

SOCIO-ECONOMIC CHARACTERISTICS INFLUENCING EXTENSION AGENTS' COMPETENCIES IN SOUTH-EAST, NIGERIA

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Abstract

This study examined the socioeconomic factors influencing the competency level of extension agents in South-east, Nigeria. A simple random sampling procedure was used to select 283 extension agent respondents representing 70% of extension agents' total numbers across each state. Data were collected through a structured questionnaire; a self-rating scale was used to determine the extension agents' competency levels in their extension activities. Frequency counts, percentages, mean scores, standard deviation and the Linear Regression was used to analyse the study data. The results shows that, majority of the respondents were married (83.4%), 46.3% were within the age bracket of 41 and 50 years, and they were all literate (100%). Respondents were found to possess high level of competence in programme planning ($\bar{x}=3.59$), demonstration and communication ($\bar{x} =3.56$), evaluation ($m=3.55$), leadership ($\bar{x}=3.43$) human relations ($\bar{x}=3.38$) and technical expertise ($\bar{x} =3.48$). They were however low in computer skills and knowledge ($\bar{x}=1.63$). Majority of the respondents (58.0%) had moderate level of competency. Extension agents' age, sex, marital status, distance to work and income were found to have significant influence on the competency levels of the extension agents. The study recommended that attention should be paid to the crucial socio economic characteristics of the extension agents that had influence on their competency levels; Extension agents should also be trained on those areas where their competencies were rated low

Keywords: evaluation, leadership, human relations, programme planning, capacity

Introduction

The mission of agricultural extension is to extend agricultural innovation and knowledge to the farmers. Agricultural extension has been associated with the concepts of technology transfer from the agricultural research centres to the rural community (Ogunlade et al, 2006). The transfer of technology aims at efficient message of research outcomes to clients and improvement of clients' capacity and potentials through educational activities (Tiraieyari, et al, 2010).

Agricultural Extension is projected to foster a sustainable and active approach to agricultural development and this has

remained a great concern to the government and a priority for discourse in the policy arena (Agwu, et al, 2008). However, there have been criticisms regarding the competencies of the extension agents who are saddled with the transfer of technologies from the research center to the farmers. Extension agents' inability to demonstrate the linkage between the economic value and production advantages of new technology is a common factor that has hindered the adoption of new agricultural technologies (Barao, 1992).

Attention to the technical competence and performance of extension workers highlights the significance of their knowledge, skills

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and orientations, which agricultural educators and employers assume is necessary. Competencies such as knowledge of the organization, technical subject matter expertise, programming, professionalism, communications, human relations, and leadership have been found as criteria used in the selection, training and development of extension workers in the developing countries, Nigeria inclusive..

Technical skills of an extension worker involve not only the knowledge of the discipline, but also the ability to impact same to farmers. As Spencer and Spencer (1993) stated, competence “is the characteristic of an individual that is causally related to criterion-referenced effective or superior performance in a job situation”

In the last two decades, The Agricultural Development Programmes (ADPs) saddled with the responsibility of carrying out the bulk of agricultural extension activities across the states and the Federal Capital Territory of Nigeria, has experienced major transformational changes, in terms of programs, funds, and human resources. The rapidly globalizing economy and increasingly complex clients have created major concerns and shifting priorities for ADP. Regardless of priorities, the efficiency of the extension programs deeply depends on the delivery approach and competencies of the extension workers.

The extension labour force has involved individuals of varying socio-economic backgrounds. These backgrounds include age, gender, working experience, educational qualification, and marital status of the extension agents aside others which have been established to be associated with their competencies either positively or negatively. According to Remi and Chris (2012), organizations are obviously stratified along some variables such as

people’s age, function, gender, race, personality, flexibility and other factors. There are interests on why some people succeed or are more effective than others when exposed to the same resources and environment. What variables best account for the differences in performance? And how can organizations ensure that they have capable people that will drive their vision and missions? These issues amongst others are quite germane in managing organizations in today’s competitive environment.

Ogunlade et al., (2011) reported that out of six socioeconomics variables tested against The competencies of zonal extension managers in Northern Nigeria, four had no significant relationship with their level of competence. There is significant and positive relationship between human resource management, tenure in extension services and human resource management competencies. There is no doubt that determining the variables that influence extension agents’ competencies will bring about increased organization effectiveness. As a result, improved performance of extension agents is one of the targets for bringing about increased agricultural production and, subsequently, improvement in the national economy. In view of this, the study investigated the socioeconomics characteristics influencing competencies of extension agents in South-east, Nigeria. Specifically the study described the socio-economic characteristics of agricultural extension agents and investigated their level of competency in the study area.

Study Hypothesis

H₀₁: There are no significant effects of socio-economic characteristics on the competencies of extension agent across South east Nigeria

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Methodology

This study was conducted in the South eastern geopolitical zone of Nigeria. This comprise of Abia, Anambra, Ebonyi, Enugu, and Imo States. South east Nigeria is home to the Igbo speaking people of Nigeria who are mainly engaged in trading and farming activities. The agriculture is largely traditional and characterized by small land holdings of about 1.2 hectares (Njoku, 2006). The use of simple farm tools such as hoe and cutlass, communal or family land holding and shifting cultivation are predominant in the area.

The target population for this study was the frontline extension agents in the ADPs in Abia, Anambra, Ebonyi, Enugu and Imo states of Nigeria. Simple Random Sampling procedure was used in the selection of 70% of the respondents' population supplied by the Agricultural Development Project offices. A total of three hundred and eight (308) respondents constituted the sample size. However, two hundred and eighty three (283) questionnaires were found suitable for use in analysis. Data were collected through a well-structured questionnaire. The total score for each competency levels ranged from 5 being the least to 25 being the highest on the scale. The overall Extension competency score ranged from 35 being the lowest competency level to 175 being the highest competency level on the 35 item scale. From the rating scale, a benchmark of 3 was adopted. A mean greater than 3 denoted high competence, 3.0 shows average competence, while less than 3 denoted low competence.

Descriptive statistics used to analyze the study data were frequency counts, percentages, mean, ranking, and standard deviation; while Multiple Linear Regression analysis was used to determine the effects of extension agents socio economics characteristics of on their competencies

Results and Discussion

Table 1 shows the age, sex, marital status, educational levels, and income of respondents. The age of respondents were grouped to reflect the level of individual responsibility, and expected physical strength for farm and non-farm work. About 46.3% of the respondents were within the age bracket of 41-50 years. This implies that most of the field extension agents were still in their active.. The extension agents were within the active labour force and could cope with the tedious activities. They were capable of undertaking rigorous activities needed for efficient delivery of their extension activities. More than 53.7% of the respondents were females implying that there were more female extension agents in the study area than the male. In the past, extension jobs were reserved for men only. The believe then was that since most farmers were men, men were suitable and could therefore easily reach men (Airemen, 2005). Nowadays that women are also farmers and the need to reach them in order to achieve increase productivity has necessitated the employment of female extension workers who are believed to be in a better position to reach ing women. This finding contradicted that of Okereke and Onu, (2007) who reported that 59.0% of extension agents in Imo state were males. Table 1 also shows that, 83.4% of the respondents were married. The implication here is that married extension workers may have more responsibilities at home and therefore, spend less time at work. The findings collaborated with the result of Adesiji (2006) and Okereke and Onu (2007) who reported that, larger percentage of extension workers were married. Table 1 reveals that, 92.9% of the respondents have had tertiary education. This indicates that a higher percentage of the extension agents had more than secondary education and were well qualified for their extension service. Sapkota *et al* (2018) supported this finding that extension agents with

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better exposure to farm-related information influence farmers to have a better disposition to the adoption of innovation and better crop production practices so easily.

.. Table 1 also show that, 30.4% of the respondents earned annual income of less than or equal to ₦400000 per annum, 35.0% earned annual income of between ₦400001-₦600,000 per annum, while 34.6% earned between ₦600001-₦800000 per annum depending on their states of operation. The implication of this is that extension agents in the study area received less than ₦50,000. This however is not encouraging considering the present situation of the Nigerian economy yet incentivising labour is an important motivator for competence

Table 1: Percentage Distribution of Respondents by Socio- economic Characteristic N=283

Characteristic	Categories	Frequency	%
Age	≤ 30	16	5.7
	31-40years	114	40.3
	41-50years	131	46.3
	51-60years	22	7.8
Sex	Male	131	46.3
	Female	152	53.7
Marital status	Single	33	11.7
	Married	236	83.4
	Widowed	14	4.9
Educational levels	SSCE	20	7.1
	Certificate of college of Agric	72	25.4
	OND	125	44.2
	HND/Bachelor degree certificate	58	20.5
	Master degree certificate	8	2.8
Income	≤ N400000	86	30.4
	N400001-600000	99	35.0
	N600001-800000	98	34.6

Source: Field Survey.

Table 2: Distribution of Respondents According to their Work Related Characteristics

Variables	Categories	Frequency	%
Distance	0-5km	140	49.5
	6-10km	67	23.7
	11-15km	27	9.5
	16-20km	42	14.8
	21-25km	7	2.5
Years of experiences	≤ 5years	72	25.4
	6-10years	87	30.7
	11-15years	66	23.3
	16-20years	39	13.8
	≥ 21years	19	6.7
Membership of Extension organizations	No	168	59.4
	Yes	115	40.6
Attendance of Training before Joining Extension Work	No	108	38.2
	Yes	175	61.8

Source: Field Survey, 2015.

Table 2 shows the work related characteristics of the respondents. The Table indicates that 49.5% of the respondents resided within 0-5 kilometers to their various circles, 23.7 % resided within 6-10 kilometers from their place of work, 9.5% resided within 16-25 kilometers, 14.8% resided within 11-15 kilometers, while 2.5% resided within 16-20 kilometers. The implication of this is that half of the extension agents do not reside in their various circles and as such, this might affect the effectiveness of their work. One of the principles of extension is that the extension officers mostly get use to norms and culture of the people. This findings tally with the work of Okereke and Onu (2007), that revealed that about 94.0% of extension workers in Imo state lived outside their places of operation. The length of service is probably an indicator of a person's commitment to the chosen career (Ejembi et al., 2006). Table 2 shows that 25.40% of the respondents had less than five years working experience, 30.7% had between 6-11 years of working experience, 23.3percent had 11-15 years of working experience, 6.7% had

21 and above years of working experience, while 13.8% of the respondents had between 16 and 20 years of working experiences. This implies that majority of the extension workers had put in many years of service.. This findings collaborates the finding of Okereke and Onu, (2007) and Obasi et al., (2014) who reported that the average years of extension agent’s experience in service in Imo and Anambra States falls within 5-15 years. Considering the importance of extension training and manpower development before joining the extension service work, the findings revealed that some of the extension workers attended training before joining the extension work. Training is crucial to the performance of the duties of an extension workers, as knowledge gained through training keeps the extension workers abreast of new development in their profession.61. 8% of the respondents agreed to have attended training before joining extension services system, while 38.2% indicated not to have attended any form of training before joining the extension work.

Table 3: Distribution of the Respondents’ Current Level of Competency

Items	Mean	SD	Rank
Teaching methods/ Communications competency			
Conduct regular extension meeting to create awareness	3.69	0.90	
Method demonstration/ latest communication methods to teach	3.37	0.93	
Make clear and convincing oral presentations	3.60	0.98	
Demonstrate benefit of adoption			
Conduct group discussion	3.56	0.98	
Conduct regular meeting/training to introduce new discoveries	3.59	1.08	
Total	3.56	0.98	2 nd
Technical/Subject Matter Expertise competency			
Apply relevant subject matter to real life problems	3.34	1.09	
Explain relevant subject matter	3.48	0.90	
Identify research-based information	3.61	0.82	
Identify appropriate delivery strategies	3.35	0.82	
Demonstrate technology skills pertinent to subject matter	3.58	0.96	
Total	3.48	0.92	4 th
Programming Planning/			

Utilize effective teaching methods	3.67	0.89	
Understand basic components of educational programming	3.58	1.00	
Acquire teaching resources for your subject area	3.47	0.98	
Prepare an annual plan of work for area of responsibility	3.70	0.95	
Recruit and manage volunteers	3.51	1.01	
Total			1 st
Evaluation competency			
Evaluate extension program and farmers	3.61	0.96	
Conduct needs assessments program	3.52	0.90	
Prepare evaluation report	3.39	0.87	
Writing programme objectivities	3.48	0.99	
Using evaluation results	3.74	0.95	
Total			3 rd
Human Relations competency			
Develop trusting professional relationships	3.39	1.00	
Provide consultation to clientele groups	3.47	0.93	
Establish relationship with subject matter specialists and peers	3.41	1.06	
Understand diversity in extension	3.39	1.03	
Manage conflicts	3.22	1.20	
Total	3.38	1.05	5 th
Leadership competency			
Apply critical thinking skills	3.49	0.94	
Understand relationship of personal goals to job performance	3.31	1.04	
Understand workgroup dynamics	3.50	0.95	
Nurture leadership skills in others	3.41	0.90	
Develop a plan for building personal leadership skills	3.39	1.04	
Total			6 th
Computer knowledge / Skills			
Answer farmers question through email	2.05	1.06	
Use internet search site	1.63	0.72	
Handle hardware problems	1.48	0.75	
Analyse data through statistical package for social science	1.39	0.58	
Manage basic computer programme	1.60	0.74	
Total	1.63	0.77	7 th

Source: Field Survey, 20157

Table 3 shows the current competency level of extension agents in the study area, the seven core competencies identified in the study for extension agents in the study area are: Communication/teaching, Technical/Subject Matter Expertise, Programming planning, Evaluation, Human Relations, Leadership and Computer knowledge and skills. Extension agents’ current levels of proficiency in these seven

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competency areas were determined in this study.

The five highest levels of sub-competencies criteria were: ability to use evaluation results ($\bar{x}=3.75$), prepare an annual plan of work for area of responsibility ($M=3.72$), conduct regular extension meeting to create awareness ($\bar{x}=3.6820$), utilize effective teaching methods ($M=3.67$), and identification of research-based information ($\bar{x}=3.61$). The five lowest levels of sub-competencies criteria were: ability to analyze data through statistical package ($\bar{x}=1.39$), handle hardware ($\bar{x}=1.48$), manage basic computer ($M=1.60$), use internet search site ($\bar{x}=1.63$), and answer farmers question through email ($\bar{x}=2.05$).

The findings imply that respondents' ability to use evaluation results, prepare an annual plan of work for area of responsibility and conduct regular extension meeting to create awareness were rated high. Evaluating extension activities of farmers' performance is one of the most critical works of the extension agents. Similarly, the preparation of work activities is a critical role in extension service. As reported by Okoweche et al. (2009), one of the extension agents' functions is to evaluate agricultural activities of farmers in order to help them prepare a plan of work and conduct meetings to meet their felt needs by bringing agricultural innovation to them.

Therefore, evaluation, communication and knowledge of extension work are central and crucial in every extension work and extension agents need high level of professionalism on these competencies. Adesiji (2006) found similar results in Osun state, where extension workers rated high, their competency on curriculum design, developing evaluation plans, preparing evaluation reports and preparing educational program plan. Considering individual

competencies that was rated slightly above average, the individual items on leadership and human relationship competencies were perceived to be slightly above average as shown in Table 3. This implies that the respondents possess less human relation's competency with the famers and have less competency in leadership. This might be as a result of the extension agents residing far from the farmers as reported during the study. Most of the extension agents claimed they lived outside their place of extension activities. Maintaining relationship with farmers is essential. This is more so, since an extension agent has to work with people in a variety of different ways. Extension often requires an intimate relationship with the farmer. They inevitably work with people who have little formal education and lead a way of life which may be quite different from theirs.

Regarding the computer/skills competency criteria that had the least mean value. This findings might be attributed to limited knowledge and the poor use of Information and Communication Technologies among extension agents in the study area. This finding collaborates with the study by Umar et al., (2015) that extension agents on poor use of ICT in Kaduna State of Nigeria.

Table 3 also presents the seven core competencies ratings. The scores for each of the sub-competencies were summated to get the score of each of the seven core competencies. The value of core competency score on the scale range from five-very low competency to twenty five-very high competency. The mean values close to twenty five indicate high level of competencies. The highest mean value ($\bar{x}=3.59$) was rated for the programme planning competency category. This was followed by teaching/Communication ($\bar{x}=3.56$) and the evaluation ($\bar{x}=3.55$) competencies category respectively. The

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lowest mean value ($\bar{x}=1.63$) was rated for the computer knowledge and skills competency category. The overall mean of 3.2 was taken as a significant level of importance for attention. The implication of the result is that extension agents in the study area claimed they possessed high level competence abilities in six out of the seven major competencies. These six were teaching/Communication, programme planning, evaluation, technical/subject matter expertise and leadership competency abilities.

Table 4: Distribution of respondent Overall Competency Levels

Range of Scores	Number	Percentage
Very Low	0	0
Low	105	37.1
Moderate	164	58.0
High	14	4.9
Total	283	100

Note. Scale: 1 = Very Low; 2 = Low; 3 = Moderate; 4 = High; 5 = Very High

Source: Field survey.

The scores of all 35 competencies items were summed in Table 4 to get the overall competency levels for the study respondents. The overall competency score on this scale range from 35 being the lowest to 175 being the highest. The overall competency score ranged from 35 to 210 with the mean value of 113.10 on this scale. The distribution of respondents' overall competency scores in quartiles is summarized. The respondents were distributed between Low, Moderate and High. However, the majority (59.3%) of the respondents had moderate competency level.

Table 5: Result of Regression Analysis showing the effects of socio economic characterizes of the Respondents on competency level

Competency	B	Std. Error	t-value	P-value
Age	20.097	3.786	5.308	.000***
Gender	32.894	3.563	9.233	.000***
Marital Status	64.620	4.003	16.145	.000***
Level of Education	1.142	4.730	.242	.809

Distance from their residences to their circles	14.097	5.016	2.810	.005*
Income	24.465	4.319	5.665	.000***
A	2.272	4.157	.547	.585
Years of extension	-1.622	4.809	-.337	.736
R=0.963	R ² =0.928	F=444.03	P-value=0.001	

Source: Data Analysis

***: Significance at .01

** : Significance at 0.05

*: Significance at 0.10

Table 5 shows the result of regression analysis on some selected socio economic characteristics effects on competency levels of the extension agents in the study area. The adjusted R² is 92.8% that gives the total variations due to the effects of socio economic characteristics on extension agents' competency in the activities. Based on the multiple regression models, five predictor variables were found to have significant effects on the competency levels of the extension agents. The five socio economic characteristics variables were: age (t=5.308, p=0.000), sex (t=9.233, p=0.00) marital status (t=16.145, p=0.000), distance to work (t=2.810, p=0.005) status and income (t=5.665, p=0.0001). The study implies that some socio economic characterizes had significant effects on the competency levels of the extension agents. Therefore, the null hypothesis (H₀₁) that there was no significant effect of the socio economic characteristics on competency level of the extension agents was rejected and the alternative hypothesis (H_{a1}) was upheld in respect of significance of age, sex, marital status, distance to work and income on competency level.

Adesiji (2006) that showed age and length of services of the extension workers was positively related to competency level. Owen, (2004) suggested a long term specialized development plan for extension agents towards their evaluation in their early years of service, to ensure development of their desired sub competencies.

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Conclusions

This study clearly shows that extension agents in the study area were young, productive and at the vibrant stage of their life. There were higher percentages of female extension agents in the study area than their male counterparts. The academic qualifications show that the Agricultural Development Project offices in the study area employed well educated extension agents, who had put in many years in extension work. However, these extension agents received less than fifty thousand naira per month. Extension agents were found to possess competent abilities in conducting regular extension meeting to create awareness and use of basic computer programmes.

The study therefore concludes that extension agent's age, gender marital status, distance to work and income have significant effects on their competency in their extension delivery activities. It is recommended that stakeholders in extension delivery pay to making these crucial socio economic characteristics of the extension agents that had influence on their competency levels favourable for effective extension outcomes. Trainings should also be availed extension agents towards bettering their skills and competence in their extension activities

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