



# Farmers' Participation in the Services of Public and Private Extension Organizations in Southwestern Nigeria

S. O. Ayansina<sup>1</sup>, R. A. Oyeyinka<sup>1\*</sup> and A. F. O. Ayinde<sup>1</sup>

<sup>1</sup>Department of Agricultural Administration, Federal University of Agriculture, Abeokuta, Nigeria.

## Authors' contributions

This work was carried out in collaboration between all authors. Authors SOA and RAO designed the study, performed the statistical analysis, wrote the protocol, and wrote the first draft of the manuscript and managed literature searches. Authors SOA, RAO and AFOA managed the analyses of the study and literature searches. All authors read and approved the final manuscript.

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## ABSTRACT

There is an increasing demand for a functional extension delivery services in Nigeria with a view to meet up with the food and fiber needs of the ever growing population of human and animal respectively. This study was designed to examine farmers' involvement in public and private extension services in southwestern Nigeria, specifically to explore the farmers' participation in the two types of organizations involved. It also evaluates the performances of personnel in the organizations. A multi-stage random sampling technique was used to select 30 respondents from each of the three selected organizations in Ogun, Osun and Oyo states in Southwestern Nigeria. Data was collected with interview schedule and analyzed both at descriptive and inferential levels. Kruskal Wallis one-way Analysis of variance was used to test the differences between the participation of beneficiaries who are farmers under the public and private extension services and the level of benefit accrued to them from the various extension organizations involved in the study. Results revealed that private extension organizations were performing better and were more preferred by the beneficiaries. Results of the tested hypotheses as shown by Kruskal Wallis test of

\*Corresponding author: E-mail: [akinoye2009@gmail.com](mailto:akinoye2009@gmail.com);

difference ( $\chi^2 = 0.709$ ) showed no significant difference between farmers' participation in the extension services of public and private organizations but however showed significant difference ( $\chi^2 = 12.074$ ) in the benefits achieved by respondents in the two organizations. These include: increased quantity of crop produced, farm income, skill acquisition, and improved education in private extension organizations. Based on this result, it could be inferred that beneficiaries generally preferred private extension organizations because of their effectiveness and vibrancy in programme administration. Public extension is therefore recommended for general overhauling and possibly privatization in order to cater for teeming population of farmers demanding for efficient and functional extension services to better their lots in production, processing and marketing of agricultural produce.

*Keywords: Public and private involvement; extension services; farmers' preferences.*

## 1. INTRODUCTION

In many developing countries including Nigeria, there is growing concern for provision of effective and sustainable agricultural extension services to majority of the resource poor farmers in whose hand the bulk of agricultural production is left. Resource poor farmers belong to a complex, diverse and risk prone (CDR) agriculture, which supports several millions of people in Africa [1]. In these countries, a number of rural development programmes have been embarked upon in order to boost production. Such programmes include Operation Feed the Nation (OFN), Green Revolution (GR), River Basin Development Authority (RBDA), National Directorate of Employment (NDE), Directorate of Food, Road and Rural Infrastructure (DIFRRI) etc. Many of these development programmes are agricultural oriented, while others are non agricultural. These development programmes were established with the aim of raising the living standard of rural people as well as boosting their share of Gross Domestic product (GDP). Despite these efforts, several studies have continued to indicate the inadequacy and ineffectiveness of some of these development programmes [1].

In Nigeria, Agricultural Development Programme (ADP) was initiated in 1975, though, at pilot level to foster a sustainable and dynamic approach to agricultural development and which has remained of great concern to the government and priority for discourse in policy area [2]. ADP focuses on rural integrated development strategy for agriculture and rural development. The establishment of the statewide ADPs raised the hope of farmers in Government genuine commitment to reduce the social political and economic problem that kept them in cycle of poverty [3]. The ADPs across the country adopted the "Training and Visit" (T&V) extension system in order to boost production, solve the

prevailing extension problem such as administrative bottleneck and red tapism, inadequate number of extension personnel and poor policy formulations. The Training and Visit Extension system as written by [4] is the type of agricultural extension system involving training of the extension personnel in the Fortnight Training Meetings (FNT) and Monthly Technological Review Meetings (MTRM) on the specific agricultural areas and visiting of the farmers in their domains for onward transferring of the knowledge required within a specified frame of time. Training and Visit extension system as put in place featured professionalism, single line of command; time bound work, concentration of effort, regular and continuous training, farm and field orientation and regular extension linkage among others.

However, it has been observed that this public extension system (Training and Visit) used by ADP in Nigeria and many countries in Sub-Saharan Africa has many weaknesses, these include: excessive cost of input delivery, bureaucratic inefficiencies, poor formulation and implementation of extension programmes and failure to address the peculiar needs of farmers [5]. All these have caused much bureaucratic inefficiencies in public extension. To remedy these problems of bureaucratic management, the public sectors have been shifting its services to private sector, and hence, the increasing involvement of the private sector in public sector extension sometimes totally as in Netherlands, New Zealand, Peru and U.K or partially through contractual outsourcing arrangement adopting private sector practice such as cost recovery schemes or fee-based activities for services that were once freely provided. Thus, we observed the increasing involvement of private sector in public extension services [6]. [7,8] also declared that extension services offered by the private

companies are better in quality and more effective than the public system.

Private extension organization is basically an organization having a legal status which is financially independent of government. For instance FADU were funded by donor agencies while JDPM-RUDEP financial sources were mostly the contributions and donations by the church members. They were actively engaged in the political, social and economic transformation of the society. The essence of the organization is to mobilize people for self and national development beyond mere basic needs. In some empirically conducted studies in the past, success of some private extension providers among small scale farmers in Nigeria is documented; such studies include those conducted by [9,10,11]. In this study, the emphasis is focused on extension activities implemented by ADP in Oyo, Osun and Ogun States in southwestern Nigeria. These are referred to as "public Extension Organizations" The private extension organizations include Justice Development and Peace Movement's Rural Development Programme (JDPM RUDEP) and Farmers Development Union (FADU). The philosophy of these organizations is directed towards comfort for all within the preview of the area and to have rapid and even development among the communities.

This study also attempts to compare the agricultural extension services delivery systems and benefit of Training and visit extension system of the public and the selected private extension organizations with a view to ascertaining the vibrancy of the organizations involving in extension works. The study will as well be able to provide interpretative information about the current trends in the extension delivery system of the private and public extension organizations in the study area.

### 1.1 Objectives of the study

1. To determine the participation of the beneficiaries (farmers) in the extension Programmes (services) of the public and private extension organizations.
2. To examine the job performance level of the staff (personnel) of the two types of organizations in the study area.
3. To ascertain the benefit accrued to the beneficiaries (farmers) of the public and private extension organizations in the study area.

### 1.2 Hypotheses of the study

HO 1:- Benefits derived by the beneficiaries (farmers) from public extension organization are not significantly different from that of the private extension outfit.

HO 2:- There is no significant difference in the participation of the beneficiaries (farmers) in the extension programmes of public and private extension organizations.

### 1.3 Conceptual Basis for the Study

The study model comprises of three major ingredients:

Resources, Channels and Results (outcomes). Any extension organization public or private is aimed at improving living conditions of their target beneficiaries. The success or failure is thus partly dependent on available resources and actions applied to them.

The features of extension organization include their objective, activities, organo-gram, environment, attitude to group action, aspiration and beneficiaries' involvement from the inputs of the study.

These are exploited by extension organizations through their activities. These activities include health, agriculture, input supply, education, training etc. The activities are meant to benefit their clients in line with their objectives.

The channel include organization's activities and the stages of social action process such as inception of ideas, legitimating, awareness creation, determining means, goals and mobilizing resources, and planning execution. These stages are translated into the execution of the programmes, which is in turn affected by the people's level of participation and performance rating of personnel's performance in the programme and the constraints encountered in the process. All those components activities within the social action process take place under the auspices of the characteristics of the local population and those of extension organizations as exploited by their activities to give what becomes the output or benefit derived from such an intervention. This has to do with the impact of intervention as processed by the local population. The impact i.e. Results involves the effects on people's standard of living, income generation, literacy level and infrastructural

development. The feedback services as an important factor is meant to evaluate the shortcomings of the present programmes or creating higher desires in the participants and therefore becomes a basis for the next social actions.

## 2. METHODOLOGY

Public Extension System is regarded as the Agricultural Development Programme (ADP) which adopted Training and Visit Extension System in all States of Nigeria Federation. Private extension organization is basically an organization with a legal status which is financially independent of government and actively engaged in the political, social and economic transformation of the society. The organization focus is to mobilize people for self-help and national development beyond ordinary basic needs [12]. The study was specifically evolved to examine the farmers' preference for public and private extension delivery services. It was carried out in Ogun, Osun and Oyo States of south west geo-political zone of Nigeria. Fig. 1 below shows Map of Nigeria indicating the study location in Southwestern States of Ogun, Osun, and Oyo, Nigeria. The suitability of the area for the study is stemmed from the concentration of the activities of the private extension organizations selected for the study.

### 2.1 Area of Study

A multi-stage random sampling technique was used in selection of Ogun, Osun and Oyo States out of the six existing States in the Southwestern Nigeria; three organizations, namely, ADP which represent the Public Extension while FADU (Farmers' Development Union) and JDPM-RUDEP (Justice Development and Peace Movement Rural Development Programme) represented the Private extension outfit of the study. Thirty (30) farmers were also selected from each of the three organizations in each of the three selected states making two hundred and seventy (270) respondents for the study. However, eighty seven questionnaires were returned for both FADU and JDPM-RUDEP which then make the total response to be 264. The research study is a survey in nature. An interview schedule which was developed based on the study objectives was pretested and found reliable at 78.26% was used to collect data among the selected respondents for the study. The interview schedule was interpreted to the respondents in their languages by the officers of each organization in order to collect the data

from them. Data collected for the study were arranged, coded and analyzed.

Descriptive and inferential statistics were employed to analyze the data collected. The descriptive tools include frequency counts and percentage to present the data on Social economic characteristics, performance rating of extension agent and participation of respondents, while inferential statistics such as Kruska-Wallis one way Analysis of variance (ANOVA) was employed to test the hypotheses of the study.

## 3. RESULTS AND DISCUSSIONS

### 3.1 Respondents' Participation in Organizations' Extension Delivery Services

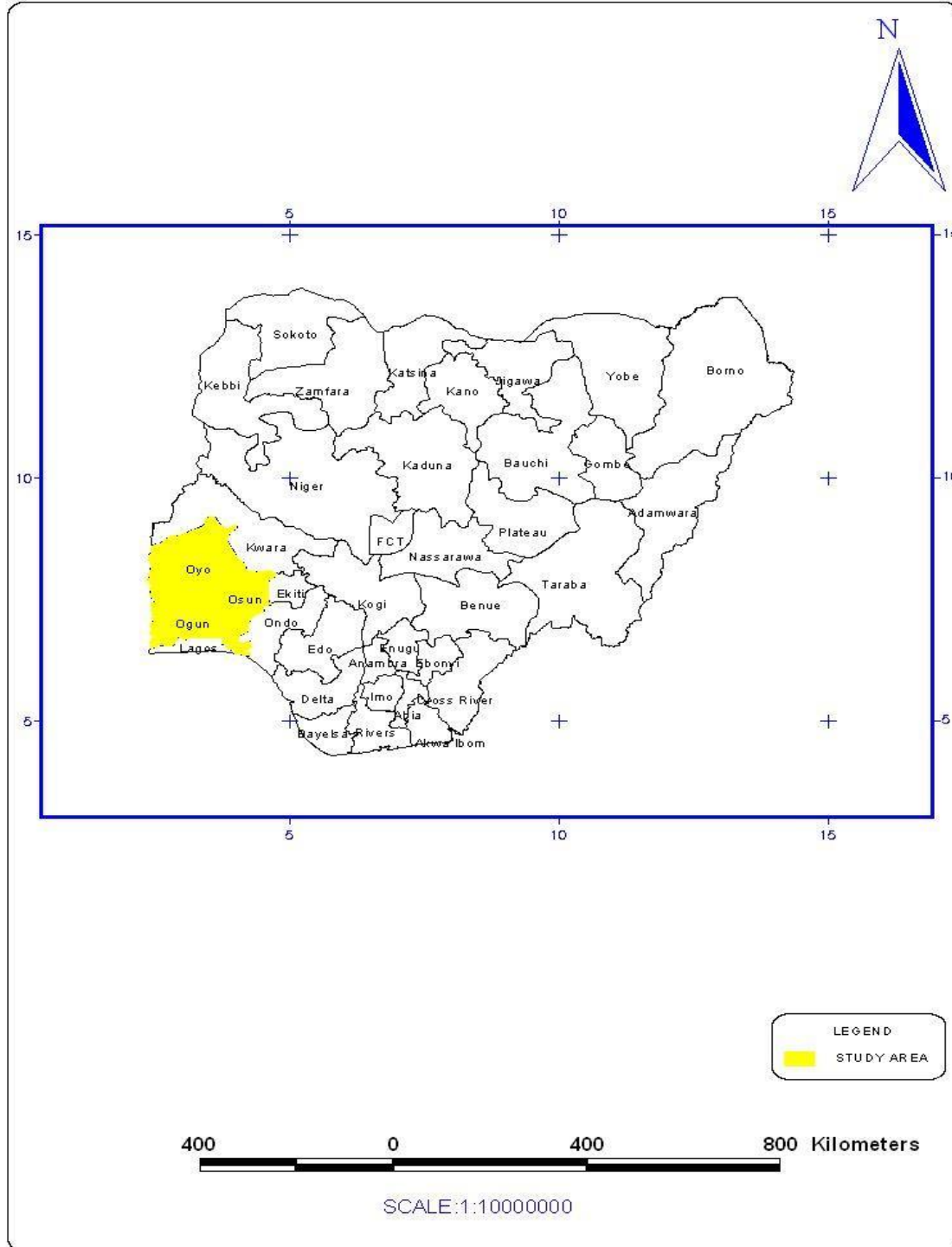
Varieties and qualities of services determine the level of beneficiaries preference and hence, participation in the extension services. As shown on Table1, the results of the analyzed data collected from the farmers showed that only extension programme of the public organization with average participation of the beneficiaries (farmers) was fertilizer supply (55.5%) while in JDPM – RUDEP, the participation was even higher than average in credit administration (88.50%) and training on crop utilization (70.30%). Workshop / seminar (71.2%), supply of improved livestock (87.3%), processing management technology (59.7%) and new farming technique (55.1%). As also shown on the table, percentage of beneficiaries' participation in FADU were higher in training of crop utilization (86.2%), credit utilization / administration (73.5%), supervision / advisory service (70.1%), workshop / seminar (66.6%), information dissemination (52.8%), and fertilizer supply (51.70%) in that order.

This result shows that beneficiaries that mostly participated in many services of private organizations may be owing to good quality of programmes, staff efficiency and adequate funding. This is corroborated by [13] who recommended "hybrid" sector of public and private extension if the lot of the farmers is to be improved.

### 3.2 Performance Rating of the Extension Personnel

Extension agent is regarded as a person "in the middle" as farmers expect agent to help, agent are also expected to work within organization's

extension guidelines. [14] also observed that factors that may enhance farmers' preference and participation is level of employee's (extension agent) job performance and which is strongly linked with organizational commitment and success [15].



**Fig. 1. Map showing study location in Southwestern Nigeria**  
Source: Ministry of Land and Survey Secretariat Ibadan, Oyo State, Nigeria

Results on Table 2, revealed the performance rating indicators with which the organizations' extension workers were assessed by the farmers. As shown on the table, significant proportion of the farmers' beneficiaries in JDPM – RUDEP (58.6%) and FADU (44.8%) scored the organizations' agents highly efficient while 35.63% and 45.98% scored them fairly efficient in the performance of their extension duties. Whereas in public extension, only negligible proportion (17.70%) of the beneficiaries saw the agents to be highly efficient but 45.6% of the farmers scored them an intermediate rating (moderate efficient).

The findings according to the performance rating of the Extension officers of the selected organizations by the farmers established that operation and performance of extension works were more efficient in private extension organizations than in the public extension outfit. This might be a basis for success of private extension organization. The findings is also confirming [8] who observed that extension services offered by the private companies, though many might be sales oriented and spatially limited to some areas, are better in

quality and more effective than the public systems.

Benefits derived by the beneficiaries of public extension organization are not significantly different from that of the private extension outfit.

According to Table 3, significant difference was discovered between the benefit achieved by the beneficiaries of public and private extension organizations with chi-square value of 12.074 tests of statistics. Analysis of Kruska Wallis test of difference also shows that benefit accrued to the beneficiaries is different from one and other. Benefit from the JDPM – RUDEP was ranked foremost (151.46); this was followed by FADU and; lastly public extension organization. The implication of this findings indicated that beneficiaries under private extension organizations had better achievements in terms of increased quantity of crop produced, farm income, skill acquisition and improved education compared to those in public extension organization. The result agreed with findings of [16,6], who declared that private extension outfit provided all inputs in the right time and monitor correct utilization to ensure maximum returns for both organization and the beneficiaries.

**Table 1. Distribution of respondent's participation level in selected extension services**

| Extension services*                           | Public extension (90) (%) |       | Jdpm–Rudep(87) |       | Fadu(87) |      |
|---|---------------------------|-------|----------------|-------|----------|------|
| New farming techniques                        | 33                        | 36.7  | 48             | 55.1  | 31       | 35.6 |
| Workshops / seminar                           | 21                        | 23.3  | 62             | 71.2  | 58       | 66.6 |
| Supervision / advisory                        | 38                        | 42.2  | 51             | 58.6  | 61       | 70.1 |
| Information dissemination                     | 28                        | 31.1  | 41             | 47.1  | 46       | 52.8 |
| Training on record keeping                    | 13                        | 14.4  | 39             | 44.8  | 33       | 37.9 |
| Training on crop utilization                  | 45                        | 50.0  | 76             | 87.3  | 75       | 86.2 |
| Credit admin / utilization                    | 12                        | 13.33 | 77             | 88.50 | 64       | 73.5 |
| Processing / mgt tech                         | 32                        | 35.5  | 52             | 59.7  | 51       | 58.6 |
| Veterinary services                           | 37                        | 41.1  | 33             | 37.9  | 22       | 25.2 |
| Input support services e.g. fertilizer supply | 50                        | 55.5  | 40             | 45.9  | 45       | 51.7 |
| Improved crop varieties                       | 36                        | 40.0  | 31             | 35.6  | 36       | 41.3 |
| Improved livestock                            | 41                        | 45.5  | 61             | 70.1  | 41       | 47.1 |

\* Multiple responses; Source: Field Survey, 2011

**Table 2. Summary of the performance rating of the extension agents of the organization under study**

| Performance rating  | Public extension |      | JDPM-RUDEP |      | FADU  |      |
|---------------------|------------------|------|------------|------|-------|------|
|                     | F                | %    | F          | %    | F     | %    |
| High efficiency     | 16               | 17.7 | 51         | 58.6 | 39    | 44.9 |
| Moderate efficiency | 41               | 45.6 | 31         | 35.6 | 40    | 45.9 |
| Low efficiency      | 33               | 36.7 | 05         | 5.8  | 08    | 9.2  |
| Total               | 90               | 100  | 87         | 100  | 87    | 100  |
| (264)               | 34.1%            |      | 32.9%      |      | 32.9% |      |

Source: Field Survey, 2011

As indicated in the Table 4, results of kruskal Wallis Analysis of variance ( $X^2=0.709$ , assyp. sig of 0.702) indicates that the attitude of farmers (beneficiaries) under the public and private extension organizations were not significantly different in their participation in extension programmes of their organizations. The findings therefore implies that irrespective of extension organization type, the participation of beneficiaries remain the same towards the extension delivery of any organization. The indifference shows that public and private extension delivery strategies are similar. It only discriminates along the gender lines, and which may be associated with some factors as identified by van den Ban [17] as follow:

- Inadequate academic qualification among women making them inefficient for extension work.
- Unwillingness of some qualified women to work in rural areas.

**Table 3. Kruskal Wallis ranking of the beneficiaries benefits under public and private extension organizations**

| Extension organization | Attitude rank |             |
|------------------------|---------------|-------------|
| Public extension       | 116.11 (3)    |             |
| J D P M-RUDEP          | 156.41(1)     |             |
| FADU                   | 133.89 (2)    |             |
| Test statistics        | Values        | Decision    |
| Chi-square             | 12.074 *      | Significant |
| Df                     | 2             |             |
| Asyp: Sig              | .002          |             |

Source:- Data Analysis, 2011; \*- Significant; Significant at 0.05

**Table 4. Kruskal Wallis ranking of beneficiaries participation under public and private extension organizations**

| Extension organization | Attitude rank |             |
|------------------------|---------------|-------------|
| Public extension       | 137.33        |             |
| JDPM-RUDEP             | 137.33        |             |
| FADU                   | 131.83        |             |
| Test statistics        | Values        | Decision    |
| Chi-square ( $X^2$ )   | 0.709         | Not         |
| df                     | 2             | Significant |
| Asyp: Sig              | 0.702         |             |

Source:- Data analysis; \* Significant; significant at 0.05

Unacceptable means of transport to some women extension agents' e.g. bicycle, motorcycle, motorized tricycle etc and stay out for a night to meet farmers at a convenient time.

#### 4. CONCLUSION AND RECOMMENDATIONS

The quest for decentralization of responsibilities of agricultural extension burden from public and government bodies to farmers and private organization was based on realistic appraisal of qualities of private organization and need for evolution of efficient and result oriented farm sector. This is with a view to empower the small scale farmers and to make meaningful contributions to Gross Domestic Product of the country. The study was however, born out of the realization of the failure of public agricultural extension to foster sustainable and dynamic approach to agricultural development. In an attempt to investigate the position and device a remedy, it was designed to assess the extension delivery services of public and private extension organizations and the result shows that,

- Personnel of the private extension organizations were more highly rated above the agents of public extension in the discharge of extension duties.
- Beneficiaries' participation in the extension programmes of private organizations was higher in Private than in the public extension outfit.
- There is significant difference in the benefit achieved by the beneficiaries of public and private extension organizations.
- Participation of beneficiaries in the services of public and private extension organizations were however not significantly different from one another.

It is therefore recommended that since government cannot completely hand – off its responsibility in extension provision, Training and re-training programmes for private and public extension staff should be frequent in order to ameliorate their quality.

Developmental agencies should use private organization's staff with proven experience in field work and needed manpower to execute their programmes development.

Training of staff both in public and private outfit should be complemented with the provision of other assistances and infrastructure.

Synthesis of public and private sector is also recommended in order to obtain durable, functional and result oriented extension work in Nigeria.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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