**Gaziosmanpaşa Üniversitesi Ziraat Fakültesi Dergisi**
*Journal of Agricultural Faculty of Gaziosmanpasa University*
http://ziraatdergi.gop.edu.tr/

Araştırma Makalesi/*Research Article*

JAFAG
ISSN: 1300-2910
E-ISSN: 2147-8848
(2016) 33 (3), 21-27
doi:**10.13002/jafag887**

# Determinants of Level of Participation of Farmers in Group Activities in Kwara State, Nigeria

**Kemi Funmilayo OMOTESHO[1*] Israel OGUNLADE[1]**
**Muhammad Abdulazeez LAWAL[2] Foluke Beatrice KEHINDE[1]**

[1]Department of Agricultural Extension and Rural Development
[2]Department of Agricultural Economics and Farm Management,University of Ilorin, Ilorin, Nigeria
*e-mail: kfomotesho@gmail.com

Alındığı tarih (Received): 25.04.2015 Kabul tarihi (Accepted): 01.06.2016
Online Baskı tarihi (Printed Online): 14.10.2016 Yazılı baskı tarihi (Printed): 30.12.2016

**Abstract:** Active participation of farmers in farmer-group activities is central to the sustenance of the groups as well as to the success of the participatory approach to agricultural extension. The study analyzed the level of participation of farmers in group activities in Kwara State, Nigeria. In addition, the study evaluated the effect of selected socio-economic characteristic of the farmers on their level of participation. A two stage random sampling method was employed in selecting 261 farmers in the study area. Primary data were collected through the use of structured interview schedule. Descriptive statistics, Likert Scale and the OLS regression analysis were the analytical tools used for the study. The results revealed that the farmers in the study area were predominantly male (87.4%), married (92.7%), middle aged and possessed formal education (73.2%). At P<0.10, six variables; total annual income (0.140), farm size(0.394), number of extension contact (0.064), membership of farmer groups (1.184), access to credit (2.074) and access to training(1.569) influenced farmers participation in farmer-groups. The study recommends the timely provision of farm credit to enable farmers expand the scope of their farming activities. Increased access to training programs as well as extension education should also be intensified.

**Keywords:** Determinants, Farmer-group, Likert scale, Participation and Regression analysis

## 1. Introduction

Agricultural development is undoubtedly a major tool in the economic development of Nigeria. The state of agriculture in the country is however that of enormous untapped potentials as attested to by the percentages of uncultivated arable land area and wasting irrigable land mass (World Bank, 2005). The poor level of commercialization of agriculture, continued dependence on family labour, small and fragmented nature of farm lands are evidences of the resource-poor nature of the average Nigerian farmer. Although Agricultural extension is expected to make a difference to this situation, poor funding is a major challenge of extension service provision in the country (Ammani et al., 2010). The resultant effect of this includes abysmally low extension personnel to farmer ratio. The provision of extension services to farmers in groups is one of the strategies currently adopted in extension service delivery to cope with this challenge.

The terms farmer-groups, farmers' associations, farmers' cooperatives, farmers' societies etc have been used interchangeably by various authors to describe groups of farmers that share common interests and come together to share experiences (DENIVA., 2005a; Uliwa and Fisher, 2004; Asante et al., 2011). Membership of farmer-groups helps small-scale farmers to pull their resources together, jointly market their products and overcome the high transaction cost associated with their small individual sizes through economies of scale (Bernard and Spielman, 2009; Liverpool- Tasie, 2012). The potentials of membership of farmer-groups in enhancing access to farm credit and minimizing individual farmer's risk has also been enunciated (Di Gregorio et al., 2004; Adong et al., 2013). In many developing countries, farmer-groups form

the pivot around which agricultural developmental projects/programmes are woven. Governments, private sector, extension agencies, NGOs and other donor agencies rely on groups as the most reliable means of reaching farmers.

Participation is the process through which stakeholders influence and share control over priority setting, policy-making, resource allocations and access to public goods and services (World Bank, 2014). Development experts opined that participation of individual members of any farmer-group is crucial to the realization of the goals and expectations of the group (Muhammad et al., 2011). In spite of the enumerated benefits of membership of farmer-groups to farmers, participation of farmers in group activities is not guaranteed in many rural communities in Nigeria (Nwaobiala et al, 2014). Poor participation of farmers has been adduced to be partly responsible for the poor performance and failures of farmer-groups. An awareness of the level of participation of members of farmer-groups will provide useful insight for extension agencies and policy makers in strengthening existing groups. Knowledge of the socio-economic characteristics of farmers which affect their levels of participation in group activities will also provide a focus around which stakeholders can work to bring about optimal participation of farmers in group activities. The main objective of the study is to analyze participation of farmers in group activities in Kwara State. Specifically, the study:

- Examined the socio-economic characteristics of farmers in Kwara State;
- Determined the level of participation of farmers in group activities and;
- Examined the effect of socio-economic characteristics of farmers on their levels of participation in group activities.

## 2. Methodology

### 2.1 Study Area

The study area is Kwara State, Nigeria. With a total of sixteen Local Government Areas, the state has a land area of about 36,825 km2 (Federal Office of Statistics, 1995) and a population of 2.371.089 (Kwara State Planning Commission, 2007). The state is located in the North-central zone of the country lying between latitudes $7^{o}45^{'}$N and $9^{o}30^{'}$N and longitudes $2^{o}30^{'}$E and $6^{o}25^{'}$E (Wikipedia, 2014). Major tribes in the State are Yoruba, Nupe, Fulani and Baruba.. The mean annual rainfall ranges between 1000mm and 1500mm. Average temperature ranges between 300C and 350C. The climatic condition favors the cultivation of arable crops including millet, cassava, yam, cowpea, maize, and rice. As obtainable in other States of Nigeria, Agricultural extension service delivery has been public and administered by the Agricultural Development Projects (ADPs) under the supervision of the State Ministries of Agriculture. A number of special agricultural development schemes/projects embarked upon by the Government and some non-governmental organizations (NGOs) over time have also addressed agricultural extension in the State. There are over 700 registered farmer-groups in the state (Kwara State Fadama Office, KWADP 2013), majority of which are economic interest groups.

### 2.2 Sampling Technique and Sample Size

The population for the study comprised of members of all crop based farmer-groups in the study area. The study focused on crop based farmer-groups in order to maintain homogeneity in nature of activities of the respondents. A two-stage random sampling technique was employed in the study. The first stage involved the random selection of 20 percent of the crop based farmer-groups across the four agro-ecological zones in the state. Secondly, three members were randomly selected from each of the selected groups. In all, 261 respondents were selected from 87 farmer-groups in the study area.

### 2.3 Data Collection and Analysis

Data for the study were collected with the use of structured interview schedule. The data were subjected to descriptive statistics (frequency counts, percentages, and means). A five point Likert scale was used to elicit information on the level of participation of the farmers in their

farmer-group activities. Statements which depict level of involvement of the farmers in the group activities were posed at the respondents. The respondents rated on a scale of 1 to 5, the extent to which they agreed or disagreed with the statements. The mean score of the respondents was adopted as a measure of their level of participation in their groups' activities. The scale was graduated as follows;

Strongly disagree=1, disagree=2, indifferent =3, agree=4 and strongly agree=5

The multiple regression analysis using the Ordinary Least Square (OLS) method was used in determining the factors influencing farmers' levels of participation in group activities. The explicit form of the multiple regression models is given by:

$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8 X_9 X_{10} X_{11} X_{12} U)$ ……1

Where:

$Y$ = Farmers' level of participation in farmer-group activities

$X_1$ =Age of the respondents measured in years

$X_2$ =Gender measured as a dummy variable 1 for male, 0 for female

$X_3$ = Marital Status measured as a dummy variable 1 if married, 0 otherwise

$X_4$ =Total Income measured in naira as the addition of farm income, non farm income and available income from other household members

$X_5$ =Highest Educational Attainment measured as a dummy variable 1 for the possession of formal education and 0 otherwise

$X_6$ =Land Tenure measured as a dummy variable 1 for owned, 0 otherwise

$X_7$ = Farm Size measured in hectares

$X_8$ = Farming Experience measured as number of years spent in farming

$X_9$ = Number of extension contact measured as the number of extension contact in the past 12 months

$X_{10}$ = membership of other farmers' groups Measured as a dummy variable 1 if yes, 0 otherwise.

$X_{11}$ =Access to farm credit measured as a dummy variable, 1 if yes 0 otherwise

$X_{12}$ =Access to training measured as a dummy variable, 1 if yes 0 otherwise

U= Error term

## 3. Results and Discussion

### 3.1 Socio-economic Characteristics

This section describes selected socio-economic characteristics of the respondents. Table 1 presents a summary of these socio-economic characteristics.

Table 1 reveals that on the average, the respondents were middle aged, predominantly male and married. Majority had at least primary school education. Many of the respondents farmed on leased farmlands, while their distribution by farm size confirmed that they were largely small-scale farmers. Majority (81.2%) of the respondents had more than 10 years experience in farming. On the average the respondents had one extension contact per month and about half of them had benefited from training exercises over the immediate past 12 month period. In addition, about half of the respondents had benefitted from credit largely from friends, relations and cooperative societies. Majority (80%) earned below N400.000 per annum.

### 3.2 Level of Participation of Farmers in Farmer-group Activities

This section discuses the level of participation of the respondents in their groups' activities. Table 2 present the scores of the respondents on their levels of participation while Table 3 presents the average response to individual statements used to access the respondent level of participation.

As shown in Table 2, all the respondents had mean scores above two out of the maximum obtainable score of five. The modal score of 4.01-5 (42.9%) reveals an appreciable level of participation among the respondents in the activities of their groups. The mean score of 3.78 also strengthens this position.

According to Table 3, about 60 percent of the respondents attended group meetings regularly while 35 percent did not. With an average of 3.38, sixty six percent of the respondents

participated in decision making within their groups.

Close to 70 percent are involved in the election of group executives and fulfilled their financial obligations to the groups.

**Table 1.** Selected Socio-economic Characteristics of Respondents

| **Socio-economic Variable** | **Dominant Indicator** | **Mean** |
|---|---|---|
| Age | About two thirds of the respondents were aged between 31 and 50 years old | 51.03 |
| Gender | Majority (87.4%) were male | |
| Marital Status | Majority (92.7%) were married | |
| Level of Education | 73.2 % had formal education though most at primary school level only | |
| Land Tenure | Majority (77.4%) farmed on leased land | |
| Farm Size | 67.8% had between 1 and 2 hectares of farmland | 2.05 |
| Farming Experience | 67.5% had more than 10 years farming experience | 21.37 |
| Extension Contact | 13.4% had no extension contact over the immediate past 12 month period | 12 |
| Membership of other Farmer-groups | 65.5% belonged to more than one farmer-groups | |
| Access to Credit | 52.1% had accessed credit over the immediate passed 12 month period though most (79.2%) received not more than N100,000 | |
| Access to Training | About half of the respondents have undergone trainings within the immediate passed 12 month period. | |
| Total Annual Income | Only 20% of the respondents had total annual income of above N400,000 | N290,416.80 |

Source: Field Survey, 2013

Majority of the respondents (86.2%) fulfilled their social obligations to the groups, 84.3 percent were obedient to the bye-laws and regulations of their groups and 89.6 percent participated in activities of the groups.

**Table 2.** Distribution of Respondents by Mean Scores on Level of Participation in Farmer-group Activities

| **Mean Score** | **Frequency** | **Percentage** |
|---|---|---|
| **0-1** | 0 | 0.0 |
| **1.01-2** | 0 | 0.0 |
| **2.01-3** | 53 | 20.3 |
| **3.01-4** | 96 | 36.8 |
| **4.01-5** | 112 | 42.9 |
| **Total** | **261** | **100.0** |
| **Minimum** | 2.25 | |
| **Maximum** | 5.00 | |
| **Mean** | **3.78** | |

Source: Field survey, 2013

However, more than half of the respondents do not work consciously towards the group goals. The poor performance of this respect is also revealed by the average response of 2.44 out of 5. While 12.6 percent were undecided, only 36.4 percent worked consciously towards the achievement of their group goals.

### 3.3. Determinants of Levels of Participation in Group Activities

This section discusses the result of OLS regression to examine the effect of various selected socio-economic variables on the level of participation of the respondents in group activities. Table 4 presents the result of the regression analysis.

Six of the 12 variables examined (total annual income, farm size, number of extension contact, membership of farmer-groups, access to credit and training) in the study influenced participation of the respondents in farmer-group activities. The variables explained 67 percent of the variations observed in the levels of participation of the respondent.

**Table 3.** Distribution of Respondents by Extent of Participation in Group Activities

| Likert Items | Strongly Agree | Agree | Undecided | Disagree | Strongly Disagree | Response Average |
|---|---|---|---|---|---|---|
| Respondent attends meetings regularly | 36(13.8) | 123(47.1) | 11(4.2) | 62(23.8) | 29(11.1) | 3.29 |
| Participation in group decision making | 36(13.8) | 137(52.5) | 15(5.7) | 35(13.4) | 38(14.6) | 3.38 |
| Participation in election of group executive | 45(17.2) | 137(52.5) | 8(3.1) | 34(13.0) | 37(14.2) | 3.46 |
| Fulfillment of financial obligations | 38(14.6) | 139(53.3) | 23(8.8) | 47(18.0) | 14(5.4) | 3.54 |
| Fulfillment of social obligations | 59(22.6) | 166(63.6) | 8(3.1) | 27(10.3) | 1(0.4) | 3.98 |
| Obedience to bye-laws and regulations | 79(30.3) | 141(54.0) | 12(4.6) | 24(9.2) | 5(1.9) | 4.02 |
| Participation in group activities | 87(33.3) | 147(56.3) | 13(5.0) | 13(5.0) | 1(0.4) | 4.17 |
| Conscious work towards group goals | 40(15.3) | 55(21.1) | 33(12.6) | 113(43.3) | 20(7.7) | 2.44 |

Source: Field Survey, 2013

Table 4 reveals that the level of participation of the respondents increased with increase in total annual income. This finding supports that of Scrimgeour at al., 2006 and may be attributed to the fact that higher income suggests higher social status, and acceptability in addition to access to funds with which to meet financial obligations of membership of farmer-groups.

**Table 4**. Result of OLS Regression Analysis

| Variables | Unstandardized Coefficients β | Std. Error | t | P Value |
|---|---|---|---|---|
| Constant | 33.892 | 2.014 | 16.829 | .000 |
| Age | .012 | .031 | .400 | .689 |
| Gender | 1.059 | .763 | 1.387 | .166 |
| Marital Status | -1.204 | 1.079 | -1.116 | .265 |
| Total Income | .140* | .073 | -1.908 | .057 |
| Education | -.223 | .137 | -1.627 | .104 |
| Land Ownership | -1.104 | .730 | -1.513 | .131 |
| Farm Size | .394** | .199 | -1.983 | .048 |
| Farming Experience | .010 | .030 | .340 | .734 |
| Extension Contact | .064*** | .018 | -3.558 | .000 |
| Membership of other Groups | 1.184** | .523 | 2.266 | .024 |
| Access to Farm Credit | 2.074*** | .548 | -3.784 | .000 |
| Access to Training | 1.569*** | .535 | 2.932 | .004 |
| **$R^2$=.67** | | | | |
| **F (12, 248) = 3.704, P < 0.01** | | | | |

*** 1%, **5%, *10%

The results also show a positive relationship between the respondents' farm sizes and their levels of participation in group activities at 5 percent level of significance. Farm size can be directly linked to output and hence income. The bigger the farm size therefore, the higher the level of participation. Agbonlahor, 2012 and Ofuoku, 2013 also reported similar findings. This finding is also in agreement with Wanyama et al., 2004 and Angba and Itari, 2012.

The level of participation was positively influenced by the number of extension contact

had by the respondents at 1 percent level of significance. Etwire et al., 2013 also confirmed that the higher the number of extension contact, the higher farmers' propensity to participate in farmer-groups in Ghana. This may be connected to the increased awareness of the importance of farmer-group created by extension education. Increase in awareness of the benefits of farmer-groups occasioned by membership of groups may explain the positive relationship between levels of participation and membership of other farmer-groups. Similar findings were also reported by Arayesh et al., 2011. The increase in the level of awareness possibly also explains the fact that participation increased with access to training opportunities.

At 1 percent level of significance, access to credit facilities positively influenced level of participation. Etwire et al., 2013 also reported a direct relationship between participation and access to credit among farmers. Access to credit suggests that the farmers will be able to take

advantage of the new funds to increase their scope of operation and hence enhance their income.

### 4. Conclusion and Recommendations

The study analyzed the level of participation of farmers in farmer-group activities in Kwara State, Nigeria. It also examined the effect of selected socio-economic characteristics of the farmers on their level of participation. The study concluded that the level of participation of Kwara State farmers in group activities were appreciable but could be improved on. It also concluded that income, farm size, access to training, access to credit, extension contact and membership of farmers' association all positively influenced participation of farmers in group activities at $p<0.10$.

The study recommends that farmers should be assisted to enhance their farm size and income through timely and adequate access to farm credit. In addition, their access to training and extension education should be increased.

### References


Adong, A., Mwaura, F.,and Okoboi, G. (2013): What Factors Determine Membership to Farmer Groups in Uganda? Evidence from the Uganda Census of Agriculture 2008/9. *Journal of Sustainable Development, 6(4): 37-55*

Agbonlahor, M.U., Enilolobo, O.S., Sodiaya, C.I., Akerele, D. and Oke, J.T.( 2012): Accelerating Rural Growth through Collective Action: Groups' Activities and Determinants of Participation in Southwestern Nigeria, Journal of Rural Social Sciences, 27(1):114–136.

Ammani, A.A., Auta, S.J., and Aliyu, J.A. (2010): Challenges to Sustainability: Applying the Problem Tree Analysis Methodology to the ADP System in Nigeria Journal of Agricultural Extension Vol. 14 (2): 35-45

Angba, A.O and Itari, P. (2012): Factors Influencing Farmers' Participation in Community Development Organizations in Obubra Local Government Area of Cross River State, Nigeria, Canadian Social Science 8(1): 54-59

Arayesh, B. (2011):Identifying the Factors Affecting the Participation of Agricultural Cooperatives' Members. American Journal of Agricultural and Biological Sciences 6 (4): 560-566

Asante, B. O., Sefa, V. A., and Sarpong, D. B. (2011): Determinants of Small-scale Farmers' Decision to Join Farmer Based Organizations in Ghana. *Africa Journal of Agricultural Research, 6*(10), 2273-2279.

Bernard, T., and D. Spielman.(2009): Reaching the Rural Poor through Rural Producer Organizations? A Study of Agricultural Marketing Cooperatives in Ethiopia. *Food Policy* 34 (1): 60–69.

Development Network of Indigenous Voluntary Associations (DENIVA). (2005b): Effectiveness of Farmer-groups as Viable Institutions for Farmer Empowerment and Poverty Reduction in the Implementation of the Plan for the Modernization of Agriculture (PMA). *Retrieved from http://www.deniva.or.ug/files/programme-agriculturetrade_research_farmergroups.pdf*

Di Gregorio, M., K., Hagedorn, M., Kirk, B., Korf, N., McCarthy, R., Meinzen-Dick, and B. Swallow (2004): Property Rights, Collective Action and Poverty: The Role of Institutions for Poverty Reduction. *Paper prepared for the Tenth Biennial Conference of the International Association for the Study of Common Property, Oaxaca, Mexico, August 9–13.*

Etwire, P.M., Dogbe, W., Wiredu, A.N, Martey, E., Etwire, E., Owusu R.K, and Wahaga, E. (2013):Factors Influencing Farmer's Participation in Agricultural Projects: The case of the Agricultural Value Chain Mentorship Project in the Northern Region of Ghana. Journal of Economics and Sustainable Development,.4(10), 36-43

Federal Office of Statistics (FOS, 1995). Abstracts of Statistics, FOS Abuja, Nigeria .

Kwara State Planning Commission, KWSPC, 2007. Kwara State Year Book. Kwara State, Nigeria.

Liverpool-Tasie L. S (2012): Farmer Groups, Input Access, and Intragroup Dynamics A Case Study of

Targeted Subsidies in Nigeria. *IFPRI Discussion Paper 01197*

Muhammad, H.U., Umar, B.F., Abubakar, B.Z. and Abdullahi, A.S (2011): Assessment of Factors Influencing Beneficiary Participation in Fadama II Project in Niger State, *Nigeria Journal of Basic and Applied Science. 19 (2): 248-252. Available online at http://www.ajol.info/index.php/njbas/index*

Nwaobiala, C. U, Ogbonna, M. O and Egbutah, E. U (2014): Assessing Levels of Participation among Farmers in IFAD/Fgn/NDDC/Community-Based Natural Resource Management Programme in Abia and Cross River States, Nigeria *Discourse Journal of Agriculture and Food Sciences. 2(5): 136-141*

Ofuoku, A.U. (2013): Propensity of Farmers to Subscribe to Farmers' Groups in DeltaState, Nigeria. International Journal of RuralStudies, 20 (1), 1-6

Scrimgeour, F., McDermott, A., Saunders, C., Shadbolt, N.M. and Sheath, G. (2006): New Zealand Agribusiness Success: An Approach to Exploring the Role of Strategy, Structure and Conduct on Firm Performance. Proceedings of the New Zealand Agricultural and Resource Economics Society (Inc.) Conference, Aug. 24-25, Nelson, New Zealand, pp: 25-27.

Uliwa, P., and Fisher, D. (2004): Assessment of Tanzania's producer Organizations. Experience and Environment. *USAID Economic growth office.*

Wanyama, J.M., Mose, L.O.,Mutoko, C.M., Wanyonyi, M.,Nyambati, E.,Wanjekeche, E. and Rono, S. (2004): Assessing Factors Influencing Farmers to Join and Participate in Farmer Research Groups in North Rift Region of Kenya. Journal of Economics and Sustainable Development, 4(10), 1-6

World Bank(2014): Participation and civic engagement: Retrieved from http://go.worldbank.org/FKWKNE86V0 On 28th August, 2014

World Bank (2005): Getting Agriculture Going in Nigeria: Framework for a National Strategy. *World Bank Report No 34618*