

<http://dx.doi.org/10.4314/jae.v15i2.4>

Socio-economic and Institutional Factors Influencing Farmers' Perception of Privatization of Agricultural Extension Services in Kaduna State Nigeria

Yusuf, D. E., Omokore, D.F. and Musa, M.W.

Department of Agricultural Economics and Rural Sociology,
Faculty of Agriculture, Ahmadu Bello University, Zaria
Email: edodoyusuf@yahoo.com
Phone numbers: +234-8039686639 or +234-8028434350

Abstract

This study was determined farmers' perception of privatization of agricultural extension services in Kaduna state. Socio-economic characteristics of farmers and the institutional factors influencing farmers' perception towards the privatization of agricultural extension services were investigated. Two out of the four KADP zones were used for the study. A total of 80 constituted the sample size for the study. Descriptive (frequency and percentage) and Inferential (Tobit regression) statistical techniques were used for data analysis. The findings revealed that education (X_2) and farmers' awareness of extension privatization (X_{10}) were positively significant to perception while age (X_1), membership of cooperative (X_8) and quality of extension service delivery (X_9) were negatively significant to farmers' perception of extension privatization to farmers. This finding suggests that farmers should be properly sensitized and well educated on issues concerning Extension privatization. This will actually expose them to know what privatization entails, including the benefits and advantages they can derive from the privatized extension practice.

Key words: *Agricultural extension services, privatization, socio-economic and institutional factors*

Introduction

The role played by extension service in every sector of agricultural production cannot be over emphasized; for the prominent role it plays in dissemination of vital agricultural information. The responsibility of making farmers aware of research findings to increase their production is that of extension service providers (FAO,1997). From government perspectives, whatever priority is given to agricultural production extension will remain a key policy tool for promoting ecologically and socially sustainable farming practices (FAO, 1997).

In agriculture, the declining government budgets combined with waning donor interest has led to significant cuts in public extension services (Farrington, 1994; Rivera and Alex, 2004). The public extension activities that remain are under increasing pressure to provide an accountable and responsive service to citizens. At the same time, the retreat of government from managing agricultural inputs and output, marketing, a diversification in the sources of agricultural research, and increased opportunities for trade have opened many new opportunities for the private sector, including extension provision (Farrington,1994).

According to Connolly (2004), privatization involves ceding of total or substantial ownership and operational control from the government to the private sector. Connolly also buttress that privatization of services involves the development of new partnerships and association capacities between government agencies and non governmental and

private sector actors. In services reform, government, through public sector agencies, retains overall strategic responsibility for services, policy and coordination as part of nationally inclusive process where all key stakeholders articulate their demands openly and actively to government and service providers, private and non- governmental actors agree or contract to provide services for specific clients or groups either through public sector funding or through charges or cost- sharing arrangements.

Privatized extension involves deep and substantial change from public service ministries, their extension agencies or department to private and non-governmental actors. Chapman and Tripp (2004) opined that, in theory, extension privatization simply implies the provision of a service or advice by a private firm in exchange for a fee but the terms and conditions of the transaction are negotiated in an open market.

Carney (1998) stated that globally, non-governmental participation in extension is most effective when government retains significant responsibilities for the cost of service, and provides training equipment and monitoring. Examples where government involvement has been maintained is Chile where the government role is coordinating private sector provision of extension. Privatization of agricultural extension has been the subject of widespread discussion by those considering the challenges of providing an efficient agricultural extension system for farmers in developing countries (Farrington, 1994; Kidd *et al.*, 2000; Rivera, 2001; Katz, 2002). Although new private extension initiatives offer many opportunities for commercial farmers, there is less certainty about the implications for resource poor farmers, whose connections to, and command of market is much more tenuous. It is generally recognized that many of these farmers have been poorly served by conventional, public -sector extension in the past (Rivera, 2001). As a result of the relative poor performance record of the public extension in Nigeria, privatize agricultural extension services in the country have been a subject of discussion in agricultural development. The subject of privatization of agricultural extension services has been examined by a number of researchers in Nigeria. Ozor and Madukwe (2001), examined the perception of extension professionals on privatization and commercialization (P&C) of agricultural extension services in Enugu State Agricultural Development Programme and confirmed that there is high level of awareness of the practice, but were afraid that the professionals might lose their jobs after the privatization exercise. Alfred and Adepoju (2006) examined Cocoa farmers' reaction to P&C of extension services in Ondo State .Their results show that about 58% of the respondents were interested in funding services provided to them. These studies focus on extension professionals in the Enugu State Agricultural Development Project (ADP) and on the perception of P&C of agricultural extension services and cocoa farmers in Ondo state only. A review of these studies suggests that adequate attention has not been given to the socio-economic and institutional factors that could influence farmers' perceptions of the privatization of agricultural extension services in Nigeria.

Objectives of the Study

The main objective of this study was to examine the perception of farmers towards the privatization of extension services in Kaduna State, Nigeria. The specific objectives were to:

- ❖ describe the socio-economic and institutional related profile of the farmers benefiting from the public extension services in the study area and
- ❖ examine the socio-economic and institutional factors influencing farmers' perceptions of the privatization of agricultural extension services in the study area.

Material and Methods

The study was carried out in two of the four extension coverage zones of the Kaduna state ADP. Kaduna State ADP has four (4) operational zones: Maigana, Samaru, Lere, and Birnin Gwari. All these zones are enclaves within the 23 Local Government Areas of the state.

Sampling procedure and sample size

The sample for this study was derived from contact farmers that are conversant with the ADP extension services in Maigana and Birnin Gwari zones of Kaduna State ADP. A multi-stage sampling technique was used in selecting the respondents. In the first stage, two agricultural extension zones were selected purposively to represent the southern and the northern geo-political zones of the state. In the second stage, three Block extension areas (BEAs) were randomly selected each from the total of 17 BEAs, giving a total of six (BEAs). In the third stage, 10% of contact farmers were randomly selected using table of random numbers from a list of farmers obtained from each of the BEAs. In all, a total of 80 farmers were involved in the study out of the 820 contact farmers in the study area. Their distribution was as follows: Chikun,16; Kaduna south,14; Kajuru,10; Sabon Gari,11; Soba,14; and Zaria,15.

In order to elicit the socio economic and institutional factors that affect farmers' perception of the privatization of agricultural extension service, some perception variables were grouped to form an index. This index was formed from responses obtained from farmer's perception on the benefit of privatization of extension service, farmer's perception on the constraints of privatized extension and farmer's willingness to pay for some specific extension privatization services. This was obtained through grouping the positive and negative perception response into five scale categories; namely strongly agrees=2, agreed =1 neutral =0 disagree =-1 and strongly disagree =-2. These together summed up to form the perception index.

Analytical techniques

Descriptive (frequency and percentage) were used to describe the socio-economic profile of the farmers while Tobit regression model were used to measure the socio-economic and the institutional factors influencing the farmers' perception of the privatization of agricultural extension.

Tobit regression model

The Tobit model adopted for this study is based on the model adopted by Tobin (1958) specified implicitly as follows:

$$Y^* = \beta X + u \text{ ----- (1)}$$

Where X is a k-vector of regressors, possibly including 1 for the intercept and the error term u is normally $N(0, \sigma^2)$ distributed conditionally on X and Y^* =dependent or latent variable with X as vector of regressors, possibly including 1 for the intercept and β the corresponding vector of the parameters.

The latent variable Y^* is only observed if $Y^* > 0$. The actual dependent variable is:

$$Y = \max(0, Y^*) \text{ ----- (2)}$$

For this study, the Tobit model was applied as specified in equation (3).The explicit form of the Tobit model is specified as follows:

$$Y^* = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + b_{10}X_{10} + u \text{ (3)}$$

Where:

Y = Perception of privatization (Strongly agreed=5, Agreed=4, Undecided=3, Disagreed=-2 and Strongly disagreed=-1)

X_1 =Age (years),

X_2 =Educational level (years),

X_3 = Occupation (number of respondents occupation)

X_4 =Farm size (ha)

X_5 = Years of farming (years),

X_6 = Participation in decision making(individual=1, Group=2, and community=3)

X_7 =Source of information (radio=1, Tv=2, Extension agents=3and Family/friends=4)

X_8 = Cooperative/association (years),

X_9 =Extension contact (No of days visited/week, month, quarterly)

X_{10} =Knowledge of extension policy document (No. of policy documents exposed to)

U= Error term

Results and Discussion

Socio-economic characteristics of farmers and extension workers

The study analyses some socio-economic and institutional variables identified to influence the perception of farmers on the privatization of extension services in Kaduna state of Nigeria. Among the socio-economic variables found to have significantly influenced farmers perception on the privatization of extension services in the study included: farmers ages and education while the institutional variables were extension visit, cooperative membership and farmers' level of knowledge of extension policy documents .The result shows that about 34% of the respondents involved in the study were above 50years and 35% had acquired secondary education. The analysis further revealed that 47% of the farmers did belong to an association. About 87.5% of the farmers had farm sizes below 5hectares and 30% had been farming for above 30years. Majority (81%) of the farmers practice farming as their primary occupation. This is observed from the finding that majority of the respondents involved in this study were full time farmers Table 1 presents responses of farmers about some of their socio-economic profiles.

Table 1: Distribution of respondents according to socio-economic characteristics (n =80)

Characteristics	Frequency	Percentage
Age (years)		
18-28	11	13
29-39	23	29
40-50	19	24
51 above	27	34
Educational qualification		
Primary	18	22.5
Secondary	28	35.0
Diploma/NCE	4	5.0
HND/Degree	-	-
Koranic	30	37.5
Years of belonging to an association		
1-5	11	14.0
6-10	23	29.0
11-15	7	9.0
16-20	1	1.5
Not belong	38	47.0
Farming experience		
0-7	5	6.0
8-15	18	22.5
16-22	15	19.0
23-30	18	22.5
Over 30	24	30.0
Farm size (ha)		
0.5-5.4	70	87.5
5.5-10.4	9	11.0
10.5-15.4	0	-
15.5-20.4	1	1.5
Occupation		
Farming	65	81.0
Civil servants	4	5.0
Trading	10	12.5

Tailoring	1	1.5
Total	80	100

The influence of socio-economic and institutional variables on farmers' perception of agricultural extension privatization (Tobit regression)

The result as shown in Table 2 indicates that the coefficient for farmer's education (0.33823) and farmer's awareness of extension policies documents (0.55714) were positively and significantly related to perception. It was found also that age (-0.33125), membership to cooperative (-0.63773) and rating the quality of extension service provided to farmers (-0.48095) were negatively and significantly related to farmer's perception of privatization of extension services. On the basis of these it is concluded that farmers' education and level of awareness of privatization of extension services shows that farmers perceived the privatization of agricultural extension service in favourable terms while age, cooperative and quality of extension service influence farmers' perception in negative terms.

The findings in Table 2 are interpreted to mean that the more educated a farmer is the more positively incline the farmer will be about the issue of privatization of extension service and the more favorable his perception of the benefits he could obtained from the private extension. This is so because education increases the access to useful information. This finding agrees with Fagbohunge and Longe (2009) that perception modifies in terms of peoples behaviour. People are able to interpret situations, synthesize and integrate series of new information in the light of what they know to make a meaning out it. This result further explained that the more educated the respondents were, the more likely they will be able to have insight into the comparative characteristics of privatized extension with that of conventional extension

Generally perception has been seen as the process by which people receive information or stimuli from their environment and transform it into psychological awareness (Oladele, 1998). Awareness of extension service policies was found to be positively related to farmers' perception of agricultural extension privatization. Awareness of extension services was positively and significantly related to perception at 5% level of probability indicating that the more the farmers become aware of the issue of privatization of extension services and its relative advantage from the conventional public extension; the clearer their perception may be on the issue concerning extension privatization and the higher their propensity to interpret the policies to deduced the advantages and disadvantages and hence a favourable predisposition will be expected towards accepting or rejecting the privatization of extension services.

The result as shown in Table 2 indicate that age was significantly related to farmers perception of extension privatization, but negatively at 1% level of probability. This implies that age was inversely related to perception of privatization of agricultural extension services. The result in Table 2 revealed that about 34% of the farmers involved in the study were above 51 years of age and has been farming for over 30years. These categories of farmers are old enough to have diverse ways of perceiving over issues affecting them than their younger farmers counterparts. This

could be the reason Fagbohunge and Longe (2009) stated that age is a factor of experience and it largely determines the level to which an individual perceives the happenings in the environment in which he leaves to make a meaning out it for reference purpose. Farmer's negative experiences with the activities of the public extension delivery system could have given them the basis for comparison which probably brought about this negative perception towards extension privatization.

In the case of involvement in a cooperative the expectation is that belonging to a cooperative would make farmers develop positive perception to extension privatization because of the positive reward that a farmer is expected to gain from being a member. The result of the study shows an inverse relationship with a negative coefficient at 1% level of significance against the a priori expectation. The result implies that farmers' who seems to be members of a cooperative organization had negative perception about extension privatization than non members.

Table 2: The influence of socio-economic and institutional variables on farmers perception of extension privatization (Tobit regression)

	Normalized Coefficient	Standard Error	t. ratio
Constant	5..3494	1.3798	3.8769
Age(X ₁).	-0.33125	.15846	-2.0904*
Education(X ₂)	0.33823	.14605	2.3158*
Occupation(X ₃)	-0.30884	.21228	-0.14549
Farm size(X ₄)	-0.98614	.48878	-0.20176
Experience(X ₅)	0.22518	.16112	1.3976
Participation(X ₆)	0.16055	.71957	0.22312
Information sources(X ₇)	0.83050	.70293	1.1815
Cooperative(X ₈)	0-63773	.26025	-2.4505*
Extension services(X ₉)	-0.48095	.16400	-2.9326*
Awareness of extension policy document. (X ₁₀)	0.55714	.29602	1.8823**

SE =60.7

Significant level: *=1 % , **=5%

Conclusion

The result of the tobit regression analysis shows the coefficient of multiple determinations; the standard error of the estimates value of 60.7% of the sampled variation in the factors that influence perception of privatization in the study area is explained by respondents, such as age, level of education, quality of extension services, cooperative membership and awareness of extension policies. This implies that about 39 % of the sampled variation in the factors that influence farmers' perception in extension privatization is explained by other variables that may not have been included in the regression analysis. Based on the findings of the study, it can be concluded that farmers' have had the opportunity of expressing their perception toward

the privatization of agricultural extension services in the study area. . Education and level of awareness of farmers had positive and significantly influenced farmers perception on the privatization of extension service while age, cooperation and quality of extension service influence farmers' perception in negative terms. It can therefore be assumed that farmer's will accept privatization of extension services only when the right institutional environment is provided to enhance acceptance. This will enable farmers to know and be expose to the knowledge of what extension privatization entails, including the benefits and advantages they can derive from the privatized extension practice. This finding suggests that farmers should be properly sensitized and well educated on issues concerning Extension privatization. They have to understand what matters most in the privatization of extension and the benefit they could obtain from the privatization as this will to some extent prepare them for either accepting the concept or rejecting it. Proper information will create awareness on privatization of extension services, thereby making farmers becoming knowledgeable of the concept. This information could be very useful to make the farmers to be able to know the advantages and disadvantages of the concept of agricultural extension privatization which would give them a better perception on agricultural extension privatization programme.

References

- Alfred, S.D.Y. and Adepaju, A. A. (2006). Farmers' perception of agricultural extension privatization on cocoa production in Ondo State. Proceedings of the 11th Annual conference AESON Abeokuta, 3rd--6th April, pp. 323-327.
- Chapman, R. and Tripp, R. (2004). Case studies of agricultural extension programmes using privatized service provision. Prepared for AgREN electronic discussion. pp10-21.
- Carney D. (1998). Changing public and private roles in agriculture services provision. Overseas Development Institute, London, U.K.
- Connolly, M. (2004). Private extension and public-private partnerships. Privatized, contracted and commercialized approaches. ARD, development discussion paper 9. Extension Reform for Rural Development, the *World Bank*.
- Fagbohunbe, B..O. and Longe, S..O. (2009). An introductory psychology: Concepts and principles. Kotleb Consult. Lagos, Nigeria.
- Food and Agricultural Organization (1997). Improving agricultural extension. A reference manual. FAO, Rome.
- Farrington, J. (1994). Public sector agricultural extension: Is there life after structural adjustment? *Journal of Natural Resource Perspectives*, No. 2. London: Overseas development institute, pp. 52-58.

- Farrington, J., Christopolos, I; Kidd, A. and Beckman, M. (2002). Can extension contribute to rural poverty reduction?. Synthesis of a six country study. Agricultural Research and Extension Network Paper No.123. London: Overseas development institute.
- Katz, E. (2002). Innovative approaches to financial extension for agricultural and natural resource management. Conceptual considerations and analysis of experience. Contribution from Armin Baradun. Landau, Switzerland: LBL Swizt Center for agricultural extension.
- Kidd, A; Lamers, J., Ficarelli, P and Hoffimann, V. (2000). Privatizing agricultural extension. Caveat Emptor, *Journal of Rural Society Studies* Vol.16, pp.95-102.
- Oladele, J. O. (1998). *Fundamentals of Psychological Foundations of Education* (4th-ed.). Handbook for Education Students and Teachers. Jonhs-Lad Publishers Ltd. Lagos.
- Ozor, N. and Madukwe, M.C. (2001). Extension professionals perception of privatization and commercialization of agricultural extension services in Enugu State agricultural development programme. *Journal of Agricultural Extension, vol,5, AESON*, pp 67-69.
- Rivera, W. (2001). Agriculture and rural extension world wide. Options for institutional reform in the developing countries. Rome, FAO.
- Rivera, W. and Alex, G. (2004). Privatization of extension systems. Case studies of international initiatives. The World Bank.
- Tobin, J. (1958). Estimation of relationships for limited dependent variables. *Econometrica* 26, pp 24-26.