

<http://dx.doi.org/10.4314/jae.v18i1.5>

Socio-Economic Factors Influencing Farmers' Participation in Community- Based Programme in Abia and Cross River States of Nigeria

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Abstract

Socio-economic factors influencing farmers' participation in IFAD/FGN/NDDC/Community -Based Natural Resource Management Programme in Abia and Cross River States, Nigeria were analyzed in 2012. Purposive and multistage random sampling techniques were used in the selection of Local Government Areas, participating communities, farmer groups, participating and non-participating farmers. The sample size was 240 (120 for Abia IFAD and 120 Cross River IFAD farmers). Data were collected with a structured questionnaire and analyzed with descriptive statistics and Probit regression model. The result indicated that IFAD participating farmers in both states were actively involved in crop, livestock, fisheries and apriary technologies of the programme. The Probit estimates of the determinants of participation of farmers in the programme showed that the coefficients of age and farming experience were positive and significantly correlated in both states. The coefficient of gender was also positive signed and significant, as well as farm size which was negative and significant in Abia State, while occupational status and membership of cooperative societies were also positively signed in Cross River State. The coefficient for gender was negative and significant in Cross River State. Negative Perception of farmers on past programmes, bad road network, late arrival of farm inputs and non- payment of counterpart funds by State and LGA's were identified as major problems affecting farmers' participation on the programme. It is therefore recommended that policies aimed at reviewing the Land Use Act of 1990 to eliminate the difficulties associated with land acquisition for agricultural purposes, access to adult education and timely supplies of farm inputs since farming is time bound and prompt payment of counterpart funds by state and local government were advocated.

Keywords: *Socio-economic, Influence, Farmers' Participation*

Introduction

Despite many years of rural development efforts by past successive governments in Nigeria in collaboration with International donor agencies, and million dollars committed into such development efforts, rural communities appear to be undeveloped (Dauda, 2002; Nwekeaku and Mbanasor, 2002). Consequently, they have consistently remained unattractive especially to youths who continuously migrate to urban centres. In recent times however, there is a growing realization that, development of the rural areas and involvement of rural people in community - based programmes can increase the capacity and productivity of the economy and enhance sustainable growth (Nwaobiala, 2013). This realization is stemmed out of the fact that increased concentration of developmental resources in the urban areas is often threatened by growing urban-population (Akolade and Issa, 2008). In recent years, an increasing number of analyses of projects have shown that participation by local people is one of the critical components of success in crops, livestock, agro - forestry and irrigation practices (USDA, 2007). Research, civil society, government and private sector organizations always developed innovative technologies and best practices to modernize small-scale agriculture but most of these technologies do not get to the intended beneficiaries. The old extension service delivery system that was meant to pass on research outputs to farmers in Africa has proved inefficient, and most of these institutions have inadequate machinery and capacity to share and disseminate outputs widely to small-scale farmers and other actors (Asiabaka, (2007) ; Richardson, 2006). Although natural resources are public goods whose benefits should be shared widely by community members, they have been over exploited and mismanaged. There is therefore a need to protect natural resources from powerful interest group with short term interests aimed at personal gain through participation (DOI, 2007).

Participation with regard to rural development include peoples involvement in decision making process in implementing programmes, their sharing in the benefits of development programmes and their involvement in the effort to evaluate such programmes. In essence, participation is all about involving a significant number of rural people (project beneficiaries) in one way or the other or actions which enhance their well being (Oakely, 2002). Mainstreaming participation has made it an instrument for promoting pragmatic policy interest such as cost – effective delivery or low-cost maintenance, rather than a vehicle for radical social transformation. This may simply shift some of the cost of service delivery to potential beneficiaries. The belief that exposure to participatory experiences will transform the attitudes and implementation styles of authoritarian bureaucracies (government or donors) may be naive. The rural poor must participate in designing and operating a programme which involves them. The importance of ensuring effective participation of the target groups lies, similarly in ensuring that rural development/ community - based initiatives are responsive to the priorities and needs of the local communities and beneficiaries (Nwosu, 2007). IFAD (2001) stated that the Rural Development Strategy gives special attention to poverty reduction and its thrust is to encourage more participation in rural development programmes and thereby building a greater sense of ownership among the poor in the community.

Participation in extension is the process of communication among men, women, farmers and extension workers during which the farmers take the leading role to analyze their

situation to plan, implement and evaluate development activities. It is a way of helping the disadvantaged people and women to gain access and control over resources or services such as training of farmers, tours, inputs, information among others needed to sustain and improve their livelihood in return for food, cash and materials (Subedi, 2008). Participation is expected to lead to better designed projects, better targeted groups or beneficiaries, more cost-effective and timely delivery of project inputs, more equitably distributed project benefits with less corruption and other rent-seeking activity (Cleaver, 2009). Yet these material incentives distort perceptions, create dependence and give the misleading impression that local people are supportive of externally driven initiatives (Bunch, 2004; Guijit and Shah, 2002).

Farmers' participation to State, Federal Government and donor sponsored agricultural programmes is an important factor to sustainable agriculture in rural areas. Farmers' participation issues are the areas of concern at national and local levels (Subedi, 2008). Without participation, there are obviously no partnerships, no developments and no programme (Aref *et al.*, 2010). Therefore, a lack of participation in the decision to implement an agricultural policy can lead to failure in agricultural development. This has led rural farmers to become more marginalized and alienated than they were before the commencement of these multi-million naira programmes. This is unlike the bottom-up participatory approach in which members of the benefiting communities are actually involved in the various stages of the programme. In this regard, these programmes could be better understood as a direct response to broaden the scope of interventions at the community level.

The problems of poor participation of farmers in donor sponsored programmes have never been ascribed to socio economic attributes of the stakeholders which are the key determinants to farmers' involvement in these programmes.

Currently, the World Bank is promoting a Participatory Community Driven Approach known as International Fund for Agricultural Development-Niger Delta Development Commission/Community Based Natural Resource Management Programme (CBNRMP) in conjunction with the Federal Republic of Nigeria which started in 2005. The programme responds to a request by the Federal Government for assistance to alleviate rural poverty in the Niger Delta. The principles and goals of this programme are improving the standard of living and quality of life for at least 400,000 rural people in the Niger Delta States (Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo and Rivers State) with emphasis on women and youth through participation (CBNRMP, 2002). In view of the above, this paper addresses the following research objectives.

Objectives of the Study

The general objective of the study is to analyze the socio economic factors that influence farmers in participating in the programme in Abia and Cross River States. The areas of emphasis in this study are on selected arable crops, livestock, fisheries and apiary technology components promoted by the programme.

Specific Objectives

The specific objectives were to:

- i. describe selected mean and percentage socio-economic characteristics of participating farmers in Abia and Cross River States.

- ii. ascertain levels of farmers participation on each technology component of the programme (arable crops, livestock, fisheries and apiary) in Abia and Cross River States.
- iii. determine the socio-economic factors that influence farmers participation in the programme in Abia and Cross River.
- iv. describe problems associated with non participation of farmers in the programme technologies in Abia and Cross Rivers States.

Hypothesis of the Study

H₁: Farmers' participation in IFAD/FGN/NDDC/Community-Based Natural Resource Management Programme Technologies is positively influenced by gender, farmers' age, marital status, education, occupation, farming experience and farm size.

Methodology

This study was conducted in the Abia and Cross River States, which are among the states in the Niger Delta Regions of Nigeria. There are nine states within the Niger Delta Regions of Nigeria namely Abia, Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo and Rivers States. These states are also known as programme areas of the programme.

Abia State is situated in the South – Eastern part of Nigeria and predominantly populated by the Igbos (Oye, 2002). Abia state lies between Longitudes 7⁰23¹ and 8⁰2¹ East of the Equator and Latitudes 4⁰47¹ and 6⁰12¹ North of the Greenwich Meridian. Cross River State lies between Latitude 5⁰5¹ and 6⁰40¹ North of the Equator with Longitude 8⁰10¹ and 8⁰5¹ East of the Greenwich Meridian. The State is bounded on the North by Benue State, on the South by Akwa Ibom State, on the East by Cameroon Republic and the West by Ebonyi State.

Purposive and multistage random sampling techniques were used in the research. Purposively, the two states namely Abia and Cross River states were chosen because they were among the pilot states of the programme. Multistage random sampling technique was used in the selection of local government areas (programme areas) participating communities, farmer groups and participating farmers. First, three (3) Local Government Areas were randomly selected from the two states; (Abia - Umuahia North, Arochukwu and Ugwunagbo) and (Cross River - Yala, Yakurr and Obubra) which gave a total of six (6) local government areas. Second, two (2) communities each were randomly selected from the six local government areas : Abia (Umuahia North – Okwoyi and Mbom, Arochukwu - Atani Abam and Obiene Ututu, Ugwunagbo- Etiti Akanu Ngwa and Asa Amaise); Cross River (Yala – Okpoma and Okuku / Itega Okpudu, Yakurr – Asiga and Ekor, Obubra–Nyamoyong and Apiapum) totalling twelve (12) participating communities. Furthermore, from the selected participating communities, two farmer groups each were randomly selected which gave a total of twenty four (24) farmer groups. Finally, ten participating farmers each were randomly selected from the selected farmer groups and this gave a sample size of two hundred and forty (240) participating farmers (120 Abia IFAD and 120 Cross River IFAD farmers). Data for the analysis were obtained from a well structured questionnaire. Objectives i, ii, iv and v were analyzed with descriptive statistics such as frequency distribution table, mean counts and percentages, while objective iii was achieved with Probit regression analysis. The levels of participation of farmers in different technology components of the programme was measured using an 8 – item statement rated on a 5 - point Likert-type scale of Always (5), Often (4), Occasionally (3), Seldom (2), Never (1). A

midpoint was obtained thus; $5+4+3+2+1 = 15/5 = 3.00$. Based on the mid score decision rule, any mean score greater than or equal to 3.00 implied participation in technology and mean score less than 3.00 denotes non participation in technology by farmers.

Results and Discussion

Distribution of Socio economic Characteristics of Respondents

The mean and percentage socio-economic characteristics of respondents are shown in Table 1. The result reveals that 57.67% and 64.17% of Abia State and Cross River IFAD farmers respectively were males. This result disagrees with the findings of (Diao *et al.*, 2007) as they identified women farmers as major producers of arable crops in sub Saharan Africa such as Nigeria. The mean farm size of the respondents showed that Abia IFAD farmers had 3.70 hectares, while Cross River IFAD farmers farmed on 2.90 hectares. The small size farm holdings were attributed to the area because most of the lands are sea locked. Abia IFAD farmers had a mean farming experience of 14.40 years and a mean annual farm income of N201, 441.00, while Cross River IFAD farmers acquired 11years farming experience with annual farm income of N198, 650.00. Farming experience has been shown to enhance participation and adoption of technologies by farmers especially in donor sponsored programmes in Nigeria (Nwaobiala and Onumadu, 2010).

Table 1: Percentage and mean distribution of selected socio-economic characteristics of IFAD farmers

Variables	Abia IFAD Farmers	Cross River
IFAD Farmers		
Gender (%) (Males)	57.67 (Males)	64.17
Farm Size (Hectares)	3.70	2.90
Farming Experience (Years)	14.40	11.00
Annual Farm Income (Naira)	201,441.00	198,650.00

Source: *Field Survey Data, 2012*

Farmers Participation in Technology Components of the Programme

Arable crop technology

The distribution of farmers according the level of participation in arable crop technology component (yam, cassava, maize, egusi and *telferia*) of the programme in Abia and Cross River States is shown in Table 2. Results show that majority (86.6%) of the farmers in Abia always participated in crop technologies with IFAD Community-Based Total Raw Scores (ICBTRS) of 564 and mean of 4.7. Also, majority (83.33%) of participating farmers in Cross River State always participated in crop technology with IFAD Community-Based Total Raw Scores (ICBTRS) of 560 and a mean of 4.7. Since the midpoint score is less than the

calculated, it means that participating farmers in both states actively participated in crop technologies of the programme. This result is not surprising because crop production (arable crops) is practiced by many farmers in developing countries, which serve as staple food and source of income for the rural poor farmers. Okande *et al.*, (2005) opined that arable crop such as cassava is cultivated in Nigeria by more than 90% of rural farmers

Livestock technology

Data in Table 2 shows that a fairly good proportions (36.67%) and 35.83 percent of Abia and Cross River State farmers participated in livestock technology component of the programme respectively. The ICBTRS score of Abia farmers was 452 with a mean of 3.8, while that of their counterparts in Cross River State recorded an ICBTRS (429) with mean (3.6). The mean scores for both farmers in the states were greater than 3.0, which imply that the farmers participated actively in the technology. Apantaku (2006) observed that farmer participation in livestock technology may be attributed to the protein needs of the farmers and their families.

Fisheries technology

Table 2 shows that 32.50% and 35.83% of Abia and Cross River State farmers, occasionally and often participated in fisheries technology components of the programme respectively. The ICBTRS score for Abia farmers was 448 with a mean of 3.8, while the Cross river state farmers had 270 ICBTRS score and mean of 3.7. This implies that the participating farmers in both states actively participated in the technology hence the mean scores were greater than 3.0. Akinbile *et al.*, (2008) asserted that farmers' participation in poverty reduction programmes were encouraged by the farmers felt needs and field problems encountered during their production process.

Agro forestry (apiary) technology

The Table indicates that 35% and 32.50% of Abia and Cross River State participating farmers occasionally participated in apiary technology respectively. Furthermore, Abia State farmers recorded an ICBTRS of 410 and mean of 3.40, while Cross River State farmers had 399 (ICBTRS) and mean of 3.2. This shows that the farmers in the two States participated in the technology since the mean score were greater than 3.0. World Bank (2003) views participation of farmers in community based projects as a means of diversifying farmer's enterprise, thereby improving the standard of living of the rural people and transforming their socio – economic lives.

TABLE 2: Distribution of farmers according to their participation in IFAD/FGN/NDDC/Community – based natural resource management programme technologies

TEP	ABIA STATE							CROSS RIVER STATE						
	Always	Often	Occasionally	Seldom	Never	ICBTRS	Mean	Always	Often	Occasionally	Seldom	Never	ICBTRS	Mean
LIVESTOCKCROPS	520 (86.6)	24 (5)	9 (2.5)	8 (3.33)	3 (2.5)	564	4.7	500 (83.33)	32 (6.67)	18 (5)	8 (3.33)	2 (1.67)	560	4.7
	150 (25)	176 (36.67)	108 (30)	16 (6.67)	2 (1.67)	452	3.8	135 (22.5)	172 (35.83)	9 (2.5)	24 (10)	8 (6.67)	429	3.6
	165 (27.5)	148 (30.83)	117 (32.5)	14 (5.85)	4 (3.33)	448	3.7	270 (45)	148 (30.83)	42 (16.67)	6 (2.5)	6 (2.6)	472	3.9
AGRO FACTORY	105 (17.5)	136 (28.3)	126 (35)	40 (16.67)	3 (2.5)	410	3.4	85 (14.16)	132 (27.5)	117 (32.5)	48 (20)	7 (5.83)	389	3.2

Decision Rule = >3.0 is participation,
 <3.0 is non Participation
 Figures in Parenthesis are Percentages.
Source: Field Survey Data, 2012

Where,
 TEP = Technology Packages
 ICBTRS = IFAD Community Based Technology Raw Scores
 Always 5, Often 4, Occasionally 3, Seldom 2, Never 1

Determination of Factors Influencing Farmers' Participation in IFAD/FGN/NDDC Community-Based Natural Resource Management Programme Technologies

The result in Table 3 shows the Probit estimates of the determinants of participation of farmers in the programme technology components. The table showed that there were very high degree of confidence and goodness of fit χ^2 (X^2) in both states that were highly significant at 1.00% level of probability. The coefficient for gender (0.118) was positively signed and significant at 1.00% level of probability in Abia State, indicating that males participated more in the programme than their female counterparts. The coefficient for gender (-0.199) was negatively signed and significant at 5.00% level in Cross River State. This implies that the female farmers participated more in the programme than their male counterparts. This shows that the programme is gender sensitive in Cross River State. Gender issues in agricultural production and technology adoption

and participation have been investigated for a long time. It might then be expected that the relative roles women and men play in both “effort” and “adoption” are similar, hence suggesting that males and females participate and adopt practices equally (Doss and Morris, 2001). The coefficients for age (0.002) and (0.018) in Abia and Cross River States respectively, were positive and significant at 10.00% level of probability. This implies that as age increases, the probability of participating in the programme increases. This is against *a priori expectation*. This is probably because most respondents who were aged are part time farmers who had other means of income. In addition, since adoption pay-offs occur over a long period of time, while costs occur in the earlier stages, age (time) of the farmer can have a profound effect on participation and technology adoption (Bonabana-Wabbi, 2006).

The coefficient of occupational status (0.099) was positively signed and highly significant at 1.00% level of probability in Cross River State. This implies that the full time farmers’ probability of participating in the programme increased as their part-time counterparts also increased. This may be attributed to the fact that majority of farmers in the study areas were full time farmers. Practices that do not draw heavily on farmer’s leisure time (off-farm hours) have positive effect on participation which may encourage adoption (Nwaobiala and Onumadu, 2010 and Mugisa-Mutetikka *et al.*, 2009).

The coefficient of farm size (-0.168) was negatively signed and highly significant at 1.00% level of probability in Abia State. The implication is that as farm size increases, the participation of farmers in the programme decreases. In the study, the availability of land to participating farmers is small. Yaron *et al.*, 1999) demonstrated that a small land area may provide an intention to adopt a technology learnt by farmers especially in the case of an input – intensive innovation such as labour-intensive or land-sowing technology (Lowenberg-Deboer, 2000).

The coefficients for farming experience (0.012) and (0.004) were positively signed and significant at 1.00% and 5.00% levels of probability for Abia and Cross River States respectively. This is in agreement with *a priori expectation*. The positive signs implied that as farming experience increases, the tendency in the adoption of programme technologies through participation increases (Bonabana-Wabbi and Taylor, 2008). It is probable that past experience, with good performance may encourage increased participation and adoption of the programme technologies. In addition, these farmers may have acquired encouraging return from the new practices and thus will continue with it anticipating continued benefits.

The coefficient for membership of cooperative societies (0.079) was positively signed and significant at 5.00% level of probability in Cross River State. Membership of professional organizations identified market and technology information as one of the benefits they obtain (Nzomi, *et al.*, 2007). Acquisition of information about a new technology demystifies and makes it more available to farmers. Information reduces the uncertainty about a technology’s performance, hence may change individual’s assessment of policy objections to objectives over time (Caswell *et al.*, 2001). Exposures to information about new technology significantly affect farmer’s choice about it. However, promotion of the farmers’ organizations and reinforcing capacities of the producers will enhance access to improved services. This has implication for extension organizations to encourage farmers to form groups to enable them gain access to resources and improved farm inputs (Issa *et al.*, 2013; Iheke, 2010).

Table 3: Probit regression estimates of determinants of farmers participation in the programme in Abia and Cross River States, Nigeria

Variables	Parameters	Abia	Cross River
Constant	X ₀	-2.329 (-8.761)***	-3.593 (-5.342)***
Gender	X ₁	0.118 (3.806)***	-0.199 (-2.238)**
Age	X ₂	0.002 (1.782)*	0.018 (1.826)*
Marital Status	X ₃	-0.183 (-0.131)	0.059 (0.0544)
Household size	X ₄	0.014 (0.534)	-0.001 (0.58)
Education	X ₅	0.012 (0.049)	0.001 (0.89)
Occupation	X ₆	0.000 (-0.001)	0.099 (3.110)***
Farm size	X ₇	-0.168 (-3.110)***	0.012 (-0.014)
Farming experience	X ₈	0.012 (4.608)***	0.004 (2.003)**
Cooperative membership	X ₉	– –	0.079 (2.436)**
Chi ²	X ²	74.747***	271.825***

Source: *Field Survey, 2012*

Values in parenthesis are t values

*, **, *** significant at 10.00%, 5.00% and 1.00% respectively

Associated Problems of Effective Participation of Participating Farmers in IFAD/NDDC/ Community Based Natural Resource Management Programme Technologies

Data on Table 4 indicates that majority (75%) and 78.33 percent of the farmers in Abia and Cross River States respectively ascribed negative perception of farmers on past programmes as a major problem. This is followed by bad road network (62.50%) for Abia IFAD farmers and 59.17% of Cross River IFAD farmers. However, 46.67% Abia State participating farmers and Cross River participating farmers 37.50% averred that

non-payment of counterpart funds by the state government hampered their participation in the programme. The Table also revealed that a fairly good proportion 48.33% and 53.33 percent of Abia and Cross River States participating farmers respectively, indicate that late arrival of farm inputs from the programme affected their participation in the programme. This is because majority of the farmers depend solely on sourcing these improved varieties of crops, livestock and fingerlings from the programme.

Table 4: Distribution of problems associated with non participation of farmers in the programme technologies

Category of Problems	Abia		Cross River	
	Frequency	Percentage	Frequency	Percentage
Administrative bottlenecks and Bureaucracy of programme	40	33.33	35	29.17
Late arrival of farm inputs	58	48.33	64	53.33
Infrequent visits of extension Officers	15	12.50	29	24.17
Inadequate training and re –training of participating Farmers	25	20.83	26	21.67
Non- payment of counterpart Fund by State and LGA's	56	46.67	45	37.50
Negative Perception of farmers on past Programmes	90	75.00	94	78.33
Bad road network	75	62.50	71	59.12

Source: *Field Survey Data, 2012*

*Multiple responses recorded

Conclusion

This study has provided empirical evidence on the participation of farmers in IFAD/FGN/NDDC/Community-Based Natural Resource Management Programme in Abia and Cross River States. The programme has exposed farmers to technologies that are location specific been practiced by them that needed adoption and continuity. The programme had played a complementary role in extension delivery and technology dissemination in the State. Negative perception of farmers on past programmes, bad

road network , late arrival of farm inputs from the programme affected their participation in the programme and non payment of counterpart fund by state and Local Government Areas were identified problems affecting farmers participation in the programme technologies.

Recommendations

Based on the findings of this study, the following recommendations are made;

- i. The Land Use Act of 1990 in Nigeria should be reviewed to facilitate access to land by landless peasantry who produce bulk of the agricultural produce.
- ii. Farm inputs such as fertilizer, improved seeds and herbicides should be subsidized and to ensure timely supply of these inputs taking cognizance of the fact that farming is time bound.
- iii. Formation and sustenance of existing programme cooperatives were advocated. This will help intending farmers to benefit from subsidised farm inputs and exposing them to improved farming technologies.
- iv. Government at federal, state and local government levels should ensure timely payment of their counterpart funds for sustainability of the programme.
- v. Since age had positive influence on participation, rural infrastructural facilities such as good feeder roads, electricity and pipe borne water, among others need to be provided by relevant agencies. This will encourage youth involvement in agricultural production, thus curbing rural-urban migration.
- vi. Prompt payment of counterpart funds by State and Local Government Areas for sustaining the programme.

Acknowledgement

The author wishes to thank and acknowledge management and field officers of IFAD/NDDC/Community-Based Natural Resource Management Programme in Abia and Cross River States Field Offices for assisting in soliciting information from IFAD farmers and non IFAD farmers. Their immense collaborations facilitated the completion of this study.

References

- Akinbile, L. A, Hussain, L. A and Yekinni, O. T. (2008). CDA/CBO Participation in Community – Based Poverty Reduction Projects in Selected Communities in Ekiti State, Nigeria. *Nigerian Journal of Rural Sociology* 8(1): 41-47.
- Akolade, G. O. and Issa, F.O. (2008). Policy Issues in Integrated and Rural Development in Lagos State. Proceedings of 13th Annual National Conference of Agricultural Extension Society of Nigeria (AESON) April, 2008, Pp 178 -189.

- Apantaku, S. O. (2006). Analysis of Participation of Farmers in Participatory Poultry Production Research in Lagos State, Nigeria. In: *Livestock Research for Rural Development* No. 18.
- Arief F. (2010). Barriers to Community Capacity Building for Tourism Development in Communities in Shiraz Ran. *Journal of Sustainable Tour* 6(2): 136-142
- Aref, F. Marof, R. and Sarjit, S.G. (2010). Community capacity building: A review of its implications in tourism development. *Journal of American Science* 6(1): 172-180.
- Asiabaka, C. C. (2007). The Challenges of Research Extension Farm Input System (REFILS) in Agricultural Technology Development and Delivery in Southeast Agro – Ecological Zone. Paper Presented at the 22nd Annual REFILS Workshop Awka, Anambra State, 20 – 23 November.
- Bonabana–Wabbi, J. and Taylor, D. B. (2008). Health and Environmental Benefits of Reduced Pesticides Use in Uganda. An Experimental Economic Analysis. A Paper Presented at Annual Meeting of American Agricultural Economics Association, July 27 – 29 Orlando Florida, USA.
- Bonabana–Wabbi, J. (2006). Assessing Factors Affecting Adoption of Agricultural Technologies: The Case of Integrated Pest Management (IPM) in Kumi District, Eastern Uganda. Unpublished M.Sc Thesis, Department of Agricultural and Applied Economics, Virginia Polytechnic Institute and State University USA.
- Bunch, R. (2004). People-Central Agricultural Improvement. In Harverkort, B: Kampa Vardai and Waters – Bayer, A.A Eds. *Journal of Experiences in participatory Development*: London IT Publications.
- Caswell, M, Fuglie. K, Ingram. C, Jans, S. and Kascak, C. (2001). Adoption of Agricultural Production Practices: Lessons Learned from the US Department of Agriculture Area Studies Project, Washington DC. US Department of Agriculture, Resource Economics *Report* No. 792. January 2001.
- Cleaver, F. (2009). “Paradoxes of Participation. Questioning Participatory Approaches to Development. *Journal of International Development* 20 (15): 597-612.
- Community-Based Natural Resources Management Programme (CBNRMP) (2002). *Programme Support Office Implementation Manual* Port-Harcourt, Rivers State, Nigeria. Vol. 1 Pp 2-5.
- Dauda, R. O.S (2002), Rural Poverty in Nigeria. Characteristics, Dimensions and Trend. *Nigerian Journal of Rural Sociology* 4 (1): 17-20.

- Department of Information (DOI) (2007). National Resources <<http://www.doi.gov/oepr/response/aof.html>> Accessed 16 December, 2011.
- Diao, X. P., Hazel, D., Resnick, D. and Thurlow, J.C. (2007). The Role of Agriculture in Development: Implications for Sub-Saharan Africa. *IFPRI Report 153*. Washington: IFPRI.
- Doss, C. R. and Morris, M. L. (2001). How Does Gender Affect the Adoption of Agricultural Innovation? The Case of Improved Maize Technologies in Ghana” *Journal of Agricultural Economics*. 25: 27 – 39.
- Guljit I. and Shah, M. K. (2002). *The Myth of Community Gender Issues in Participatory Development*. Colchester, U.K. International Technology Development Group Publishers.
- Iheke, S. O. (2010). Market Access, Income Diversification and Welfare Status of Rural Farm Households in Abia State, Nigeria. *The Nigeria Agricultural Journal* 41(2): 13-17.
- International Fund for Agricultural Development (IFAD) (2001). *Rural Poverty Report 2001: The Challenge of Ending Rural Poverty*. Oxford: Oxford University Press.
- Issa, F. O, Akolade, G. O and Auta, S. J. (2013). Cooperative Policies and Administration in the Attainment of MDGs: Challenges and Opportunities for Extension Service Delivery. *Journal of Agricultural Economics and Extension Research Studies* 2(1): 34-48.
- Lowenberg – DeBoer, J. (2000).”Comments on Site – Specific Crop Management: Adoption Patterns and Incentives.” *Review of Agricultural Economics*. 22 (1): 245 – 247.
- [
Mugisa – Mutetikka, M., A., Opio, F. M, Ugen, M., Tukamuhabwa, A. P, Kayiwa, B. S., Niringiye, and E. Kikoba, E. (2009). “Logistic Regression Analysis of Adoption of New Bean Varieties in Uganda”. MSc Thesis Virginia Polytechnic Institute and State University USA.
- Nwakeaku, C and Mbanasor, J. (2002). “Issues in Rural Development: Nigeria’s Challenges” In Nwosu A.C, Nwajiuba, C.U. and Mbanasor, J.A (eds). *Agricultural Transformation in Nigeria*. Novelty Industrial Enterprises Ltd, Owerri, Pp 45-50.
- Nwaobiala, C. U. and Onumadu, F. N. (2010). Youth Participation in Cassava Production through Rural Extension Project of Federal College of Agriculture, Ishiagu, Ebonyi State, Nigeria. Proceedings of the 44th Annual Conference of Agricultural Society of Nigeria held at LAUTECH Ogbomoso, Osun State, Nigeria 18th – 22nd October, Pp 50 – 51.

- Nwaobiala, C. U. (2013). Appraisal of Farmers' Participation in IFAD/FGN/NDDC/Community Based Natural Resource Management Programme in Abia and Cross River States, Nigeria. A PhD Thesis Department of Agricultural Economics and Extension Abia State University Uturu.
- Nwosu, I. E. (2007). Appraisal of Community Participation in World Bank Assisted Rural Development and Poverty Reduction Programme in Abia State, Nigeria. A PhD Thesis Department of Rural Sociology and Agricultural Extension. Michael Okpara University of Agriculture, Umudike.
- Nzomi, J. N, Byeruhanya, J. K, Maritim, H. K and Ombato, I. J. (2007). Determinants of Technology Adoption in the Production of Horticultural Export Produce in Kenya. *African Journal of Business Management* 1 (5): 129 – 135.
- Oakely, E. A. (2002). Projects with People. The Practice of Participation in Rural Developments Geneva ILO Pp. 98-112.
- Okonade, E.O, Olaniyi, A.O and Ogunlaye, K.Y. (2005). Adoption of Improved Cassava Techniques among Farmers in Surulere LGA of Oyo State, Nigeria. Proceedings of the 39th Annual Conference of Agricultural Society of Nigeria (ASN) Held at Benin Edo State, Nigeria, Pp 15 -16.
- Oye, V. I. (2002). The Unbroken Covenant. Government House, Umuahia, Abia State, Nigeria.
- Richardson, D. (2006). ICT's – Transforming Agriculture. Agricultural Extension Report of the 6th Consultative Export meeting of CTA's Observatory on ICTs. *CTA Working Document* No. 8034.CTA.86p<<http://www.anancy.net/uploads/file-en/WD8034.pdf> Accessed 14 December, 2007.
- Subedi, R. (2008). Women Farmers' Participation in Agricultural Training in Kaure District of Nepal Laren Stein University of Applied Science, Kathmandu.
- United States Department of Agriculture (USDA) (2007). <http://www.usda.a.ol.html> Accessed 15 January, 2007.
- World Bank (2003). Community - Based Poverty Reduction Programme. International Capacity Studies of Local Communities in Six Pilot States. In Olayemi, J.K (eds) *Synthesized Report*, Pp 1 – 5, Washington D.C USA, Washington D.C USA.
- Yaron, D., Dinar, A and Voet, H. (1992). "Innovations on Family farms: The Nazareth Region in Israel." *American Journal of Agricultural Economics*. 361 – 370.