projects

Table 3 reveals that provision of educational facilities ($\bar{X} = 2.17$), water supply to the community ($\bar{X} = 2.20$), provision of healthcare facilities ($\bar{X} = 2.28$) and provision of motor able roads ($\bar{X} = 2.19$) were perceived to be effective roles play by CSDP. This implies that emergence of Non-governmental Organizations (NGOs) like CSDP is now well recognized as a successful tool for ensuring equitable and sustainable social development through provision of basic amenities particularly in the rural areas. This is in line with the findings of World Bank (2012) on CSDP activity in Enugu State that reported education, water, health, transport and rural electricity were among the services provided in the sampled communities. Meanwhile, intervention such as provision of agricultural inputs ($\bar{X} = 1.35$) and provision of extension services ($\bar{X} = 1.25$) were perceived not to be effective this might probably be because CSDP is basically inclined towards the provision of basic and social amenities.



Table 3: Respondents' Perception on the roles of CSDP (n = 300)

CSDP Roles	VE(3)	E(2)	NE(1)	WS	WM	RMK	Ranks
Provision of healthcare facilities	164	56	80	684	2.28	Effective	1st
Water supply to the community	140	80	80	660	2.20	Effective	2nd
Provision of motorable roads	104	148	48	656	2.19	Effective	3rd
Provision of educational facilities	144	64	92	652	2.17	Effective	4th
Provision of agricultural inputs	28	48	224	404	1.35	Not Effective	5th
Provision of extension services	12	52	236	376	1.25	Not Effective	6th

Note: VE = Very effective; E = Effective; NE = Not effective;

Source: Field survey, 2020

Constraints of the Respondents in Accessing CSDP

The result in Table 4 shows that, poor mobilization, time consuming and poor funding rank 1st, 2nd and 3rd respectively intern of severity of the problems while problem of site location rank lowest 12th this may probably be because of the nature of land tenure system which for them lubricate of developmental issues.

Table 4: Constraints faced by the respondent's participation in CSDP (n = 300)

Constraints	*Frequency	Percentage	Ranking
Poor mobilization	252	84.0	1st
Time consuming	240	80.0	2nd
Poor funding	236	78.7	3rd
Lack of awareness micro-projects	200	66.7	4th
Poor information and communication	192	64.0	5th
Problem of bureaucratic bottleneck	184	61.3	6th
Problem of personnel	160	53.3	7th
Inconsistent Government policies	92	30.7	8th
Poor access to healthcare facilities	64	21.3	9th
Poor maintenance of micro-projects	48	16.0	10th
Problem of leadership	16	5.3	11th
Problem of site location	12	4.0	12th

*Multiple responses

Source: Field survey, 2020

CONCLUSION AND RECOMMENDATIONS

The study concluded that the intervention of CSDP was noted through indicators such as education, water sectors, healthcare delivery and transport services. Some of the major constraints faced were poor mobilization. Recommendations were:

1. Extension agents should increase their contacts in order to reach out to large number of farmers for greater mobilization and participation in the project.
2. The program should be scaled up in other Local Government Areas (LGAs) of the State.
3. The project should come up with flexible policy that removes bureaucracy for easy access to micro-projects.

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