



Factors Influencing Rural Dwellers Participation in Millennium Village Project (MVP) in Pampaida, Kaduna State, Nigeria

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Abstract

This study examines the factors influencing rural dwellers participation in Millennium Village Project (MVP) in Pampaida of Kaduna State, Nigeria. Specifically the socio-economic characteristic of the beneficiaries of the project were identified; and factors influencing rural dwellers participation in the project examined. Data collection process was through the use of structured questionnaire. The study used 120 questionnaires administered to randomly selected respondents in 28 settlements divided into 4 clusters of 7 settlements each. Descriptive statistics and multiple regressions were used to analyze the data. The findings show that most of the respondents were experienced young small scale male adult farmers with little formal education (42%) and massive contact with extension agents. Furthermore, age, income, educational attainment, farm size and extension contact were the reasons why the respondents participated in the MVP. Therefore, the following recommendations were made: more adult education centers should be established in the area, as well as more facilitators employed to increase the educational level of the programme participants; soft loans should be granted to the farmers to offset the bureaucratic procedures for credit facilities.

Keywords: MVP, participation, poverty, rural dwellers

Introduction

Most of the poor people live in rural areas. Their first need is food, and past successes in mass poverty reduction programmes have placed heavy emphasis on getting resources for increased staples production, productivity; and consumption to small holders and farm workers (Lipton, 2001). Yet, most developing countries' poverty reduction strategies are macro-economic in nature, because they say little about where to get resources for agriculture or rural development, or how to get those resources to the poor. According to the United Nations (UN, 2001), the population of sub-Saharan

Africa is on the increase; with one-third of the population living below the minimum level of dietary energy consumption, hence majority are undernourished people. They are crippled by factors such as diseases; climatic changes; low level of irrigation; extreme isolation in mountains and land locked; insufficient energy resources; and other liabilities that have kept them outside the mainstream of global economic growth. Nonetheless, while many that live within these countries are impoverished, they are also capable and resourceful. Though struggling to survive, they are not dispirited but are determined to improve their situations.

The developing countries generally already contend with chronic poverty and food crisis in various dimensions. Africa has a higher

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proportion of people living in poverty than any other continent, with 90 percent of the poor living in rural areas, where approximately 80 percent of the rural populace depend on agriculture for their livelihood (Enete and Amusa, 2010). In Nigeria rural poverty issue has been described as widespread and increasing daily in spite of the country's vast resources (CBN/World Bank, 1996; Ayanwale and Alimi, 2004). The poverty situation in the country has since been a cause for concern as it shortens lifespan. For instance, given an estimated average global life expectancy of 68.09 years for both sexes, Nigeria's overall life expectancy at birth is 52.46 years (CIA, 2012a). In other words, Nigerians are about 23% below the average world life expectancy. The severity of poverty in Nigeria's rural areas is particularly heart-rending. This is further aggravated by the country's extremely low per capita income of US\$1,600 – based on 2012 estimates; that is, US\$4.38 per day, ranking Nigeria globally at 146th position. In addition, 2012 GDP based on purchasing power parity (PPP) was \$2,800, depicting daily PPP of \$7.67 (CIA, 2012b).

The agricultural sector in Nigeria is predominantly in the hands of rural dwellers, majorly the smallholder farmers, who have been generally described as poor and hungry. The concern about the threat posed by poverty has led the Nigerian government to devote considerable attention to alleviating its scourge through the implementation of various rural poverty alleviation programmes. Some of these programmes include: The River Basin Development Authority (RBDA), launched in 1975; Agricultural Development Projects (ADPs), 1975; Operation Feed the Nation (OFN) of 1976; The Green Revolution, 1980; and the Directorate for Food, Roads and Rural Infrastructure (DFRRI), established in 1986. Other initiatives were: Better Life Programme (1994); Poverty Alleviation Programme (PAP); National Special Programme for Food Security (NSPFS) launched in 2002; The Community Based Agricultural and Rural Development

Programme (CBARDP) of 2003; National Economic Empowerment Development Strategy (NEEDS) (2003-2007); and a host of others.

All these programmes failed to make a dent of impact to achieve the stated objectives in the lives of the rural dwellers due to top-bottom approach adopted without due consultation, participation or involvement by the poor over programme initiative, execution, coordination and implementation. As a result, seven out of every ten Nigerians are absolutely poor (NEEDS, 2004). This situation is worse in the rural areas where more than 75% are very poor (Ikwuba, 2011).

The world's target for reducing extreme poverty in its many dimensions by 2015 was reached after several conferences, summits and resolutions by concern bodies and organizations. Finally, the United Nations' 189 member countries signed the Millennium declaration on September 8, 2000 (United Nations, 2001), which adopted a new global partnership in tackling the rural poverty problem. This has become known as the Millennium Development Goals (MDGs), premised on eight goals, viz; (i) ending poverty and hunger; (ii) universal primary education; (iii) promote gender equality and women empowerment; (iv) reduce child mortality; (v) improve maternal health; (vi) combat HIV/AIDS, malaria and other diseases; (vii) ensure environmental sustainability; and (viii) develop a global partnership for development (Anonymous, 2008).

To achieve the MDGs, Millennium Village Projects (MVP) were designed using community-led development approach with targeted and low-cost investments in selected villages in rural areas. The MVP operates in 80 villages organized in 14 clusters in Africa. These villages were selected to represent the principal agro ecological zones and farming systems of Africa that are hunger hotspots. The Millennium Village Projects (MVP) are operating with financial and technical

supports from the Earth Institute/Columbia University, the Millennium Promise, the United Nations Development Programme (UNDP, 2011), governments and donor agencies. The first Millennium Village was started in Sauri, Kenya in 2004 (Carr, 2008). The success led to the establishment of 75 other villages in 12 African countries. In 2006, the Millennium Village Project, a bottom-up approach for lifting villages out of the trap of poverty, through rural dwellers participation was established in two clusters for the Northern and Southern parts of Nigeria. These are the Ikara Millennium Village cluster in Ondo State and the Pampaida Millennium Village cluster in Kaduna State (UNDP, 2011).

Project participation is the involvement of an individual from the decision-making stage, planning, implementation, execution, operations and even evaluation. UNDP (1993) defines participation as when people are closely involved in the economic, social, cultural and political processes that affects their lives. According to Kolawale (1990), participation may involve multi-sectoral approach whereby people take part in decision making. Ekong (2003), defined participation as "playing active, though not necessarily direct roles in community decisions, knowledge of local issues, attendance of public meetings related attempts to influence proposed measures through individual and group actions, belonging to groups and committees and financial contributions towards community programmes". According to Yoon (2001), different ways of participation in most development projects are: participation in implementation; evaluation; benefit and decision making. He opines that participation in decision-making is the most important form to promote as it gives people a say over their future and environment, it also helps the people to acquire problem solving skills and full ownership of projects. These are key elements of sustainable community development.

IFAD (2002) observed that participatory processes can be effective in increasing the

incomes and food security of the rural poor as well as to reverse environmental degradation. Participation, according to Pretty (1995) is one of the critical components of success. To ascertain this, World Bank (1997) in Pretty (1995) stated that participation has been associated with increased mobilization of stakeholder ownership of policies and projects; greater efficiency, understanding and social cohesion; more cost-effective services; greater transparency and accountability; increased empowering of the poor and disadvantaged; and strengthened capacity of people to learn and act. Studies have shown that different farmers have different or varied reasons for participating in agricultural and rural development programmes. Edi *et al.* (2007) reported that labour intensive projects, with high dependence on household income constrained farmers' participation. Whereas, programmes that provides easy access to farming inputs, environmentally friendly, and provide adequate leisure time encouraged participation. According to Dimitri and Nicholas (2002), farmer's decision to participate in agricultural development projects in Greece was dependant on their agricultural education/training and economic level. Therefore, there is need to investigate factors which motivated rural dwellers participation in the Pampaida Millennium Village Project in Kaduna State, Nigeria. Hence, specifically this study sought to identify socio-economic characteristics of the project participants, as well as factors that influenced the rural dwellers' participation in the project.

Methodology

The study was conducted in Pampaida, Kaduna State of Nigeria. Pampaida is made up of 28 settlements with a population of 5,666 people (NPC, 2006). Pampaida represents the agro forestry parkland system in the dry sub-humid Sudan savanna, characterized by shrubs, trees and grasses of different species with a strong presence of livestock. Generally the farmers practice

agrosilvopastoral farming system with uni-modal rainfall pattern averaging 1050mm annually commencing from June to November yearly. The area soil type is haplustalfs, sandy to loamy with sorghum and maize as the main cultivated crop (Nziguheba *et al.*, 2010). During the rainy season, the rivers spill their banks creating low lying seasonal flooded areas called *Fadama* which the villagers use to grow rice. Multistage method of sampling was employed for this study. The research covered 28 settlements of MVP in Pampaida. The settlements were grouped into 4 clusters of 7 settlements each. In each cluster, 30 household heads, been adequate representation of each cluster, were randomly selected, making the total sampled respondents of 120 people. Primary data were collected through the use of structured questionnaire. Descriptive statistics and multiple regression methods of analysis were used in this study. The multiple regression is shown as:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_9X_9 + U$$

Where:

- Y = Access to MDGs interventions (Total Number)
- a = Constant
- X₁ = Age (Years)
- X₂ = Gender (Male = 1, Female = 2)
- X₃ = Farm size (Ha)
- X₄ = Level of education (Years)
- X₅ = Household size (Number)
- X₆ = Extension contact (Number.)
- X₇ = Access to credit (Yes=1; No =2)
- X₈ = Income (Total annual income)
- X₉ = Farming experience (Years)
- b₁-b₉ = Regression co-efficient
- U = Error term

Results and discussion

Socio-economic characteristics of the beneficiaries

Result presented in Table 2, depicts the socio-economic variables of MVP participants in the area of study. It was revealed that respondents' ages range between 21- 70 years. Age is very important in agricultural production and project participation because it determines the physical strength of the farmer / individual (Oladimeji and Abdulsalam, 2013; Muhammed-Lawal *et al.*, 2009).

Table 2: Socio-economic distribution of respondents

Variable	Frequency	Percentage (%)
Age		
21-30	38	32
31-40	46	38
41-50	24	20
51-70	12	10
Gender		
Male	106	88
Female	14	12
Education		
No formal education	36	30
Koranic	34	28
Adult education	1	0.8
Primary school	33	27.2
Secondary school	8	7
Tertiary institution	8	7
Household		
1-5	67	56.0
6-10	39	32.0
11-15	7	6.0

16-20	6	5.2
21-25	0	0
26-30	1	0.80
Farm size		
Less than 2	19	16
2-4	66	55
Above 4	35	29
Farming experience		
1-10	6	5
11-20	50	42
21-30	43	36
31-40	19	17
Frequency of contact with extension workers		
1-10	24	21
11-20	32	28
21-30	14	12
31-40	16	14
41-50	14	12
51 and above	13	13
Total	120	100

Source: Field survey, 2011

About 70% of the respondents are between the ages 21 - 40 years. This agrees with the assertion that young people tend to withstand stress, put more time in various agricultural operations and participate in programmes/projects which can result to increased output (Adeola, 2010). Rahaman *et al.* (2002) reported that farmer's age may influence adoption of innovation or technology (participation) in several ways.

Majority (88%) of the respondents were males; indicating that males participate in MVP than females. This can be attributed to the fact that household heads are mostly men except in a situation where the husband is dead or the woman is a divorcee. The educational level of the respondents in the study area was very low; most (58%) of the respondents did not have formal education, with 27% academic apex being primary school. It was indicated that average household size was 6 people with about 56% having 1-5 people. The rural communities are predominantly farmers who practiced early marriage; it was amazing at the small size of their households; implying that farmers labour would have to be supplemented with hired labour or animal traction. Household size in an agrarian

society plays an important factor because it influences to a large extent supply of labour for immediate farm need (Akinyemi, 1998).

Farm size in an agrarian society is an important resource to fight against poverty and improve living conditions of the farmers. All the rural dwellers in the area were small scale farmers whose farm holdings averaged 3.6ha. The small size of farms can be attributed to the fact that most of the farm lands are owned through inheritance which fragments the land among the family members. This is in conformity with the report of Olukosi and Erhabor (1988) that most subsistence agrarian communities, land acquisition is usually through inheritance which is passed from generation to generation and gets fragmented the more as it is passed from generation to generation. Experience is an important factor in agricultural production and project participation. It is assumed that the higher the experience of the farmer the better will be his productive capacity. From the study, 78% had 11-30 years of experience in farming. This reveals why the respondents readily participated in the programmes of the MVP. The more the experience in farming, the more farmers are

less likely to oppose participation in agricultural programme, as farmer's performance could have great influence on their participation (Nkonya *et al.*, 2008). Furthermore, Nkonya *et al.* (2008) stated that experienced farmer will know the biophysical and socio-economic environment well and thus be able to make informed decisions on land management. The result from the study shows that 93% of the respondents had contact with extension workers on MVP; with maximum number of visits of 55 times during the project implementation period.

Factors influencing rural dwellers participation in MVP

The coefficient of determination which shows the fitness of the data to the model indicates a value of 0.57. This implies that 57% of the variation in the model is as a result of the explanatory variables included in the model. This means that other factors other than the included variables are also responsible for the factors that influence rural dwellers' participation in the project. Age was found to have a positive sign and significant at 1% probability level. Therefore, age is a major factor that influenced MVP participation. Farmers are less likely to quit farming as they get older (Rhodes, 1983). Farm size is very salient in the participation of members in MDG project; hence, the coefficient for farm size

indicates a positive sign and was significant at 5% probability level, which agrees with the *a priori* expectation. This means that as farm size of the individual increases interest in the project will increase. This could be so to adopt new technologies that will result to increased yield.

Education was positively signed and was significant at 1% probability level. As educational attainment of the people increase, their participation in a project will as well increase. This shows that even with the low level of education, they perceived the importance of the project and therefore encouraged them to participate in the project. As formal education increases, participation in a project increases because education facilitates adoption of innovation. Household size was negatively signed and insignificant, implying the higher the number of people in a household the less the participation in the project. This is against expectation because household members are supposed to influence the level of participation in a project in order to meet the demand of the people. Extension contact estimated coefficient showed that extension contact has a positive effect on participation of respondents in MDG project. It revealed that as the number of extension visits increases, the number of participants as well as individual interest in the project will also increase.

Table 3: Multiple regression analysis

	Coefficients	Standard error	t-stat	P-value
Intercept	3.487	1.377	2.531	0.013**
Age	0.167	0.025	6.682	0.0004***
Gender	0.113	1.308	0.086	0.931
Income	0.042	0.057	1.744	0.0458*
Education	0.513	0.127	4.021	0.0001***
Farming experience	-0.003	0.021	-0.123	0.903
Farm size	0.910	0.314	2.901	0.044**
Extension contact	0.011	0.005	1.988	0.0156**
Access to credit	0.535	0.384	1.392	0.167
Household size	-1.170	1.387	-0.799	0.426

R² = 0.57; F = 3.20; *** Significant at 1%, ** Significant at 5%; * Significant at 10%

Access to credit was positive but not significant. This implies that as access to credit of the individuals increase, their participation in the project will increase. The insignificant nature of the variable is against the expectation which may be attributed to the bureaucratic nature of the loans procedures. Also, participants may not be having the collaterals often demanded by the formal lending agencies which can impede the participation in the project as a result of lack of capital to purchase some of the technologies provided them. Income was found to be positive and significant. This implies that income consideration was of great influence that made the respondents to participate in the project so that they can improve their livelihood.

Conclusion

The study set out to identify factors influencing rural dwellers participation in Millennium Village Project (MVP) in Pampaida Community of Kaduna State. The results showed that the respondents were young male headed household heads participating in MVP in the study area, with low level of education, small farm holdings and had massive contact with extension agents especially at the beginning of the project. The regression analysis revealed that age, income, educational attainment, farm size and extension contact were the reasons why the respondents participated in the MVP. As a result of the findings from the study area, the following recommendations are hereby advanced: that rural development experts and policy makers should adopt the community-based development approach in order to carry the participants along; more adult education centres should be established in the area, as well as more facilitators employed to increase the educational level of the programme participants; soft loans should be granted to the farmers to offset the bureaucratic procedures for credit facilities; and, rural dwellers participating in the MVP should form co-operative society to access loans and other capital for improved output.

References

- Adeola, S. S. (2010). *Economic of Insecticide usage among cowpea farmers in Kaduna State, Nigeria*. Unpublished M.Sc. Thesis, department of agricultural economics and rural sociology, Ahmadu Bello University, Zaria.
- Akinyemi, S. D. (1998). *Economic evaluation of the impact of Oyo state agricultural development project on resource use and productivity of farmers*. A paper presented at the department of agricultural economics, University of Ibadan, Ibadan, Nigeria
- Anonymous, (2008). *Nerica and the United Nations millennium development Goals*. In: Somado, E.A., Guei, R.G. and Keya, S.O. (Eds). *NERICA: the New Rice for Africa – a Compendium*, pp. 1-195 www.warda.org.
- Ayanwale, A. B., & Alimi, T. (2004). The impact of the national Fadama facility in alleviating rural poverty and enhancing agricultural development in south-western Nigeria. *Journal of Social Sciences*, 9(3), 157-161.
- Carr, E. R. (2008). The millennium village project and African development: problems and potentials. *Commentary, Progress in Development Studies*, 8(4), 333–444.
- Central Bank of Nigeria/World Bank (1996). *Collaborative Study on Nigeria's Prospects for Development*. Proceedings of a Workshop April 15-17.
- Central Intelligence Agency (CIA) (2012a). *The World Fact Book*. Available at <https://www.cia.gov/library/publications/the-world-factbook/fields/2102.html>.
- Central Intelligence Agency (CIA) (2012b). *The World Fact Book*. Available at <https://www.cia.gov/library/publications/the-world-factbook/fields/2004.html>
- Dimitri, D., & Nicholas, G. (2002). Farmer's participation in Agric-environmental

- schemes in Greece. *British Food Journal*, 3(4), 261-275.
- Edi, D., Paola, G., Ford, R., & Samuel, T. (2007). Factors affecting farmer's participation in agri-environmental measures: A Northern Italian perspectives. *Journal of Agricultural Economics*, 59(1), 114-131.
- Ekong, E. E. (2003). *Rural Sociology: An Introduction and Analysis of Rural Nigeria*. Dove Educational Publication, Uyo, Nigeria.
- Enete, A. A., & Amusa, T. A. (2010). Challenges of agricultural adaptation to climate change in Nigeria: A synthesis from the literature. *Field Actions Science Reports*, 4, 1-11.
- Ikwuba, A. (2011). Absolute poverty deterioration in Benue state: Rural people oriented coping strategy. *Cross-Cultural Communication*, 7(1), 132-140.
- International Fund for Agricultural Development (IFAD) (2002). *Community Based Agricultural and Rural Development Programme Formulation Report*, Rome, Italy.
- Kolawale, A. (1990). Constraints to farmers' participation in large scale irrigation project in Nigeria. Proceedings of National Workshop on Farmers' Participation in Irrigation Development and Management. Institute of Agricultural Research (IAR), Zaria. 7-8.
- Lipton, M. (2001). *Escaping poverty: The poor productive resource needs*. A Keynote Address. AFPRI, Boon, Germany, September. pp. 4-6.
- Muhammed-lawal, A., Omotesho, O. A., & Falola, A. (2009). Technical efficiency of youth participation in agriculture programme in Ondo State, Nigeria. *Journal of Agriculture, Food and Environment*. 5(1), 20-26.
- National Empowerment and Development Strategies of Nigeria, NEEDS, (2004). *NISER. Communication Development Incorporated*, Ibadan, Nigeria.
- National Population Commission (NPC) (2006). <http://www.population.gov.ng/state/crossriverfinal.pdf>. Accessed 10th December, 2010.
- Nkonya, E., Pender, J., & Kato, E. (2008). Who knows who cares? The determinants of enactment, awareness and compliance with community natural resource management regulations in Uganda. *Environment and Development Economics*, 13(1), 79-109.
- Nziguheba, G., Palm, C. A., Berhe, T., Denning, G., Dicko, A., Diouf, O., Diru, W., Flor, R., Frimpong, F., Harawa, R., Kaya, B., Manumbu, E., McArthur, J., Mutuo, P., Ndiaye, M., Niang, A., Nkhoma, P., Nyadzi, G., Sachs, J., Sullivan, C., Teklu, G., Tobe, L., & Sanchez, P. A. (2010). The African green revolution: Results from the millennium villages project. *Advances in Agronomy*, 109, 75-115.
- Oladimeji, Y. U., & Abdulsalam, Z. (2013). Analysis of technical efficiency and its determinants among small scale rice farmers in Patigi local government area of Kwara state, Nigeria. *IOSR Journal of Agriculture and Veterinary Science*, 3(3), 34-39.
- Olukosi, J. O., & Erhabor, P. O. (1988). *Introduction to farm management economics; Principles and applications*. AGITAB Publishers, Zaria.
- Pretty, J. N. (1995). Participatory learning for sustainable agriculture. *World Development*, 23(8), 1247-1263,
- Rahaman, S. A., Ogungbile, A. O., & Tabo, R. (2002). Factors affecting adoption of ICSV III and ICSV 400 sorghum varieties in Guinea and Sudan Savannah of Nigeria. *Journal of Agro Forestry and Environment*, 1(1), 21-32.
- Rhodes, S. E. (1983). Related differences in work attitude and behaviour: A review and conceptual analysis. *Psychological Bulletin*, pp. 328-367. Published by Cornell University Press.
- United Nations (2001). *Road map towards the implementation of the United*

Nations Millennium Declaration.
Report of the Secretary-General,
General Assembly, Distr. General 6
September 2001 Fifty-sixth session
A/56/326, Item 40 of the provisional
agenda, Follow-up to the outcome of
the Millennium Summit.
<http://www.un.org/documents/ga/doc/s/56/a56326.pdf>. Retrieved on
October 30, 2013. 1-58.

United Nations Development Programme
(1993). *Human Development Report,*
United Nations Development
Programs. New York.

United Nations Development Project
(UNDP) (2011). Millennium
Development Villages (MDVs).
Project Factsheet. Available at
www.ng.undp.org/projects/poverty/MDVP.pdf.

World Bank (1997). *Rural development*
poverty reduction and environmental
growth in sub-Saharan Africa.
Findings No. 92
<http://www.worldbank.org>.

Yoon, C. S. (2001). *Participatory*
communication for development. In:
Bessette, G. and Rajasunderam, C. V.
(Eds.) *Participatory Development*
Communication: A West African
Agenda. International Development
Research Centre (IDCR) and
Southbound publishers, Malaysia.
Available
at <http://www.southbound.com.my/communication/parcom.htm>.