
Effect of Community Effort on Economic Development in Nasarawa State, Nigeria

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Abstract

This study examined the effect of community effort on economic development in Nasarawa state, Nigeria. To this end, the research used data from primary sources of information. Data were collected by administering questionnaires. The sample size used in this study is 340 individuals drawn from three communities, (one community from each senatorial district Headquarter). The sample size was calculated by using Yamane (1967) formula. The study adopted ordinary least square (OLS) regression method to carry out the investigation. The data were collected from three (3) communities, one from each senatorial districts Headquarters in Lafia, Akwanga, and Keffi Local Government Areas of Nasarawa state, Nigeria. The results of the study showed that all the indicators of community efforts (educational development, health facilities, and road network) have positive impact on economic development (level of income) in communities in Nasarawa State. Therefore, it can be concluded that community efforts generally had positive impact on economic development (level of income) in communities in Nasarawa State. The study recommends that provision of more educational facilities by communities will help to develop a resilient population thereby leading to better performance of civil services in communities, and that provision of more health facilities by communities will create in-built resistance among the residents to epidemics caused by air, water, and changes in weather. Therefore, all stakeholders and hands must be on deck in the fight against illiteracy in communities so that Nasarawa state can join her members in enjoying the dividend of development experienced through education.

Keywords: Community Effort, Economic Development, Education, Health, Roads

JEL Classification: O12, I15

1. Introduction

Community efforts have evolved over the past few decades into a recognized discipline of interest to both practitioners and academicians. Community efforts (CE) or local economic development effort (LEDE) is a community-driven process where communities identify and initiate their own solutions to economic, social and environmental issues to build healthy, economically viable communities. Community economic development (CED) contains principles and goals based on a grassroots approach to development where communities choose deliberate actions to influence the local economy and improve the quality of life for its residents (Shittu, 2022). Community efforts have probably been practiced for as long as there have been communities. It is hard to imagine the American colonies being successfully established

in the seventeenth century without some degree of community efforts, even if the term had not yet come into existence. Many scholars trace the origin of modern community efforts as a discipline to post-World War II reconstruction efforts to improve less developed countries, regions, states, and areas. Others cited the American “war on poverty” of the 1960s with its emphasis on solving neighbourhood housing and social problems as a significant influence on contemporary community efforts (Green & Haines 2002). A major contribution of community efforts was the recognition that a city or neighborhood is not just a collection of buildings but a “community” of people facing common problems with untapped capacities for self-improvement. Today, community is defined in myriad ways: in geographic terms, such as a neighborhood or town (“place based” or communities of place definitions), or in social terms, such as a group of people sharing common chat rooms on the Internet, a national professional association or a labor union (communities of interest definitions).

Determining the sources of developments to communities, the United States Accounting Office (2000), observed that the federal governments have small influence on community efforts to plan for and manage growth, agreeing that that the federal government invests in physical infrastructure, revitalize the communities and preserve its natural resources, boosting community efforts. In its 2000 report, the office noted that diverse communities encounter a variety of growth-related challenges with the communities competing to attract businesses and jobs. The importance of community efforts according to Sara-Beth, Thomas and Steven (2002) necessitated the design of tools and strategies to promote community economic growth; concluding that emphasis is on strategies and tools increasing employment for its spiral effects on social security, health, and general security (Nwidobie, 2014). Available statistics reported by Agbo (2021) showed that people accessing primary and secondary education as a result of community activities had increased by 36.2% and there has been an improvement in educational sector in Nasarawa State as a result of innovation and building of new school blocks in rural areas. Similarly, it was reported that new health centres have been built in most communities and existing ones renovated, as a result, a total of 1,013 males, 1,414 female and 1,010 children who would not have had access to health care services in their communities now do so. Community based-organisation (CBO) has provided access to pipe borne water in rural communities and has reported that access to clean water increased for poor families in a community driven development program. In the transport sector, reported the number of community owned engine speed boats increased from 4 to 7 meaning a 42.8% increment (Agbo, 2021). This has led to increase in number of trips per month and there has been reduction in time taken per trip, the cost of water transport has also reduced by 28.5%, ease of transport and increase accesses of the beneficiaries, box culverts were also constructed. However, some of the box culverts were not well constructed in some of the communities.

Akhimien, Adamolekun and Isiwale (2018) reported that in Nigeria, over the years the stated objectives and strategies of rural and community development have been pronounced by policy makers and those concerned with the issue of development. But there still exists enormous gap between policy formulation and implementation and the reality of the level of the development of particularly the rural communities. Developments efforts at the community levels in Nigeria are initiated by the communities and financed by either the federal, state, local governments or the communities themselves depending on the magnitude of the development required. The three tiers of government also initiate policy frameworks to guide the siting of

developmental projects in a community. The local government councils being the closest arm of government to the communities are by the Nigerian constitution provided with finance for initiating and executing developmental projects in the local communities with its spiral effects on creating jobs and income at the community levels, reducing crime; attracting more developments to the communities (Sara-Beth, Thomas & Steven, 200).

In Nigeria, the local economy is characterized by weakening capacity due to rural-urban migration, the establishment of semi-urban communities (for agricultural and small-scale manufacturing for self-sustenance) by the retiring middle class not migrating to the rural communities, low level of employment, poverty, inhuman habitat, unexploited natural resources and untrained, unusable and wasting human resources. Effective public policy implementation to develop communities or even promote economic development might be impeded by a lack of attention to the exact channels. Thus, economic development at community level still remained low in Nasarawa State. Poverty, unemployment, crimes, and inter-communal crises continued to rise while literacy level, and live expectancy rate continued to fall (Nwidobie, 2014). Economic development of every community is affected by certain key factors, such as education, health, and good road network. Government of Nasarawa State has formulated and implemented series of community development programmes, including provision of primary and secondary education, primary and secondary health facilities, and construction of roads, with the aim of achieving accelerated economic development where unemployment and poverty problems would be reduced. In spite of the provision of these facilities and services, the indices of economic development in Nasarawa State have left much to be desired as they are still exhibiting poor in most facets of the community effort (Shittu, 2022).

In view of the problems above, most communities in Nasarawa state have made efforts and introduced several community development programmes. These include, Community and Social Development Project (CSDP); Community-based Poverty Reduction Project (CPRP); Local Empowerment and Environmental Management Project (LEEMP); and Community Education and Social Development Projects (CESDP). The unsatisfactory performance of community effort in economic development in Nasarawa state can be attributed to internal and external factors. In some communities, there has been the problem of inadequate funds for productive activities, leading to their low performances and output from economic activities. The problem of continued communal crises has led to loss of human and material resources in the face of dwindling poor human capital development has negatively affected economic development in the communities. In the external front, there has been the problem of inadequate provision of educational, health, and good road network, thereby leading to inadequate employment opportunities for people living in communities. Another problem is lack of incentives to producers, leading to low productivity towards economic development in Nasarawa state. Other factors that led to failure of community effort include: lack of modern infrastructural facilities such as pipe borne water, electricity, hospitals, all season roads, communication services, organized markets, among others. All these problems combined to hamper community efforts towards economic development in communities in Nasarawa state, Nigeria.

2. Literature Review

Community is defined differently by different writers. For instance, Shittu (2022) defined community as a location (communities of place) or a collection of individuals

with a common interest or tie whether in close proximity or widely separated (communities of interest). Community development is defined in many different ways. Most practitioners think of community development as an outcome – physical, social, and economic improvement in a community – while most academicians think of community development as a process – the ability of communities to act collectively and enhancing the ability to do so. This paper defines community development as both a process and an outcome and explains the relationship between the two. A review of the literature conducted by Mattessich and Monsey (2004) found many definitions of community such as: People who live within a geographically defined area and who have social and psychological ties with each other and with the place where they live. A group of people who live close with one another and are united by common interests and mutual aid (National Research Council, 1975). A combination of social units and systems which perform the major social functions and the organization of social activities (Warren 1963). Community effort is defined as the employment of community resources (including human and material) to address social needs and empower groups of people”. The unique focus on the employment of community resources in the process of change stems from community development theory’s roots in sociology, as opposed to the psychology-based theories of micro level social work practice. When these resources and the community’s people are appropriately engaged and empowered, the role of the social worker in a Community Development framework lands heavily on the facilitator side of the expert-facilitator continuum (Mendes, 2008). These definitions refer first to people and the ties that bind them and second to geographic locations. In this context, community efforts takes on the mantle of developing stronger “communities” of people and the social and psychological ties they share. Indeed this is how community efforts was defined in most of the literature. Discussions that reflect this aspect focus on community efforts as an educational process to enable citizens to address problems by group decision making (Long 1975). Or, they may describe community efforts as involvement in a process to achieve improvement in some aspect of community life where normally such action leads to the strengthening of the community’s pattern of human and institutional relationships (Ploch, 1976). All of these concepts of community efforts focus on the process of teaching people how to work together to solve common problems. Other authors define community efforts more in terms of an action, result, or outcome: local decision making and program development resulting in a better place to live and work (Huie 1976); or a group of people initiating social action to change their economic, social, cultural and/or environmental situation (Christenson and Robinson 1989). These conceptions show that community efforts should be considered as both a process and an outcome. Therefore, a working definition of community efforts in simple but broad terms is: A process: developing and enhancing the ability to act collectively, and an outcome: (i) taking collective action and (ii) the result of that action for improvement in a community in any or all realms: physical, environmental, cultural, social, political, economic, etc. Having arrived at a comprehensive definition of community efforts, the focus can now shift to how it can lead to community development and economic development.

The community development literature generally refers to this as social capital or social capacity, which describes the abilities of residents to organize and mobilize their resources for the accomplishment of consensual defined goals (Christenson & Robinson, 1989), or the resources embedded in social relationships among persons and organizations that facilitate cooperation and collaboration in communities (Committee for Economic Development 1995). Simply put, social capital or capacity is the extent to

which members of a community can work together effectively to develop and sustain strong relationships; solve problems and make group decisions; and collaborate effectively to plan, set goals, and get things done. There is a broad literature on social capital with some scholars making distinction between bonding capital and bridging capital (Agnitsch, Flora and Ryan, 2006). Bonding capital refers to ties within homogeneous groups (e.g., races, ethnicities, social action committees, or people of similar socio-economic status) while bridging capital refers to ties among different groups. There are four other forms of “community capital” often mentioned in the community development literature (Green and Haines 2002): (i) Human capital: labor supply, skills, capabilities and experience, etc., (ii) Physical capital: buildings, streets, infrastructure, etc., (iii) Financial capital: community financial institutions, micro loan funds, community development banks, etc., and (iv) Environmental capital: natural resources, weather, recreational opportunities, etc. Community effort is a process where community members work together to create new wealth and well-being. Some indices of community efforts include: (i) provision of health institutions to reduce communicable diseases; (ii) provision of educational institutions and capacity building issues such as drop-out rates and training; (iii) provision of infrastructure such as roads, water, sewage, utilities, etc.; (iv) Housing; (v) Community demographics such gender breakdowns, youth and Elders, income, etc.; (v) Environmental concerns such as global warming, government interventions in subsistence living, resource developments, etc.

Theoretical Review

One of the theories that can be used to explain the relationship between community effort and economic development is the location theory of community development which was propounded by Giloth (1998). The theory states that, development can accrue a community because of the geographical factors supporting the natural distribution of resources, which attract industries requiring these resources to it. The economic-based theories look at the flow of economic activities into and out of local communities to identify and explain which firms and industries have the greatest capacity to expand, on which much development emphasis will be placed with their multiplier impact on the host community. This theory relates the community’s economic growth directly to the demand for its goods and services from outside its local economic boundaries. The growth of industries using local resources: labour and material, according to Giloth (1998) generate both local wealth and jobs. The local economic development strategies that emerge from this theory they argued, emphasizes the priority of aids to and attraction to local environment of industries with markets both within and outside the community over aids to firms with market only within the community. Robinson (1989) observed that the implementation of this model require measures that reduce barriers to the establishment of industries producing for sale within and outside the community; adding that current and high technology strategies aimed at attracting new firms draw on this economic-based model. Empirical findings support the argument that inter-country and inter-community export industries have high job multipliers. Thus jobs created in these firms are known to generate jobs elsewhere within the community. Central to this theory is the view that economic activity tends to agglomerate in specific places and to choose locations with a large local demand resulting in a self-reinforcing growth process. The spatial distribution of economic activity can be explained by agglomeration (or centripetal) forces and dispersion (or centrifugal) forces. The former include backward and forward linkages of firms, externalities and scaled economies while the latter include negative externalities, transport costs and intensification of competition. Consequently, location theory of

community development is mainly concerned with the location of economic activity, agglomeration and specialization rather than with economic growth per se. This study is anchored on the location theory of community development.

Empirical Review

Ferguson, Ronald and William (2007) investigated the effect of community efforts on economic development in Canadian communities. A sample size of 300 respondents was selected from three Canadian communities by using simple random sampling technique. The model was estimated by using Ordinary Least Square (OLS) regression techniques, and the study found that community efforts were most important for rural growth and that economic development was more strongly linked to community efforts in provision of amenities. Role of community efforts in economic development was studied by Wylie (2016). The study examined the impact of community efforts on productivity changes after 1980 in Canadian Economy. While exploiting time series data from 1986 to 2014, the study not only estimated trans-log production of labour cost share equation with iterative Zellner estimator for capturing effects of provision of infrastructure by communities on economic development, but also estimated Cobb-Douglas production function with OLS and AR (1) for capturing effects of provision of infrastructure by communities on productivity. The study found more effective role for provision of infrastructure by communities for enhancement of productivity and economic development in Canada as compare to the growth enhancement role of infrastructure in United States. Canning and Bennathan (2010) estimated the rates of return to paved roads provided by communities for a panel on expenditure on road infrastructure, human capital, labour, and cost of environmental pollution of 41 countries. Using logistic regression methods, the study found that the highest rates of return to road infrastructure provided by communities occurred in countries with infrastructure shortages. The study also analyzed whether physical capital, human capital, labor, and other infrastructure variables are complements or substitutes to road infrastructure provided by communities. He found that the length of paved road infrastructure provided by communities is highly complementary with physical and human capital. However the study observed that the marginal return to road infrastructure provided by community declines rapidly if the length of road infrastructure provided by communities is increased in isolation from other inputs. The study concluded that road infrastructure investment done by communities are not sufficient by themselves to yield large changes in output.

Vias (2011) examined community efforts in economic development in South Africa in 2011. The study employed cross-section survey design method. A sample size of 600 respondents was selected from four rural communities in the South Africa using simple random sampling techniques. A structured questionnaire designed by the researchers was used as instrument for data collection. The instrument was validated by experts and its reliability was ascertained using the Cronbach Alpha Coefficient technique. Descriptive statistics, such as, simple percentages, mean and standard deviation were used for data analysis. The study found that communities were positioned to benefit from self-help road construction and provision of health centres. The study recommended that more research be done to examine the differences between rural communities and urban communities. Gibbons, Lytikäinen, Overman and Sanchis-Guarner (2012) estimated the impact of community road on firm employment and productivity using plant-level longitudinal data from 2000 to 2010 for Britain. This study found substantial effects on employment and numbers of plants for small-scale

geographical areas, but no employment response at plant level. Using logistic regression methods, the study found that road construction by communities could affect firm entry and exit, but not the employment of existing firms. Fan, Zhang and Zhang (2012) investigated the effects of road network provided by communities on economic development and poverty in rural India, China and Thailand. By estimating a system of equations, using logistic regression methods, these studies explicitly account for the simultaneous effects of road network investment provided by communities in factor of product markets. Results from the study showed that road investments provided by communities is significant in promoting economic development and poverty reduction. In rural India, investment provided by communities in rural roads was found to have had the largest positive impact on agricultural productivity growth. In China and Thailand, road investments provided by communities were found to have contributed significantly to growth in non-farm and total economic growth as well as in agricultural growth.

Solomon (2012) examined the role of community effort as a viable instrument for fostering community development in Nigeria; challenges and prospects. The study adopted qualitative and textual method in gathering and analyzing secondary data for this study, participatory theory is adopted as its frame work. However juxtaposing these roles with the objective goals of community development in Nigeria, the paper argues that the role of this tier of government in fostering community development is not only insignificant but also marginal compared to what is obtained in the developed nations, this is so owing to certain myriad of problems that confront this tier of government; poverty, and inadequate finances among others. The paper concludes that development can be achieved, sustained, and fostered if these problems enumerated are solved and it will make local government more viable in this task. Thus, the paper proffers recommendations among which are: grassroots institutions should be re-integrated into the scheme of community development. There should be provision of sufficient funds for community development efforts by the Federal and State governments to the local government to carryout programmes, projects and policies that will foster community development in their domain. Baños, González and Mayor (2013) measured the impacts of road infrastructure provided by communities on economic development in Spain. The study employed logistic regression techniques to carry out the analysis. Controlling for spatial effects and time effects, the study find strong evidence of the positive impact of road provided by communities on the private sector performance and hence economic development in Spain. Okoji (2013) examined the socio-economic empowerment of rural women as a correlate of community development programmes of multinational oil corporations in Niger Delta, Nigeria. The study adopted ex-post facto research design and random sampling technique was used to select 1126 respondents from the twelve communities. Two scales were used to collect primary data; these are Host Community Development Inventory (HCDS) $r = 0.71$ and Multinational Oil Development Inventory (MOCDI) $r = 0.74$. Data collected were analyzed with Pearson Product Moment Correlation Analysis at 0.05 level of significance. Findings from the study revealed that the multinational oil corporations did not follow the principle of community development in the intervention programmes because the host communities were not involved in the projects identification, planning, execution and evaluation. Significant relationship did not exist in the economic development ($r = 0.702$; $N = 1126$, $P > 0.05$), vocational skills ($r = 0.005$; $N = 1126$; $P > 0.05$), educational development ($r = 0.025$; $N = 1126$; $P > 0.05$). It was therefore recommended that for the community development programmes of the multinational oil corporations to be

successful, the host communities must be involved in the identification, planning, implementation and evaluation of the projects.

Oliver and Thomas (2017) examined the effect of community efforts on the economic development Benue state in 2017. The study used cross-section survey design. A sample size of 340 respondents was selected from three communities (one community from each senatorial zone) in the State using simple random sampling techniques. A structured questionnaire designed by the researchers was used as instrument for data collection. Questions on community efforts in the areas of education, health, road construction, community electrification, and provision of security were asked. The study revealed that community efforts in the areas of education, health, road construction have significant effect on economic development, but provision of security has minimal effect on economic development in the state. Akhimien, Adamolekun and Isiwale (2018) examined rural and community development in Nigeria with emphasis on housing policies, and strategies employed to bring about rural development in Nigeria. The study assess the impacts of institutions, agencies and efforts made by both domestic and foreign international organizations. The institutions, agencies and non-governmental organizations are programmed to bring about grassroots development. Therefore, clarification of terminology like development, rural community, and sustainability was conducted, this formed the philology basis of the analysis. Findings has shown that efforts made by the Nigerian government through several strategies like the nation's development plans did not bring about desired development. However, international organizations strategies lead to little or no any meaningful improvement in the living conditions of the rural dwellers and rural infrastructure. It was also found out that a number of issues such as corruption, wickedness and mismanagement, sentimental planning from above rather than basic-productive approach; the quest for self-embellishment, greed and pursuance selfish interest has brought about failure of the rural developmental efforts. The researcher's primary source or method of data collection was based on Analytic studies using descriptive method of data analysis to evaluate the draw backs of rural community development. The paper therefore concludes that for the desired development and growth to be realized and sustained, the government based development process must be reversed to rural-based and bottom-up approach, government must continue to create an environment that is conducive for rural development to thrive, the corruption mentality that has bedeviled government representatives and other stake holders must change in Nigeria in order to eliminate corruption and mismanagement of resources. Therefore, for the realization and sustenance of rural development these measures should be established and implemented. Rufai, Olaniyonu, Mohammed and Olayiwola (2018) undertook a study to ascertain if planned school maintenance programme by communities feature in the activities of accreditation agencies. Research hypothesis was generated, the research is of correlational as well as ex-post facto design. The population of the study consisted of all the lecturers and undergraduate students of conventional public Higher Institutions in Lagos State. Data collected using two self-developed questionnaires were analyzed using both descriptive and inferential statistics. The results show that there is no significant difference regarding maintenance practices in federal and state owned higher educational institutions in Lagos State. The Null Hypothesis is therefore not rejected. It was concluded that the Architects and policy makers should endeavour to give Nigerians "maintenance –free buildings or building that required low level of maintenance.

In Nigeria, a number of empirical studies have been carried out on the effect of community effort on economic development. But, from the review of literature above, no empirical studies on the effect of community effort on economic development in Nasarawa State exists. Besides, none of the empirical studies reviewed above has been carried out between 2019 and 2021. Hence, this study contributes to an increasing body of knowledge furnishing evidence of the consequences of effect of community development on economic development. This study will fill these gaps.

3. Methodology

The survey method was adopted for this research to examine the effect of community effort on economic development in Nasarawa state, Nigeria. This method was adopted because the data used for the study were qualitative. To this end, the research used data from primary sources of information. Data were collected by administering questionnaires. The sample size used in this study is 340 individuals drawn from three communities, (one community from each senatorial district Headquarter). The sample size was calculated using Yamane (1967) formula. To achieve this, the ordinary least square (OLS) regression method was used to determine the relationships between variables. The responses to each question in the questionnaire were converted to logit before estimating the regression equation. Chi-square statistic was also employed to ascertain the association between indices of community development and an index of economic development.

This study is centred on Nasarawa State. The study is structured into thirteen local government areas covered mostly by mountains, which are rocky and undulating, most parts of the state are fertile for farming and grazing of livestock. It's bordering with river Benue in the south make fishing possible. The state is located in the North-Central zone of Nigeria with a population of about 2.13 million (National Population Commission, 2016) with average growth rate of 2.5%. The state lies between latitude 7°15'N and longitude 6°18'E and covers a land area of about 32,500 km² (Nasarawa State Ministry of Information, 2002). The state has two main climate seasons: the dry and wet season. The natural vegetation comprises of wooded and rain forest savannah, with annual rainfall ranging between 1000 to 1500 mm. The annual rainfall pattern across the state extends between the months of April and October with minimum temperature ranging from 21.10C to 25C while maximum average temperature ranges from 30C to 35C. The state is made of sixteen (13) Local Government Areas (LGAs) which are grouped into four (3) agricultural zones – A, B, and C- by the state's Agricultural Development Project (ADP) based on agronomic and cultural characteristics. Agriculture is the mainstay of the economy of the state.

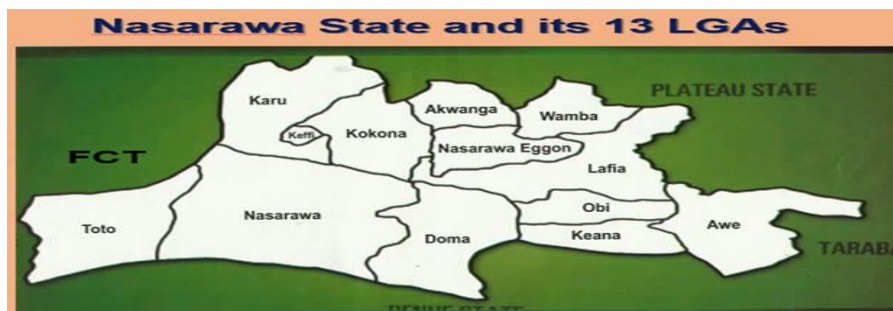


Figure 1: Nasarawa State Map

This study is anchored on location theory of community development propounded by Giloth (1998). The location theory of community development posits that development accrue to a community because of geographical factors supporting the natural distribution of resources, which attract industries requiring these resources to it. The economic-based theories look at the flow of economic activities into and out of local communities to identify and explain which firms and industries have the greatest capacity to expand, on which much development emphasis will be placed with their multiplier impact on the host community. This theory relates the community's economic growth directly to the demand for its goods and services from outside its local economic boundaries. To promote economic development, government need to promote both human and physical capital as well as mobilize both internal and external financial resources. Therefore, provision of education and health by communities which eventually lead to human capital development are significant for economic development in developing countries, including Nigeria.

The population for this study is 340 individuals drawn from three communities-one from each senatorial district Headquarter. The three senatorial district Headquarter that will be covered in the study are Lafia, Akwanga, and Keffi. The three communities selected are: Angwan Kilema (in Lafia), Angwan Ninzo (in Akwanga), and Sabon Gari (in Keffi). The population of these communities is based on the National Bureau of Statistics (2021) were 943; 432; and 768 respectively (NBS, 2021). The three communities were selected because they are located in senatorial district Headquarters.

Table 1: Distribution of Population between the Selected Communities

Communities	Senatorial District	Population Size
Angwan Kilema (Lafia)	Southern Senatorial District	948
Angwan Ninzo (Akwanga)	Southern Senatorial District	436
Sabon Gari (Keffi)	Southern Senatorial District	773
Total		2,157

Source: National Bureau of Statistics (2022).

The sample size was calculated by using Yamane (1967) formula. The study adopted stratified and simple random sampling techniques to draw the sample from the population. The respondents were randomly selected from three (3) communities, one from each senatorial districts Headquarters in Lafia, Akwanga, and Keffi Local Government Areas of Nasarawa state, Nigeria. The senatorial districts Headquarters were chosen because they are more populous and constitute the main commercial areas of each senatorial district. The respondents were stratified into three groups according to the communities and senatorial districts and the name of each household head was written on a piece of paper and a simple random sampling was done by picking one piece of paper at a time from each group up to the sample size of each community. In conclusion, 340 individuals were randomly selected from three communities across Nasarawa state, Nigeria for the administration of the questionnaire. All the individuals from each of the three communities were given an equal chance of being selected through random sampling.

Table 2: Distribution of Samples between the Selected Communities

Communities	Sample Sizes
Angwan Kilema (Lafia)	150
Angwan Ninzo (Akwanga)	122
Sabon Gari (Keffi)	68
Total	340

Source: Author's Computation

The model used in this study was adapted from the work of Okoji (2013) on impact of socio-economic empowerment of rural women as a correlate of community development programmes of multinational oil corporations in Niger Delta, Nigeria. The central building block in his model which follow location theory of community development, is that economic development depends on women empowerment through multinational oil corporations, capacity building, and availability of infrastructure in the community. Those endogenous variables are then determined by the exogenous, largely, economic development variables as indicated in the model below. The Okoji (2013) model, which contains four endogenous variables and 1 exogenous variable, is in general form as below. The model is specified as follows:

$$EDE = f(WEM, CAP, INF) \dots\dots\dots 1$$

Where EDE = Economic Development (poverty); WEM = Women Empowerment; CAP = Capacity Building; and INF = Infrastructural Facilities. Using this model the necessary variables of interest are then introduced as presented in equation (2) below.

Model (1) above is modified by replacing women empowerment and capacity building with provision of educational, and health facilities. Thus, the model for this study is specified as:

$$EDE = f(EDU, HEA, ROD) \dots\dots\dots 2$$

Since education (EDU), health (HEA), and roads (ROD) are funded by both private and public sectors, the regression form of the model is thus stated in linear forms as:

$$EDE_t = \beta_0 + \beta_1PRE_t + \beta_2PUE_t + \beta_3PRH_t + \beta_4PUH_t + \beta_5PRR_t + \beta_6PUR_t + U_t \dots\dots\dots 3$$

Where EDE_t = Economic Development at time t (Proxy by Income Level); PRE = Primary school enrolment in Nasarawa state communities at time t; PUE = Public school enrolment in Nasarawa state communities at time t; PRH = Private sector health facilities in Nasarawa state communities at time t; PUH = Public sector health facilities in Nasarawa state communities at time t; PRR = Roads provided by community effort in Nasarawa state communities at time t; PRU = Roads provided by public sector in Nasarawa state communities at time t; and U = Error Term at time t. Model (3) was estimated by using Ordinary Least Square (OLS) regression techniques. From the model (3.3), our a priori expectations are expected to sign positive and greater than zero. Therefore, $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6 > 0$.

Equation (3.3) was estimated using the Ordinary Least Squares (OLS) multiple regression technique. Before estimation, each response was coded according to the number of respondents. Cross-sectional data on the included variables was used. The International Business Machines Corp (IBM) Statistical Package for Social Sciences (SPSS), version 20 was employed for coding while the E-views version 10.0 was used to estimate the model.

Cross tabulation was employed for the analysis of data collected through the administration of questionnaire. The study utilized tables for a summary of the results. Chi-square statistic was also employed to ascertain the association between economic development (level of income) and community development efforts. Chi-square method was used to determine whether or not a relationship is statistically significant (i.e., not probable as a result of chance).

Cramer's V method was utilized to determine the statistical significance and provides information about the strength of the relationship between the dependent and

independent variables. The decision rule is that a Cramer’s V value of 0 = No relationship, 0.2 or less = Weak relationship, from 0.21 to 0.3 = moderate, and above 0.3 = Strong relationship. In terms of analysis of reliability, the Cronbach’s alpha was employed to check for data reliability. The decision rules are that: 0 – 0.2 is weak/minimally acceptable; 0.21 – 0.25 is moderate/acceptable; 0.26 – 0.30 is moderately strong; 0.31 – 0.35 is strong; 0.36 – 0.40 is very strong; and 0.41 – 0.45 is worryingly strong. As was observed by Nunnally (1978), the most minimum cited threshold for Cronbach alpha in terms of the range of acceptance is 0.25.

Economic development is the increase in three basic values of development, namely: sustenance, involving the ability to meet basic needs such as food shelter, health and protection. It is measured in Naira (#). Private school enrolment in Nasarawa state communities is measured by the number of pupils/students in the registers in private primary/secondary schools in the selected communities; Public school enrolment in Nasarawa state communities is measured by the number of pupils/students in the registers in public primary/secondary schools in the selected communities; Private sector health facilities in Nasarawa state communities is measured by the number of private health institutions in the selected communities; Public sector health facilities in Nasarawa state communities is measured by the number of public health institutions in the selected communities; Roads provided by community effort in Nasarawa state communities is measured by the number of kilometer of roads constructed by community effort in the selected communities; and Roads provided by public sector in Nasarawa state communities is measured by the number of kilometers of roads constructed by government in the selected communities.

4. Results

Table 3: Descriptive Statistics of Community Effort

Community Effort	Frequency	Percentage
School Enrolment		
Private (primary and secondary) school enrolment	240	70.6
Public (primary and secondary) school enrolment	100	29.4
Health Facilities		
Private sector health facilities	300	88.2
Public sector health facilities	40	11.8
Roads		
Roads provided by community effort	310	91.2
Roads provided by public sector	30	8.8
Total	340	100.0

Source: Author’s Computation

The data on table 3 indicated that private school enrolment is 240 or 70.6%, while public school enrolment is 100 29.4%. This means that private school enrolment is greater than public school enrolment. For health facilities, it revealed that private health facilities are 300 or 88.2%, while public health facilities are 40 or 11.8%. This means that private health facilities are greater in number than public health facilities. The data obtained on roads indicated that roads provided by community effort is 310km or 91.2%, while roads provided by public sector is 30 or 8.8%. This means that roads provided by community is longer in terms of kilometer than roads provided by public sector. Indices of community efforts were tested to ascertain the differential in economic development in selected communities in Nasarawa State. Chi-Square and Cramer’s V

were used to test the relationship between indices of community efforts and economic development in communities in the State.

Table 4: Pearson Chi-Square Result

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24.544 ^a	32	0.023
Likelihood Ratio	27.039	32	0.516
Linear-by-Linear Association	0.323	1	0.570
N of Valid Cases	340		

Source: Author's Computation

Table 4 reveals the results of cross tabulation. Based on the Pearson chi-square results, community efforts is statistically associated with economic development since the value of Pearson Chi-Square (24.544) is greater than asymptotic significant (0.023).

Table 5: Symmetric Measure

	Value	Approx. Probability
Phi	0.254	0.034
Cramer's V	0.227	0.034
No. of Valid Cases	340	

Source: Author's Computation

The results on table 5 revealed that there is correlation between community effort and economic development. Cramer's V, which indicates the strength of the relationship between the variables is 0.227 and, thus, the impact of the relationship is moderate/acceptable.

Table 6: Regression Results for the Model of Economic Development (Income Level)
Dependent Variables: Economic Development (Income Level)

Variable	Coefficient	Std. Error	t-Statistic	5% Critical Value	Prob.
C	2.274	0.771	2.950	2.943	0.004
PRE	0.035	0.200	0.675	2.943	0.328
PUE	0.002	0.132	0.031	2.943	0.605
PRH	0.080	0.136	1.497	2.943	0.135
PUH	0.135	0.200	0.675	2.943	0.428
PRR	0.008	0.153	0.031	2.943	0.028
PRU	0.170	0.128	1.327	2.943	0.235

Note: R² = 0.6248, F-Stat. = 4.096, DW = 1.162

Source: Author's Computation

Regression results for the model of economic development (Income Level) are presented on table 6. The results revealed that the coefficient of private school enrolment (PRE) is positive, indicating positive relationship between economic development (level of income) and private school enrolment in communities in Nasarawa State, and this is in line with apriori expectation. This means that as educational development increases, level of income increases (economic development increases) and vice versa. This means that private school enrolment is significant in increasing level of income (economic development) in communities in Nasarawa State. Table 6 also revealed that the public school enrolment (PUE) is positive, indicating positive relationship between economic development (level of income) and public school enrolment in communities of Nasarawa State, and this is in line with a priori expectation. This means that as the public school enrolment increases, level of income increases (economic development increases) and vice versa. This means that

provision of public schools is significant in increasing level of income (economic development) in communities in Nasarawa State.

Table 6 also revealed that the coefficient of private health facilities (PRH) is positive, indicating positive relationship between economic development (level of income) and availability of private health facilities in communities in Nasarawa State, and this is in line with a priori expectation. This means that as the number of private health facilities increases, level of income increases (economic development increases) and vice versa. This means that development of private health facilities is significant in increasing level of income (economic development) in communities in Nasarawa State.

Table 6 revealed that the coefficient of public health facilities (PUH) is positive, indicating positive relationship between economic development (level of income) and public health facilities in communities in Nasarawa State, and this is in line with a priori expectation. This means that as health development increases, level of income increases (economic development increases) and vice versa. This means that public health facilities are significant in increasing level of income (economic development) in communities in Nasarawa State. Table 6 revealed that the coefficient of roads provided by community effort (PRR) is positive, indicating positive relationship between economic development (level of income) and private school enrolment in communities in Nasarawa State, and this is in line with a priori expectation. This means that as roads provided by community effort increases, level of income increases (economic development increases) and vice versa. This means that roads provided by community effort are not significant in increasing level of income (economic development) in communities in Nasarawa State. Table 3 revealed that the coefficient of roads provided by public sector (PRU) is positive, indicating positive relationship between economic development (level of income) and roads provided by public sector in communities in Nasarawa State, and this is in line with a priori expectation. This means that as the number of roads provided by public sector increases, level of income increases (economic development increases) and vice versa. This means that private school enrolment is significant in increasing level of income (economic development) in communities in Nasarawa State. The value of coefficient of multiple determination ($R^2 = 0.6248$) shows that the variability in the explanatory variables (PRE, PUE, PRH, PUH, PRH, and PRU) account for 62.5 percent of the variability in EDE. This suggests that the model is of good fit. The high value of F-statistic (4.096) also underscores the good fit of the model. The small value of Durbin-Watson stat (1.162) indicates absence of spurious results prevalence in autocorrelation in time series data.

The results from the present study revealed that there is positive relationship between economic development (level of income) and educational development (primary school enrolment) in communities in Nasarawa State. This finding agrees with the submissions of Larry and Sunday (2016) who found that there is positive relationship between the provision of educational facilities and economic development in the rural communities of Ebonyi state. The positive but not significant effect of private school enrolment implies that not many pupils have been enrolled in private schools in communities in Nasarawa State. Health facilities (HEA) were found to have positive relationship with economic development (level of income) in communities in Nasarawa State. This result agrees with the findings by Fan, Zhang and Zhang (2012) in rural India, China and Thailand who revealed that public investment on health facilities was found to have had the largest positive impact on economic development. In China and Thailand, community investments on provision of health facilities were found to have contributed

significantly to growth in non-farm and total economic development as well as in agricultural growth in the communities. The positive but not significant effect of private school enrolment implies that not many patients were treated in private health facilities in communities in Nasarawa State. The study also revealed that the coefficient of roads is positive, indicating positive relationship between economic development (level of income) and availability of infrastructural facilities (road) in communities in Nasarawa State. This result agrees with the submissions of Laborda and Daniel (2009) who found positive effects of road density and road paved on total factor productivity (TFP) in countries with middle low and low income. Thus, the null hypothesis of no significant effect of roads on economic development in communities in Nasarawa State should be rejected. The positive but not significant effect of roads on economic development implies that not much has been done in the provision of facilities in communities in Nasarawa State.

5. Conclusion and Recommendations

From the analysis of the results, it can be stated that all the indicators of community efforts (educational development, health facilities, and road network) have positive impact on economic development (level of income) in communities of Nasarawa State. Therefore, it can be concluded that community efforts generally have positive impact on economic development (level of income) in communities of Nasarawa State.

Based on the findings of this study, recommendations include provision of more educational facilities by communities will help to develop a resilient population thereby leading to better performance of civil services in communities. Provision of more health facilities by communities will create in-built resistance among the residents to epidemics caused by air, water, and changes in weather. Therefore, all stakeholders and hands must be on deck in the fight against illiteracy in communities so that Nasarawa state can join her members in enjoying the dividend of development experienced through education. Communities should hasten their efforts in the provision of infrastructural facilities, especially road network to encourage entrepreneurial activities which is believed to be the remote solution to unemployment problem in the country as good road network is one of the factor in the economy. Government should also endeavour to provide other infrastructural amenities, such as safe and uninterrupted water supply, and efficient telecommunications to every community as this will boost the level of employment generation and will engage citizens productively in Nasarawa State. There is also the need to formulate policies tailored towards developing the informal sector of the economy so as to ensure community road development which may likely reduce unemployment and improve economic development in the communities. There is a need to establish peasant associations and cooperation that will assist providing credit, saving, and marketing agricultural products and local transportation of products within the communities

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