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Binomial Logit Estimation of Factors Influencing Participation in Community and Social Development Projects (CSDPs) in Kwara State, Nigeria

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ABSTRACTS

The study identified factors influencing participation in the community and social development projects in Kwara State, Nigeria. Multistage sampling procedure was used to select 120 respondents sampled for the study. Data were collected with interview schedule and descriptive statistics, such as frequency, percentages and mean were used to summarize the data while binary logistic regression was used for inferential deductions. The results show that the mean age of the participants was 42.28 years with male (70.8%) dominating participation. About 42% of the participants completed both tertiary and secondary education with an average monthly income of N 28,300. The binomial logit regression results showed that education (odds ratio =12.32), average annual income (odds ratio =12.39), as well as number of hours spent on previous projects (odds ratio =1.048) significantly influenced participation in the CSDPs at p<0.05. The findings have implications for successful community development interventions, in that participants' education, annual income and number of hours spent on previous projects may be leveraged on to enhance community members' participation in these interventions.

Keywords: Participation; Community and Social Development Project; logistic regression; odds ratio; development projects.

INTRODUCTION

Over the years, many reasons have been alluded to the failure or abandonment of many developmental projects across the globe and the most prominent among these reasons was lack of community participation. Aurick et al. (2017) and Ihuah and Benebo (2014) submitted that community development through projects and programmes implementation can only be meaningful if the community members are involved at every stage of the development process. The inclusion of local people in the planning and implementation of projects and programmes that affect their lives lead to better results through the connection between development aid and its intended beneficiaries (Mansuri and Rao, 2012). Therefore, developmental scholars and practitioners have been advocating for the participation of local people in the projects and programmes that affect their lives.

Successful development interventions must be adapted to local conditions which is often shaped by different socio-cultural, economic and political realities. In realization of this fact, coupled with the failures of the top-down approach contributed to the paradigm shift and subsequently birthing of the CSDP (Brett, 2003). Hitherto, many development intervention programmes were designed and implemented without much input from the beneficiaries. This has been responsible for the low survival rate and poor accountability of programmes/projects in Nigeria because the beneficiaries could not personalize the projects as 'ours' but 'theirs' (Elijah et al., 2018). The concept of 'our project' promotes accountability and sustainability and this gives a project high survival rate because it avoids imposition of projects on the beneficiaries.

The establishment of community and social development projects (CSDPs) with funding support from the World Bank as a strategy to sustainably increase access of poor people to social and national resource infrastructure was borne out of the need to involve people in programmes that address their social and economic needs. In Nigeria, CSDP was designed to build on the weakness of existing Community Driven Development (CDD) projects both in scope and magnitude through a two-fold strategy. This was done by integrating project elements into local governance structures and enhancing partnerships between communities and the local government (Elijah et al., 2018). This has brought about a paradigm shift in the conventional top down approach to project development and

implementation towards bottom-up approach where the programme beneficiaries are actively involved at every facet of the project life cycle. This has been documented to facilitate achievement of goals and objectives of development intervention programmes (Aurick et al., 2017).

In an attempt to relate participation to community development, Mohammed (2010) submitted that one of the best strategies to community development is to encourage community participation in developmental projects. Involving community members in developmental projects gives them opportunity to make better and sustainable decisions and have greater positive impacts on their communities. Amal et al. (2018) reported that one of the reasons communities are not developed rapidly in many developing countries is the low participation of community members in decision making. The study recommended active participation of community members for a sustainable community development of every aspects of a community.

The primary aim of the CSDP as a developmental project was to assist in developing community in a sustainable manner by ensuring that all stakeholders are involved. This has been argued by scholars to enhance empowerment and promote infrastructural development (Obar et al., 2017; Aurick et al., 2017 and Hoe et al., 2017). However, Agwu and Abah (2009) and Ochepo et al. (2019) opined that many social intervention projects and services of the government and development agencies did not yield much of the desired results because of their rigidity in terms of top-down supply-driven and non-participatory mode of operations. In contrast, Yusuf et al. (2020) documented the successful implementation of the CDSPs in Kwara, albeit, with low community participation. Against this background, this study sought to identify factors influencing participation in the CSDPs in Kwara State, Nigeria with a view to drawing implications for community development. The specific objectives of the study were to: describe the socioeconomic attributes of the CSDP project beneficiaries; and identify factors influencing participation in the CSDPs in Kwara State.

METHODOLOGY

Kwara State is located within the North Central geopolitical zone of Nigeria, commonly referred to as the Middle Belt. It has 16 Local Government Areas with the state capital in Ilorin. It covers an area of 36,825 km² and regarded as the ninth-largest Nigerian state by size. The state is situated between latitude 7°45N and 9°30N and longitudes 2°30E and 6°25E, with Niger State in the north, Kogi State in the east, Oyo, Ekiti and Osun states in the south and an international boundary with the Republic of Benin in the west (nigeria.gov.ng, 2019). *C*onsisting of mostly of wooded savanna, but with forested regions in the south (Britannica.com, 2019), agriculture constitutes the main source of the state economy. The principal cash crops produced in the State are cotton, cocoa, coffee, kolanut, tobacco, beniseed and palm produce. Mineral resources in the state are Gold, limestone, marble, feldspar, clay, kaolin, and quartz and granite rocks. The principal groups residing in Kwara State are the Yoruba, Nupe, Bariba and Fulani. Farming is the major occupation of the people (nigeria.gov.ng, 2019).

Multistage sampling procedure was used in selecting respondents for the study. In the first stage, clustering the state along senatorial zones to ensure representativeness, 25% of the total number of local government areas (LGAs) which benefitted from CSDP in the state were randomly selected from the three zones of the state, giving three LGAs. There were 12 beneficiary communities from these three LGAs. In the second stage, 50% of the beneficiary communities in the three LGAs were selected giving 6 communities. There was a total of 300 community members representing these communities in the CSDP. The third stage involved proportionate selection of 40% of these individuals giving 120 respondents sampled for the study. Interview schedule was used for primary data collection. Data collected were summarized using percentage and weighted mean scores, while binary logistic regression model was used to determine factors associated with participation in the CSDPs.

Variables for the study were appropriately measured. For instance, personal characteristic such as sex, educational level, and indigene status among others were measured at nominal level while variables like age, household size and monthly income were measured at interval level. For the binomial logistic regression model, the selected predictor variables in the model were re-categorised as appropriate. For example, education level measured as '0' for no-formal education, '1' for completed primary education, '2' completed secondary education, and '3' completed tertiary education was collapsed to have '1' for respondents with some form of

education and '0' for those without any form of formal education. The measurement of all predictor variables included in the model were as specified beneath it. Participation scores, dichotomised using median value such that values equal to or less than were categorised as low and values above it as high, was the response variable of the binomial logit model. Rationale for inclusion of predictor variables followed a priori expectation in addition to guide from literature For instance, Hoe et al. (2017) listed similar predictor variables in their study to evaluate determinants of participation in poverty alleviation programmes in a local community in Malaysia.

The model specifications are presented below:

$$P_i\,(Y = 1/X_i)\ \frac{p_i}{1-p_i} = e^{(\beta_0+\beta_1 X_1+\beta_n X_n+u)} \quad \text{.....EQ. 1}$$

The expanded function of the model is given as

$$P_i(Y = 1/X_i)\ \frac{p_i}{1-p_i} = e^{(\beta_0+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4+\beta_5 X_5+\beta_6 X_6+\beta_7 X_7+\beta_8 X_8+\beta_9 X_9+\beta_{10} X_{10}+\beta_{11} X_{11}+u)} \quad \text{.....EQ. 2}$$

Where:

α= Constant/intercept
β= Slope (Regression coefficient)
Y = Dependent variable for the study {participation in CSDP dichotomized into high (1) and low (0)}

While independent variables were measured thus:
X_1= Age (in years)
X_2= Marital status (Married=1, otherwise = 0)
X_3= Gender (Male= 1, Female= 0)
X_4= Primary occupation (farming = 1, Otherwise = 0)
X_5= Household size (number as given)
X_6= Education (Had some formal education= 1, no formal education = 0)
X_7= Average income (in naira)
X_8 = Ownership of land (Yes = 1, Otherwise = 0)
X_9 = Farm size (in hectare)
X_{10} = Organization membership (Yes = 1, No = 0)
X_{11} = Number of hours spent on previous projects (as given in hours),

RESULTS AND DISCUSSION

Personal characteristics of the respondents

Table 1 shows that the mean age was 42.28 years, with standard deviation of 14.0. The results indicate that most of the participants of CSDPs were middle aged, who were still agile and active to contribute to community development through the implementation of community based projects of CSDP. The standard deviation of 14.0 indicates good spread in the age data to include young individuals; an implication that youths are actively involved in community development activities of the CSDP. The overall implication of this finding is that there would be available and capable hands to undertake both physically and intellectually demanding responsibilities. This is in-line with the assertions of Dotterweich (2006) that reported strength as youth characteristics that promote development. Somewhat different findings were reported by Okereke-Ejiogu et al. (2015) and Obar et al. (2017) where mean ages of participants in the CSDP were 49.0 and 52.8 years, respectively, in Imo and Oyo States of Nigeria.

The majority (70.8%) of the respondents were male, while only 29.2% were female. This indicates preponderance of male participant partaking in the CSDP in the study area compared to female. This is similar to the findings of Okereke-Ejiogu et al. (2015) and Obar et al. (2017) where about 68% and 70% male members of the community, respectively, participated in CSDP in Imo and Oyo State, Nigeria. Similarly, Hoe et al. (2017) reported about 86% males that participated in rural poverty alleviation programme in Malaysia. While on one hand, this trend of low women inclusion in community participation may be related to their inability to partake in strenuous activities associated with the projects; on the other hand, it may not be totally devoid of cultural gender imbalance common within rural and peri-urban societies where these projects are often instituted.

The majority (63.3%) of the respondents were married while 20% were single. This is also similar to findings of Obar et al. (2017) and Okereke-Ejiogu et al. (2015) where about 92% and 79%, respectively, of respondents in their studies were married. Marriage comes with responsibility; and married individuals are regarded often as being responsible. This could be the reason married people are often considered and perhaps why majority of the CSDP participants in this study are married.

On educational level, about 42% of the participants completed tertiary and secondary education. The result indicates a high proportion of the participants in the CSDPs in the study are well educated. This has implications for open-mindedness and acceptance of new ideas as formal education is considered a veritable tool that enhances community participation in development initiatives. This is similar to the submission of Elijah et al. (2018) and Adesida and Okunlola (2015) that educational level influences level of community participation.

Most of the respondents (46.7%) engaged in

farming as primary occupation. About 18.3% and 17.5% were primarily traders and civil servants, respectively, while 15.0% retired from the civil service and currently non-working. The results indicate inclusion of different categories of individual in the CSDP in the study area, including senior citizens (i.e. retirees) whose wealth of experience from several years of working could be helpful in making informed decision relating to development activities within the community. This is similar to the findings of Okereke-Ejiogu *et al*. (2015) and Obar *et al.* (2017) which had more CSDP participants as farmers (37.5%) and 35.1% traders, respectively. Average monthly income of respondents was N28,300, while as much as 40% earned below N 20,000, 38.3% earned from N20,001 to N 40,000. Average monthly income of participants in this study was much lower compared to N38,268.52 reported by Okereke-Ejiogu *et al.* (2015) and N58,594 by Obar *et al.* (2017). The findings indicate that the respondents could be financially responsive and would be able to make financial contribution to the success of the projects where necessary.

Table 1: Personal characteristics of participants in the CSDPs in Kwara State

Variable	Percentage	Mean	Standard deviation
Age (years)			
20 – 29	19.2		
30 – 39	25.8		
40 – 49	26.7	42.28	14.0
50 – 59	14.2		
60 – 69	10.0		
70 – 79	1.7		
80 – 89	2.5		
Gender			
Male	70.8		
Female	29.2		
Marital Status			
Single	20.0		
Married	63.3		
Widowed	9.2		
Separated	5.0		
Divorced	2.5		
Education level			
No formal education	6.6		
Completed primary education	10.0		
Completed secondary education	41.7		
Completed tertiary education	41.7		
Monthly income (₦)			
≤ 20,000	40.0		
20,001 – 40,000	38.3	28,300	15,582
40,001 – 60,000	13.3		
> 60,000	8.4		
Primary Occupation			
Farming	46.7		
Trading	13.3		
Civil service	17.5		
Hunting	2.5		
Retired/non-worker	15.0		

Field survey, 2019

Factors influencing participation

The results in Table 2 show that the binary logistic regression explained 31.7% of the variance in participation (Nagelkerke R^2= 0.317) and correctly classified 72.2% of cases. Specifically, it was revealed that education (odds ratio = 12.318), average annual income (odds ratio = 12.391) as well as number of hours spent on previous projects (odds ratio = 1.048) significantly influenced participation in the CSDPs at $p<0.05$. Given the odds ratio of 12.318, the result indicates that being educated increases the likelihood of higher participation in the CSDP by 12 times. That is, educated individuals are more likely to participate 12 times more than the non-educated. This corroborates the findings of Amal et al. (2018) who reported lack of basic education as a limiting factor to active community participation in local development project in Somalia. The authors further submitted that the educated among the community members are always considered very important at handling certain tasks; thus, they are usually at the center of the development process handling different scenarios and solving problems and challenges that may impede the developmental processes. Furthermore, Akpan et al. (2015) averred that education triggers participants' participation in community development projects as long as the participants are meant to participate at all stages of the project. Thus, the findings show that being educated is considered very crucial to the attainment of any developmental effort which overall effect is to develop community economically, socially and physical through infrastructural facilities.

In a predictive manner, the odds ratio of 12.391 indicates that a unit increase in income increases the likelihood of high participation by 12 .This implies that higher earning individuals are more likely to participate in the CSDPs. This is not unexpected because participation in the community programmes comes with a lot of sacrifices which at time could be financial. In this instance, the individual with stable financial conditions would be better off than the less financially privileged. Lastly, number of hours spent on previous project is also associated with high participation, with a unit increment in hours spent increasing the likelihood of high participation by 1 (i.e. odds ratio =1.048). Akpan et al. (2015) asserted that duration of a project was a factor that facilitated participation in southern Nigeria. This is plausible in that, the more individual commit more time to participation, the more their commitment, and subsequently the chances of increased participation

Table 2:Determinants of participation in CSDPs

Variables	B	Wald	Exp(B)
Age	-0.057	2.715	0.944
Sex	0.117	0.023	1.124
Marital status	0.659	0.903	1.933
Major occupation	1.032	1.717	2.807
Household	0.013	0.009	1.013
Education	2.511**	3.516	12.318
Annual income	2.517***	7.076	12.391
Land ownership	-0.774	1.036	0.461
Farm size	0.075	0.484	1.078
Org. Membership	0.233	0.098	1.263
Hours spent on previous projects	0.047**	4.623	1.048
Constant	4.669***	5.617	106.5911

Field survey, 2019.

Overall percentage prediction = 72.2

-2 Log likelihood = 88.051; Nagelkerke R Square = 0.317

*** Significant at 0.0001 level of significance,

**Significant at 0.01 level of significance; and

* Significant at 0.05 level of significance.

CONCLUSION

Community and social development projects (CSDPs) are World Bank-assisted projects that are aimed at promoting development at community level across many developing countries and participation of community members in the activities are determined by certain factors that may be location specific. The study showed that education, average income and number of hours spent on previous projects significantly influenced participation in the CSDPs in Kwara State. These could be vital in making decisions that may positively influence community development socially, physically and economically. The study, therefore, recommends that these three critical variables should be carefully considered while selecting community members for any CSDP activity in the study area in order to ensure increased grassroots participation in community development efforts, which is sine qua non with bottom-up participatory development.

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