

**FARMERS PERCEPTION OF OPINION LEADERS IN AGRICULTURAL EXTENSION DELIVERY**

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**Abstract**

*The study perceived opinion leaders in agricultural extension delivery in Orlu Agricultural zone of Imo State. Specifically, it determined opinion leaders performance in teaching and communication, assessed farmers perception of the effectiveness of the opinion leaders in agricultural extension delivery; ascertained the influence of opinion leaders socio-economic characteristics on their effectiveness and identified problems associated with the opinion leaders effectiveness in extension delivery. Both opinion leaders and farmers formed the target population. Random sampling was used in the field in which thirty opinion leaders and sixty farmers were selected for the study. Primary data were collected using a set of structured questionnaire, and analyzed using percentage and regression model. Results showed that opinion leaders have performed well in teaching and communication of farming practices. Outstanding performance was in the area of demonstrating good knowledge of farming problem (96.7%), communication of messages that are beneficial to farmers (93.3%), and faster transfer of improved technologies to farmers (91.6%). Result further showed that opinion leaders are highly effective (68.3%) in agricultural extension delivery. The hypothesis of the study was rejected as the F-ratio (59.716) which determines the overall significance of the regression model is highly significant at 1% level of probability, thereby indicating that the opinion leaders socio-economic characteristics had significant influence on their effectiveness in agricultural extension delivery. The study recommends sustainability on opinion leaders usage in agricultural extension delivery.*

**Keywords:** Agricultural Development, Agricultural Extension Delivery, Farmer Perception, Opinion Leader.

**Introduction**

Agricultural extension remain one of the most crucial and critical means to reach farming households in the rural areas globally (Ogunsunmi and Abegunde, 2011; Anaeto *et al.*; 2012; Ogundiran, 2013; Chukwu, 2013; Anaeto *et al.*; 2013). It is aimed at providing farmers with necessary educational skills and technical information to enable them make effective farm management decisions to enhance their daily practices (Oyebanji, 2008; Ajayi, 2011; Chukwu, 2013; Anaeto

*et al.*; 2013). Effective extension delivery process is therefore an essential factor for the accelerated development of agriculture in developing economics (Oyebanji, 2008).

Most at times, it is difficult for extension agents to provide all extension services to the needy hence the necessity to involve the opinion leaders. These are informal leaders that are able to influence others. Opinion leadership is not a function of the individual's final position or status in the system, but is earned and maintained by individual's technical competence, social accessibility and conformity to the systems norms (Zaharaias *et al.*; 2008; Sharara *et al.*; 2011). By their close conformity to the system's norms, opinion leaders serve as opt model for the innovative behaviours of their followers (Kim, 2007; Kim *et al.*; 2007). Opinion leaders have more exposure to external communication, higher social status, greater mass media exposure, greater social participation, more urban contact and innovativeness (Kim, 2007; Kim, *et al.*; 2007; Mohamed, 2012).

Effective and efficient extension delivery is pertinent for development to be achieved in agricultural sector. For this to be successful, efficient and effective effort should be made by creating the right attitude and mindset both with the clientele (rural farmer) and the opinion leader. Often time, farmer attitude contributes to ineffective delivery of extension service by opinion leaders (Chukwu, 2013). Studies have been carried out on the effectiveness of opinion leader in agricultural extension delivery (Kim, 2007; Zaharaias *et al.* 2008; Gershon, 2009; Sharara *et al.* 2001; Mohamed, 2012), but little or none have make better in respect of their effectiveness in extension delivery in Imo State generally and Orlu agricultural zone in particular. It is against this background that this study:

- Determined opinion leaders performance in teaching and communication;
- Assessed farmers perception of the effectiveness of the opinion leaders in agricultural extension delivery;
- Ascertained the influence of opinion Leaders Socio-economic Characteristics on their effectiveness;
- Identified the problems associated with the Opinion Leaders effectiveness in extension delivery.

It was assumed that opinion leaders socio-economic characteristics do not have any significant influence on their effectiveness in agricultural extension delivery.

**Materials and Methods**

This study was carried out in Orlu agricultural zone of Imo State, Nigeria which is located between latitude 4<sup>o</sup>45' and 7<sup>o</sup>25' N of the equator and longitude 6<sup>o</sup>5' and 7<sup>o</sup>25' E of the Greenwich Meridian (Microsoft Cooperation, 2009). The area has a population of about 220,000 (NPC, 2006; NBS, 2008). Its annual rainfall is about 2299mm while the mean annual temperature is 20<sup>o</sup>C with a relative humidity of about 75% annually (Microsoft corporation, 2009; and Wikipedia, 2012). The area comprised both large and small scale farmers with most of them influential enough to encourage others.

A sample was drawn from both opinion leaders and farmers. Three out of seven Local Government Areas (LGAs) were selected because of the existence of influential opinion leaders and farmers in the area. Ten opinion leaders and twenty farmers were randomly selected from each of the three LGAs given a sample size of thirty opinion leaders and sixty farmers respectively. A structured questionnaire was used to collect the primary data. A three point likert scale format was designed to assess opinion leaders performance in teaching and communication, and analyzed using percentages. Similarly, farmers perceptions of the effectiveness of the opinion leaders was analyzed using percentages, while the influence of opinion leaders socio-economic characteristics on their effectiveness in extension delivery was subjected to regression analysis, Problems associated with opinion leaders effectiveness in extension delivery was achieved using percentages, and the gravity of problems positioned in rank order. The hypothesis was tested using multiple linear regression model, stated implicitly as follows:

$$Y = f(X_1 X_2 X_3 X_4 X_5 X_6 X_7 X_8 X_9 X_{10}) + e_i$$

Where Y = Effectiveness

- X<sub>1</sub> = Age (years)
- X<sub>2</sub> = Education level (No of years in school)
- X<sub>3</sub> = Marital Status (married = 1, single = 0)
- X<sub>4</sub> = Household Size
- X<sub>5</sub> = Monthly Income (₦)
- X<sub>6</sub> = Mobility (Mobility =1, No Mobility =0)
- X<sub>7</sub> = Field Experience (years)
- X<sub>8</sub> = Access to Information (access =1, No access =0)
- X<sub>9</sub> = Sex (Male = 1, Female =0)
- X<sub>10</sub> = Extension Agents contact (No of visits)
- e<sub>i</sub> = Error term.

**Results and Discussion**

Result in Table 1 revealed farmers assessment of opinion leaders performance in teaching and communication. They were perceived high in the area of good knowledge of farming problem, communication of messages that are beneficial, and faster transfer of new and improved technologies to farmers (96.7 %, 93.3 %, 91.65 %). Others include punctuality at organized meetings and seminars, polite while teaching, communication of farmers problem to extension agents faster, clear presentation of subject matter, good knowledge of improved technologies and clear application of theory and practical (88.3 %, 86.6 %, 85.0 %, 88.3 %, 81.6 %, 71.6%). However, opinion leaders listening ability to farmers problems, giving equal treatment to all farmers, and not been explanatory enough were rated low.

This result implies that opinion leaders are knowledgeable about subject matter and new ideas but inadequate knowledge about adult learning principles. There is therefore need to sustain the teaching and communication qualities and if possible improve on them especially in the areas of lag. This is because efficiency of teaching and communication is positively related to adoption of farm technologies (Chukwu, 2013a; Anaeto *et al.* 2013).

**Table 1: Distribution of Farmers' Assessment of Opinion Leaders' Performance in Teaching and Communication**

Teaching and Communication	Fair (1)	Good (2)	Very Good (3)	Total	Percentage (%)
• Knowledge of farming problem	-	2	58	60	96.67**
• Message are beneficial	2	2	56	60	93.33**
• Communicate new technologies to farmers fast and good	1	4	55	60	91.67**
• Punctuality	2	5	53	60	88.33**
• Polite in teaching	3	6	52	60	86.67**
• Communicate your problems with extension agents	4	5	51	60	85.00**
• Good presentation of topics	5	5	50	60	83.33**
• Knowledge of new technologies	6	5	49	60	81.67**
• Integrate theory and practical well	8	9	43	60	71.67**
• Listen to your problems	14	17	29	60	48.33**
• Give fair treatment to all farmers	11	21	28	60	46.67**
• Are they explanatory	9	26	25	6	41.67*
• Allow farmers' to discuss	15	22	23	60	38.33*

Source: Field Survey Data, 2013,

\* Accepted rating

\*\* Not accepted rating respectively

Table 2 assessed farmers' perception of the effectiveness of the opinion leaders in extension delivery. Result showed that opinion leaders are highly effective as perceived by 68.3% of the respondents. This is left with only about 26.6% of the respondents who perceived them as been moderately effective. Very few of the farmers (6.6%) see them as been fairly

effective. This implies that opinion leaders used in extension delivery are very effective, especially in the area of providing the needs of farmers. This tallies with the findings of Mohamed (2012) that opinion leaders involved in extension delivery are very hardworking and efficient in providing farmers needs and finding solution to their immediate problem.

**Table 2: Distribution of Farmers' Perception of the Effective of Opinion Leaders'**

Perceptions level	Frequency	Percentage (%)
▪ Highly effective	41	68.33
▪ Moderately effective	15	26.67
▪ Fairly	4	6.67
▪ Total	60	100.0

Source: Field Survey Data, 2013.

Results in Table 3 examined influence of opinion leaders socio-economic characteristics on their effectiveness in extension delivery. Based on statistical significance of the coefficient and goodness of fit, the exponential function was chosen as lead equation. This was based on the value of  $R^2$  (0.889), F-ratio value (59.716), conformity of the signs with *a priori* expectations of the model and has the highest number of significant variables (six variables).

The coefficient of multiple determinations  $R^2$  was found to be 0.889 (88.9%). This is an indication that 89 % of the variation in the level of effectiveness of the opinion leader was explained by the explanatory variables (socio-economic characteristics). The F-ratio (59.716), which determines the overall significance of the regression model was highly significant at 1% level of probability, hence a conclusion that the opinion leaders socio-economic characteristics had a significant influence on their effectiveness in extension delivery.

**Table 3: Regression Analysis of the Influence of Opinion Leaders' Socio-economic Characteristics on their Effectiveness in Agricultural Extension Delivery.**

Variables	Exponential	Semi-log	Linear	Double-log
Constant	14.755 (12.121)***	620323.175 (12.961)***	272604.381 (13.827)***	11.599 (10.516)***
Age (X <sub>2</sub> )	-0.011 (-0.388)	-54075.872 (-1.060)	-1720.219 (-0.392)	-0.332 (-0.983)
Education (X <sub>3</sub> )	0.014 (4.123)***	-27239.937 (-1.969)*	2467.694 (2.317)***	0.160 (2.299)***
Filled Experience (X <sub>3</sub> )	0.007 (2.748)***	-7861.459 (-0.576)	738.628 (0.552)	0.006 (3.728)***
Access to information (X <sub>4</sub> )	0.347 (3.040)***	7869.536 (0.250)	-18558.672 (-0.868)	0.089 (0.426)
Household size (X <sub>5</sub> )	0.018 (0.698)	16609.764 (0.845)	3934.116 (0.983)	0.078 (0.601)
Mobility (X <sub>6</sub> )	0.113 (5.410)***	2605.53 (3.845)***	-9140.995 (-4.218)***	0.073 (2.532)***
Monthly income (X <sub>7</sub> )	1.155E-7 (2.927)***	-20334.282 (-0.761)	256.193 (2.294)***	-0.103 (-0.579)
Access to extension agents (X <sub>8</sub> )	1.421 (4.504)***	23315.337 (1.830)*	18849.790 (5.543)***	0.152 (0.803)
Gender (X <sub>9</sub> )	-0.185 (-0.553)	-29854.199 (-0.704)	-26101.099 (-0.448)	-0.212 (-1.822)
Marital Status (X <sub>10</sub> )	0.232 (0.997)	41819.908 (0.349)	36050.303 (0.052)	0.273 (2.316)**
R <sup>2</sup>	88.9	80.8	78.4	70.8
F-Ratio	59.716***	55.495***	51.959***	52.200***

Sources: Computer Printout of SPSS (2013); values in parenthesis are t-values \*Statistically at 10%; \*\*Statistically at 5%; \*\*\*Statistically Significant at 1%

Table 4 examined problems associated with opinion leaders in extension delivery. The problems were ranked according to severity as shown in Table 4. Results revealed that inadequate mobility (96.3%) ranked first among other problems. Next to it were poor feeder roads, traditions and customs of farmers,

farmers illiteracy. Others include poor communication infrastructure, inadequate information, inadequate improved technologies and poor extension agents contact which ranked 8<sup>th</sup> among others. This implies that opinion leaders are faced with so many problems which challenged their operations.

**Table 4: Frequency Distribution of problems Opinion Leaders' Encounter in Agricultural Extension Delivery**

Problems	Frequency**	Percentage %**	Rank Order**
Mobility	59	98.33	1 <sup>st</sup>
Poor feeder roads	58	96.67	2 <sup>nd</sup>
Tradition and culture of the people	55	91.67	3 <sup>rd</sup>
Literacy	52	86.67	4 <sup>th</sup>
Poor communication infrastructure	49	81.67	5 <sup>th</sup>
Inadequate information	47	78.33	6 <sup>th</sup>
Inadequate improved technologies	46	76.67	7 <sup>th</sup>
Poor extension agents contact	43	71.67	8 <sup>th</sup>

\*\*Multiple Responses were obtained; Sources: Field Survey, 2013.

### Conclusion

Opinion leaders are found to have performed well in all aspect of teaching and communication, except in areas of listening ability to farmers problems, and giving convincing explanation on certain issues to farmers. Their efficiency in teaching and communication led to favourable perception of their effectiveness in extension delivery by farmers. The hypothesis of the study was rejected hence the opinion leaders socio-economic characteristics had a significant influence on their effectiveness in extension delivery. In view of the fact that they are effective in delivering extension services, inadequate or poor mobility was a problem among others associated with their effectiveness. The study therefore recommends sustainability in the utilization of opinion leaders in agricultural extension delivery.

### References

- Ajayi, A.R (2001): Evaluation of Extension Agents' Job Characteristics: A case study of Enugu State Agricultural Development Project, Nigeria, *Journal of International Agricultural and Extension Education*.
- Anaeto, F.C, C.C. Asiabaka., F.N. Nnadi, J.O. Ajaefro, O.O, Aja, F.O Ugwoke, M.U. Ukpongson, A.E Onweagba (2012): The role of extension officers and extension services in the development of agriculture in Nigeria, *Wudpecker Journal of Agricultural Research Vol. 1(6), pp. 180-185, July 2012 Available online at <http://www.wudpeckerresearchjournals.org> 2012.*
- Anaeto, F.C., Asiabaka, C.C., Onweagba, A.E., Onu, D.O., Ohajianya, D.O., Nnadi, F.N., Ugwoke, F.O., Ajaero, J.O., Aja, O.O., Ibe, M., Chikaire, J., Nwankwasi, N.R., Anyoha, N.P., Okereke, n>E. and Ukponson, M.A. (2013): Use of Extension Education/Services as Policy Instrument for Meaningful Agricultural and Rural Development in Nigeria. *International Journal of Applied Research and Technology*. 2(3): 167-172.
- Chukwu, A.O. (2013): Farmers' Perception of the Effective of Extension Principle in Extension Delivery in Owerri Agricultural zone, Imo State, Nigeria. *International Journal of Applied Research and Technology*. 2(3): 38-43.
- Chukwu, A.O. (2013a): Analysis of women extension agents Effectiveness in Technology Transfer in Imo State, Nigeria, *International Journal of Development Research Vol. 3, Issue, 7, pp. 001-003, July, 2013.*
- Gershon, F. and Sara, S (2009): The role of opinion leaders in the diffusion of new knowledge: the case of integrated pest management, Development Research Group The World Bank Policy Research Working Paper 3916, May 2009.
- Kim, D. (2007): Identifying Opinion Leaders by Using Social Network Analysis: A Synthesis of Opinion Leadership Data Collection Methods and Instruments, PhD thesis, the faculty of the Scripps College of Communication of Ohio University.
- Kim, D; Chitnis, K; Vasanti, P. and Singhal, A. 92007): Opinion Leadership Networks and Diffusion of e-Choupal in Indian Villages, *Journal of Creative Communications, @ (3): 345-360.*
- Microsoft Corporation (2009): Microsoft Encarta Premium suite 2009 (software).
- Mohamed, M.M (2012): Identifying opinion leaders using social network analysis, a study in an Egyptian village, *Russian Journal of Agricultural and Socio-economic Sciences*, No. 4(4)/2012.
- Ogundiran, O.A., (2013): Analysis of effectiveness of agricultural extension service in among rural women: a case study of Odeda local government, Ogun State, Nigeria, *International Journal of Science, Technology and Society 2013; 1(1): 36-42 published*

- online July 10, 2013; doi:  
10.1648/j.ijsts.20130101.15
- Ogunsumi L.O. and B.O Abegunde (2011): Evaluation of agricultural extension and delivery services in southwest Nigeria, *International Journal of Agriscience* Vol. 1(4): 581-591, September 2011 [www.inacj.com](http://www.inacj.com) ISSN: 2228-6322© *International Academic Journals*
- Oyebanji, O.O. (2008): "The development of agricultural Extension in Nigeria" in Judith N. (Ed.): *Agricultural Extension in Africa*. CTA, The Netherlands. Vol. 2. Pp. 235-250.
- Sharara, H., L. Getoor and M. Norton (2011): Active Surveying: A Probabilistic Approach for identifying Key Opinion Leaders, Proceeding of the Twenty-Second *International Joint Conference on Artificial Intelligence, Barcelona, Catalonia, Spain*, 16-22 July.
- NPC (2006): Nigeria Population Commission, *Nigeria federal Government Initiative of individuals head count*. Spread, State by State, In :MOFINEWS Jan-Feb, 2007, 6(3): 7
- NBS (2008): National Bureau of Statistics Official Gazette (FGP 71/52007/2,500(OL24): *Legal Notice on Publication of the Details of the Breakdown of the National and State Provisional Totals, 2006 Census*. [www.nigerianstart.gov.ng](http://www.nigerianstart.gov.ng) (accessed 28 October, 2011).
- Wikipedia (2012): The free Encyclopedia: [www.en.wikipedia.org](http://www.en.wikipedia.org).
- Zacharias, S., M.C. Jose, A.A. Salam and B.S. Kruvilla (2008): *The influence of Opinion Leader in the Rural Market: Marketing to rural consumers, understanding and tapping the rural market potential*: Pp: 3-7.