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Introduction

Globally, agricultural extension is a very important service that promotes rural livelihoods (Davis, 2016), and is an effective way of reaching farming households in rural areas. It remains the cornerstone of agricultural development in many countries, including Nigeria (Adejo, Okwu & Ibrahim, 2012). Agricultural extension services are particularly important for farmers as they assist with increasing their production capacity by disseminating information aimed at addressing issues related to their knowledge, attitude and skills. Nigeria has one of the most elaborate extension systems in sub-Saharan Africa (SSA) (Musa, Aboki & Audu, 2013), which is expected to foster a sustainable and dynamic approach to agricultural development in the country. However, the performance of the Nigerian extension services is regarded as unsatisfactory, as the required professionalization and development is still far from being achieved (Adekunle, 2013).

Extension practitioners in Nigeria are reported to be unresponsive to farmers' need, unaccountable for services rendered, not held liable for unethical conduct, prone to incorrect and wrong message dissemination, and generally provide an inefficient service. In addition, investment in extension services has generally declined due to donor agencies having shown increasing concern on the decreasing rate of returns on their investments in this sector (World Bank, 2006). As reported by Omotesho, Ogunlade and Ayinde (2015), farmers perceived the level of accountability of extension agents in Nigeria to be poor. All these points to the need to restructure the agricultural extension and advisory services in order to enhance its relevance to meet the need of all actors, and thus play its rightful role ensuring food security and providing innovative solutions.

Several reforms have been introduced into Nigeria's agricultural extension service approaches, models, methods, funding and training over the years without the desired impact, as part of an attempt to overcome the highlighted problems. Discussions in the field of extension over the last twenty years have brought to the fore a shift from government funded to private sector funded extension services (Adetayo & Eunice, 2013), with a recent increased focus on the professionalization of extension and advisory services. Oladele (2011) and Zwane (2014) opined that the institutionalization of a proper policy framework that outlines the guiding principles for service delivery and the professionalization of extension to promote sound work ethics were essential to improve and ensure excellent extension service delivery.

Professionalization, as operationalized in this study, encompasses the components of accreditation, registration and certification of extension service providers. Accreditation involves the process of ensuring that an individual has gone through a professional program that meets the prescribed standard for a profession (HRPA, 2010). Registration ensures that individuals who have passed qualifying exams are regarded as having met the specified standard of professional training, and can be registered with the accredited organization tasked with oversight of that profession. Certification is the process whereby a professional society or body attests to the professional qualification of an individual, which gives them the right to practice the occupation or profession, having ensured that minimum standards of education or experience have been met (HRPA, 2010).

Professionalization of extension service providers is a mandate in one of the

strategic frameworks and operational plans launched by the Global Forum for Rural Advisory Services (GFRAS) to revitalize agricultural extension internationally (Davis, 2016; Davis, 2015; GFRAS, 2012). This is to ensure that the agricultural extension professional body in each country (such as the Agricultural Extension Society of Nigeria (AESON) which needs revamping) is recognized, legalized and empowered to properly regulates the entry, exit and conduct of individuals in the profession through proper accreditation, registration and certification processes. Terblanche (2015) reported that South Africa has taken the lead in Africa to implement this mandate, which has been reported to enhance the qualification, competence, work ethics, integrity, objectivity and accountability of service providers (Zwane, 2014). As an organizational response to the pressure from an increasingly complex and rapidly changing environment; this mandate should be applied in Nigeria to unlock the extension sector for accountability and efficient service delivery.

This study therefore aimed to examine the knowledge of agriculture extension agents regarding the concept of professionalization of their services in Nigeria prior to its implementation. This will give insight to extension stakeholders both locally and internationally regarding laying the foundation needed to properly refocus strategies that will be used to restructure extension and advisory service delivery in the country.

Theoretical Framework

This study is based on the theory of planned behavior, which is an extension of the theory of reasoned action, and is usually adapted to model attitude-behavior relationships (Ajzen, 1985; Ajzen, 1991). The Theory of Planned Behavior is important for analyzing individuals' intentions and behavior. It emphasizes that individual behavior (such as the participation/adoption of a concept or innovation) originates from their intention (to participate/adopt), with one of the major psychological constructs that determine intention being attitude. The attitude of an individual is a function of their knowledge, which is a significant predictor of intention and behavior (Borges, Lansink, Ribeiro & Lutke, 2014; Oladele, 2012). Knowledge is built through access to relevant information from past experiences and interaction with the environment. Knowledge is generally considered a prerequisite for the acceptance of a new policy, concept and innovation (Rogers, 1995; Oladele, 2012), thus, the knowledge of the extension agents will influence their attitude and their disposition towards implementing professionalization. The theory contends that the attitude towards a particular behavior, the perceived behavioral control and the subjective norms all determine the decision to adopt a particular innovation or perform a given behavior (Adebayo & Oladele, 2012).

The theory of planned behavior establishes that having a high knowledge and favorable attitude about a given concept and behavior strongly enhances the individual's intention to adopt and perform such a concept or behavior. The theory of planned behavior is thus relevant to this study as the eventual adoption of the innovation of professionalization is based on the knowledge and attitude of the extension agents regarding the concept and its components. A fundamental assumption for this study is that assessing the knowledge of extension agents, as it relates to the concept of professionalization, would give stakeholders in the extension sector the necessary insight into predicting whether or not they would engage in programs geared towards ensuring the professionalization of the sector.

A number of authors have provided an understanding of individuals' intention, as influenced by knowledge and their adoption behavior in various areas of agriculture, such as water conservation practices (Yazdanpanah, Hayati, Hochrainer-Stigler & Zamani, 2014), organic farming (Lapple & Kelley, 2013) and soil conservation (Wauters, Bielders, Poesen, Govers & Mathijs, 2010). This therefore implies that having the proper knowledge regarding the concept of professionalization and its components will enable extension agents to facilitate its full implementation. It will also predict their behavior regarding their participation in the professionalization processes when implemented.

Purpose

The purpose of this study was to determine the knowledge level of extension agents regarding professionalization of extension services in South Western Nigeria. This was done by identifying their socio-economic characteristics, examining their knowledge about accreditation, registration and certification on professionalization, and determining the socio-economic factors that influence their knowledge.

Methods

The study was carried out in South West Nigeria. This area has a high concentration of agricultural institutions, extension organizations and research institutes. The study population was all extension agents employed in both public and private extension organizations, with the public extension service being referred to as the Agricultural Development Program (ADP). The study population was 653 public and 70 private extension agents who are employed in the six state ADPs and the four non-governmental extension organizations in the area. A two-stage sampling procedure was used to select the public extension agents. The first stage was a purposive selection of three of the six States within the area, namely, Ogun, Osun and Oyo, based on the information obtained from their various extension agencies. The second stage was a random selection of 87, 129 and 85 extension agents in Ogun, Osun and Oyo States respectively. The proportionate sample size selected in each state was determined through the use of Roasoft sample size technique based on a 5% error margin, and resulted in 301 public extension personnel being identified for inclusion in the survey.

The private extension agents were selected using a two-stage sampling procedure, the first being a purposive selection of two prominent agro-based Non-Governmental Extension Organizations out of the available four, based on their employee base and current activities in the region. Those selected organizations were the Farmers Development Union (FADU) and the Justice Development and Peace Movement-Rural Development Program (JDPM-RUDEP), which had extension employee bases of 23 and 35 respectively. The second stage was a random selection of 22 and 33 extension personnel from FADU and JDPM-RUDEP respectively, the proportionate sample size also being determined through the use of Roasoft sample size technique based on a 5% error margin. The total sample size for the study therefore was therefore 301 public and 55 private extension personnel. The sample frame error was eliminated by ensuring that all administrative and other office staffs in the extension organizations were not included in the study, while the sampling error was controlled by ensuring that a multiple contact strategy was used to contact all field extension agents in the included extension organization

Table 1
Population and Study Sample

Selected Extension Agencies		Population Size	Selected Sample Size
Public Agencies (ADPs)	Ogun	112	87
	Osun	193	129
	Oyo	108	85
Private Agencies (NGEOs)	FADU	23	22
	JDPM	35	33

Data were obtained with the use of a structured questionnaire that was divided into two sections, the first being for their socio-economic characteristics, and the second regarding their knowledge about the concept and indicators of professionalization, specifically accreditation, registration and certification. Respondents were presented with a list of 12 statements on the general concept of professionalization, eight each on accreditation, registration and certification, totaling 36 statements. They were asked to indicate whether these statements were true or otherwise using a 2 point scale of true/correct (2) and false/incorrect (1). The scale was reversed for negative statements. Several researchers such as Arbuckle, Morton and Hobbs (2015), Mondal, Haitook and Simaraks (2014), Oladele (2012), Oladele (2011) and Rhodes, Leland and Niven (2002) adopted a similar scale of measurement to generate the knowledge scores of respondents. The total knowledge score of the extension agents were aggregated for all the 36 items, giving an overall Knowledge Score, with 36 being the lowest and 72 being the highest.

Lecturers in the Department of Agricultural Economics and Extension at the North West University and local extension managers in South West Nigeria validated the data collection instrument and a reliability test was carried out using the split-half method. An overall reliability coefficient of 0.87 was obtained for the entire questionnaire which showed proper consistency of the instrument. As stated by Kuder and Richardson (1937), a reliability co-efficient of 0.85 and above shows that the instrument is highly consistent and reliable. The cronbach alpha reliability coefficients for the different sections of the instrument were *general concept of professionalization* (0.80), *accreditation* (0.84), *registration* (0.79) and *certification* (0.90). Data were analyzed with SPSS Version 22 and STATA 11 using descriptive statistics, such as numbers, percentages and means. Inferential statistics using the t-Test assessed whether the means of public and private groups were statistically different from each other, and a tobit regression model was fitted to determine the factors influencing the agents knowledge on professionalization of extension services. The model was chosen due to its ability to model variables that have either a left or right censoring in the dependent variable (Tobin, 1958).

The Tobit model is presented as:

$$Y^{*} = X_i\beta + \varepsilon \quad \ldots\ldots\ldots\ldots (1)$$

where Y* is the dependent variable', in this case the generated knowledge scores of the extension agents; β is a vector of unknown coefficients; X_i is a vector of independent variables {which include age (X_1), gender,

household size (X_2), educational qualification (X_3), higher degree (X_4), years of experience (X_5), number of communities covered (X_6), rural-urban background) (X_7)}, and ε is an error term that is assumed to be independently and normally distributed with mean zero and a constant variance of S^2.

Results & Discussion

Socio-Economic Characteristics of the Extension Agents

The results in Table 2 show that the mean age of the public and private extension agents was 42.0years and 38.5years respectively, with a statistically significant difference between them ($t = 3.8$, $p \leq 0.01$). This implies that private extension agents were generally younger than their public counterparts. The majority of the public (74.8%) and private (74.5%) extension agents were males, while only one-quarter of both (25.2% public, 25.5% private) were females. This corroborates Ajayi (2013), Arokoyo (2010) and Oladele and Mabe (2010) findings who reported that there were more males in extension services than females in Africa. A significant difference ($t = 2.8$, $p \leq 0.01$) was observed between the public agent's average household size of six persons with a standard deviation of 1.9, and the private agents five persons with a standard deviation of 2.1.

The educational qualification of the entire extension agents sampled for the study reveals that the majority (82.0% and 94.6%) of both agents had Higher National Diploma (HND) certificates and above level of education. This is in consonance with Fabusoro Awotunde, Sodiya, Alarima (2008) and Oladele (2011), who stated that most of the extension agents in the South Western area of Nigeria had HND and above levels of education. However, there are more Bachelor and Masters Degree holders among the private agents than the public agents. The results from Table 2 also show that the majority (82.1% and 80.0%) of the public and private extension agents respectively were not studying for a higher degree at the time of the study. This agrees with Adesoji and Aratunde (2012), who reported that only a few extension agents in Oyo State were studying for a higher degree. Terblanche, Koch and Lukhalo (2012) also stated that only a few extension officers in South Africa were committed to improving their academic status.

The mean years of experience among the public and private extension agents were 12.5 years and 8.4 years respectively, which was a statistically significantly difference ($t = 5.4$, $P \leq 0.01$), suggesting that public extension agents are generally more experienced in extension work than their private counterparts. The mean number of communities covered by public and private extension agents was 19.2 and 38.2 respectively (Table 2). Further analysis of the result shows that there is a significant difference ($t = -14.2$; $p \leq 0.01$) in the number of communities they service. The results from Table 2 also reveal that slightly above half (58.1% and 52.7%) of the public and private agents had a rural background, that they were born and brought-up in the rural area. Oladele (2015) also reported that approximately half of the extension officers in North West Province, South Africa have a rural background.

Table 2
Socio-Economic Characteristics of the Extension Agents

Characteristics	Public Extension Agents (n = 301)		Private Extension Agents (n = 55)		t-stat
	Freq(%)	Mean(SD)	Freq(%)	Mean(SD)	
Age (years)					
≤ 30	17(5.6)	42.0(7.5)	2(3.6)	38.5(6.2)	3.8*
31-40	134(44.5)		39(70.9)		
41-50	98(32.6)		12(21.9)		
51 and above	52(17.3)		2(3.6)		
Gender					
Male	225(74.8)		41(74.5)		
Female	76(25.2)		(14)25.5		
Household Size					
1-4	62(20.6)	5.8(1.9)	18(32.7)	4.9(2.1)	2.8*
5-8	216(71.8)		37(67.3)		
9 and above	23(7.6)		-		
Ed. Qualifications					
College of Ag.	5(1.7)		-		
Ordinary National Diploma (OND)	49(16.3)		3(5.5)		
Higher National Diploma (HND)	149(49.5)		23(41.8)		
B.S.	94(31.2)		26(47.3)		
M.S.	4(1.3)		3(5.5)		
Current Higher Degree Studies?					
No	247(82.1)		44(80.0)		
Yes	54(17.9)		11(20.0)		
Years Experience					
≤ 10	149(49.5)	12.5(7.3)	40(72.7)	8.4(4.9)	5.4*
11-20	97(32.2)		13(23.7)		
21-30	53(17.6)		2(3.6)		
31 and above	2(0.7)		-		
# of Communities Covered					
≤ 20	201(66.8)	19.2(9.5)	3(5.5)	38.2(9.0)	-14.2*
21-40	91(30.3)		28(50.9)		
41 and above	9(2.9)		24(43.6)		
Rural/Urban Background					
Rural	175(58.1)		29(52.7)		
Urban	126(41.9)		26(47.3)		

Note: Statistical Significance at $p \leq 0.01$ (*)

Knowledge of Extension Agents on Professionalization

Table 3 shows that majority (79.3%) of the extension agents across the study area had a wide range of knowledge regarding professionalization (12 statements). None of the extension agents answered all the knowledge test questions correctly, nor did any respondent answer all questions incorrectly. Across the study area (pooled agents), more than 90% of the extension agents correctly responded to two of the knowledge statements, also, more than 80% of them correctly responded to two other statements, while about 70% correctly responded to the remaining eight. Although both the public and private extension agents demonstrated a high knowledge on the general concept of professionalization, the private agents had a higher percentage of correct responses than their public counterparts. This is in line with Mengal, Mallah, Mirani and Siddiqui (2012), who stated that private extension field staffs in Pakistan were generally more knowledgeable and competent than their public counterpart. This might be due to most of the private agents being younger and have more educational qualification than their colleagues in the public agencies. The overall exhibition of a high level of knowledge on the general concept of professionalization across the entire study area is however a good omen, as it is likely to ensure that the respondents have a positive attitude and behavior to their participation in the process of professionalization when implemented.

Table 3
Knowledge of Extension Agents on General Professionalization Concept

Professionalization Concept	Agents		
	Pooled %	Public %	Private %
1. Professionalization is a process of setting up policies and structures to guide the extension profession	98.3	98.3	98.2
2. Professionalization ensures only extension agents that have met the professional required standards are certified by recognized professional bodies	92.7	91.7	98.2
3. Professionalization signifies commitment by extension agents to maintain currency of skills and knowledge in the profession	89.0	88.4	92.7
4. Professionalization does not ensure appropriate regulation for extension service	83.1	81.7	90.9
5. Professionalization sets a foundation for continuous improvement in service delivery	76.7	81.1	62.7
6. Professionalization is a mechanism for ensuring that extension agents abide by the code of ethics set for the practice of the extension profession	74.4	73.4	80.0

7. Professionalization is a mechanism to protect, promote and ensure extension service sensitivity to the needs of farmers	74.2	72.8	81.8
8. Professionalization does not point out areas of improvement in extension service delivery	73.3	72.4	78.2
9. Professionalization legalizes extension practice	73.0	72.1	78.2
10. Professionalization promotes efficient and effective use of resources and access to certified information on infrastructures and facilities for service delivery	72.5	72.8	70.9
11. Professionalization does not involve consistent monitoring, evaluation and assessment of extension services	72.5	73.1	69.1
12. Professionalization does not ensure periodic quality review of extension personnel and the services they render	72.2	72.1	72.7
Average	79.3	79.2	80.3

The results of the responses of the extension agents to the eight knowledge questions regarding accreditation are presented in Table 4, which shows that majority (83.5%) of the agents demonstrated a high level of knowledge about this component of professionalization. More than 80% responded correctly to six of the eight knowledge statements on accreditation, while more than 70% responded correctly to the remaining two statements. However, the result further shows that the private extension agents have higher percentage of correct responses than their public counterparts in more than half (5 statements) of the knowledge statements on accreditation, indicating that they were generally more knowledgeable on most of the statements on the accreditation component of professionalization than the public agents. This agrees with Mengal *et al.* (2012), who reported a similar trend. The young age and higher educational status of the private agents possibly affected their knowledge level, suggesting that the private agents may adopt and embrace the accreditation process more readily than their public counterpart. Tooheey (2002) stated that knowledge was a major driver of accreditation of agricultural advisers and consultants in Australia.

Table 4
Respondents' Knowledge on Accreditation Component of Professionalization

Accreditation Component	Agents		
	Pooled %	Public %	Private %
1. Accreditation of extension personnel is an essential criteria for professionalization of extension service	89.6	88.4	96.4
2. Accreditation promotes accountability	86.0	84.1	96.4
3. Accreditation is a channel of injecting more integrity and competence into extension service delivery	85.4	85.4	85.5
4. Accreditation will improve standards of practice in the extension profession	85.4	86.0	81.8
5. Accreditation ensures a disciplined, systematic and reliable approach to extension training	84.3	85.0	80.0
6. Accreditation does not strengthen community confidence in quality of service delivery	81.2	83.4	69.1
7. Accreditation promotes credibility	78.9	78.1	83.6
8. Accreditation is not a mechanism for quality improvement and assurance in extension service delivery	77.5	76.4	83.6
Average	83.5	83.4	84.6

The results from Table 5 show that majority (82.9%) of the extension agents were well informed regarding the registration component of professionalization. More than 80% responded correctly to six of the eight knowledge statements on registration, while more than 70% responded correctly to the remaining two statements. This is in line with Terblanche *et al.* (2012), who reported that majority of extension personnel in South Africa were knowledgeable on professional registration processes. Nonetheless, further comparison of the responses on the knowledge statements on registration revealed that the private extension agents had an overall higher percentage of correct responses across most (5 statements) of the statements than their public counterparts.

The implication of this is that the private extension agents further revealed their innovativeness and openness to new information due to their young age and educational level. This gives a clue to their tendency of adopting faster registration processes involved in professionalization than the public agents. Similarly, Lopokoiyit, Onyango and Kibett (2011) also reported that public agents in Kenya needed more knowledge and a training upgrade than their private counterparts on administration, instructional and cross-cutting issues in extension.

Table 5
Respondents' Knowledge on Registration Component of Professionalization

Registration Component	Agents		
	Pooled %	Public %	Private %
1. Registration promotes accountability	86.8	85.4	94.5
2. Registration of extension personnel is an essential criteria for professionalization of extension service	86.2	85.0	92.7
3. Registration is a channel of injecting more integrity and competence into extension service delivery	86.2	85.0	92.7
4. Registration will improve standards of practice in the extension profession	84.6	84.7	83.6
5. Registration does not strengthen community confidence in quality of service delivery	84.0	85.4	76.4
6. Registration ensures a disciplined, systematic and reliable approach to extension training	82.9	85.0	70.9
7. Registration is not a mechanism for quality improvement and assurance in extension service delivery	77.2	75.7	85.5
8. Registration promotes credibility	75.3	73.4	85.5
Average	82.9	82.5	85.2

Furthermore, the findings from Table 6 reveal that majority (83.6%) of the respondents in the study area pooled together had a wide range of knowledge regarding the certification component of professionalization. More than 80% responded correctly to six of the eight knowledge statements on certification, while more than 70% responded correctly to the remaining two statements. This implies that these extension agents are highly likely to willingly participate in the process of certification when professionalization is implemented. Knowledge and agreement on the need for service quality, public confidence, personnel competence, environmental concerns, code of ethics and continuous education requirements were also some of the drivers of certification in Australia (Tooheey, 2002).

However, across the eight knowledge statements on certification, the private extension agents had a higher percentage of correct responses on five of the statements than their public counterparts. This is similar to Lopokoiyit *et al.* (2011), who stated that public agents in Kenya needed more knowledge and training upgrade than their private counterparts on contemporary issues in the extension profession. This attribute shows that they have the basic information about the importance of certification as a criterion for professionalization thus enabling them to support, embrace and adopt faster professional certification processes.

Table 6
Respondents' Knowledge on Certification Component of Professionalization

Certification Component	Agents		
	Pooled %	Public %	Private %
1. Certification is a channel of injecting more integrity and competence into extension service delivery	88.5	87.4	94.5
2. Certification promotes accountability	88.2	86.4	98.2
3. Certification of extension personnel is an essential criteria for professionalization of extension service	86.5	85.4	92.7
4. Certification does not strengthen community confidence in quality of service delivery	84.3	85.7	76.4
5. Certification will improve standards of practice in the extension profession	83.4	84.4	78.2
6. Certification is not a mechanism for quality improvement and assurance in extension service delivery	81.2	79.7	89.1
7. Certification promotes credibility	77.8	77.1	81.8
8. Certification ensures a disciplined, systematic and reliable approach to extension training	78.7	80.1	70.9
Average	83.6	83.3	85.2

The total knowledge score of the extension agents were aggregated for all the 36 items, giving an overall Knowledge Score, with 36 being the lowest and 72 being the highest. Using the correct responses of the extension agents to combine their knowledge scores on all the 36 statements on professionalization and its components, Table 7 indicates that majority of the public (86.0%) and private (89.1%) extension agents were highly knowledgeable on the concept of professionalization and its components. Based on the deductions drawn from the theory of planned behavior, this implies that their high level of knowledge is a potential predictor of their positive intention and behavior to adopt and support the implementation of the concept of professionalization. This bodes well for the implementation of professionalization of extension services in the study area.

Table 7
Distribution of the Overall Knowledge Score of the Extension Agents on Professionalization

Knowledge Score	Public Extension Agents (N=301)		Private Extension Agents (N=55)	
	Freq. (%)	Mean (SD)	Freq. (%)	Mean (SD)
36-60 Low Knowledge (Below 70%)	42 (14.0)	65.42 (4.66)	6 (10.9)	66.04 (4.46)
61-72 High Knowledge (70% and above)	259 (86.0)		49 (89.1)	

Factors Influencing the Knowledge of the Extension Agents using Tobit Regression

The Tobit regression results from Table 8 reveal that the likelihood ratio statistics as shown by the chi-square value are highly significant ($P < 0.000$) indicating that the model has a strong explanatory power. Variance Inflation Factors were used to test for multicollinearity among the variables, and were all below 10, with a mean value of 1.58. The result shows that educational qualification and rural-urban background significantly influence extension agents' knowledge on professionalization.

The coefficient of educational qualification (3.856, $p <0.01$) of the extension agents was positive and significant. This indicates that there was a direct relationship between their educational qualification and their knowledge level on professionalization of extension services. An increase in the extension agents' level of education will lead to a marginal increase in their knowledge on professionalization by 3.856. This conforms to apriori expectations, as an increase in extension agents' educational qualification will enhance their knowledge and cause them to better appreciate the benefits that professionalization will inject into the sector, thereby increasing their innovativeness and rational disposition towards it. Several studies have also note educational level as a determinant of extension agents' knowledge on innovations and agriculturally related contemporary issues (Ajayi, 2013; Oladele, 2011).

The extension agents' rural-urban background was seen to have a reasonable contribution to their knowledge on professionalization. The coefficient of background (0.794) was positive and statistically significant ($p < 0.05$) in the model. The result indicates that there is a direct relationship between the public and private extension agents' background and their knowledge on professionalization of extension services. Their background had the probability of increasing their knowledge on concepts of professionalization by 0.794. This is expected, as the majority were from the rural, agricultural areas, thus already exposing them to the terrain and challenges faced by farmers which may have made them more motivated to obtain information and knowledge on professionalization, thereby enabling them to render more effective and professional service to their clients.

Table 8
Tobit Regression Result of Socio-Economic Factors Influencing Extension Agents' Knowledge on Professionalization

Variables	B(SE)	t-stat	P > |t|	VIF
Age	-0.102(0.078)	-1.31	0.193	1.82
Gender	0.287(0.410)	0.70	0.485	1.04
Household Size	0.011(0.127)	0.09	0.929	1.99
Educational Qualification	3.856(0.326)**	11.82	0.000**	1.94
Higher degree	0.463(0.552)	0.84	0.402	1.45
Years of Experience	0.024(0.077)	0.31	0.753	1.75
Number of Community	0.019(0.015)	1.25	0.211	1.06
Rural-Urban Background	0.794(0.377)*	2.10	0.036*	1.56
(Constant)	50.849(3.334)**	15.25	0.000**	
/sigma	3.267(0.130)			
LR Chi2 (8)	283.64			
Prob > Chi^2	0.000			
Pseudo R^2	0.1390			
Log likelihood	-878.6376			
Uncensored observations 325				
Left censored observation 1 (Minimum ≤ 50)				
Right censored observation 30 (Maximum ≥ 72)				

Note: ** and * signifies significance at 1% and 5% levels respectively.

Conclusion, Recommendations & Implications

Ensuring sustainable agricultural development in many countries hinges on vibrant, effective and efficient extension services. The professionalization of these services has been noted as an important way of unlocking its potential, ideally facilitating the much desired attributes of integrity, credibility, accountability and competence of extension service providers. This survey, carried out in the South West area of Nigeria, has provided insight on extension agent knowledge regarding professionalization and its components of accreditation, registration and certification. The findings revealed that although both public and private extension agents had a basic knowledge on the concept of professionalization and its components, the observed disparities in the level of knowledge between them needs to be addressed.

The findings also revealed that educational level and background were significant influencers of their knowledge on professionalization. This suggests that those who are more educated and focused on pursing higher degrees are more knowledgeable about professionalization, and therefore more likely to support professionalization implementation. These findings have implications for educating and training extension agents on professionalization. If agent knowledge on professionalization is limited, their attitude, perception and behavior may not be favorable towards professionalization, which could ultimately hinder the progress for its smooth implementation.

This is even more salient, as they are major stakeholders in the extension sector.

Therefore, seminars and workshops on professionalization should be held for agents in the extension organizations with greater focus on the public extension agencies, to enhance their knowledge and capacity regarding the concept, intricacies and potential benefits of professionalization on service delivery. In addition, there is need for extension agencies to support continuous professional development through training and acquiring relevant higher degrees, as stated in the requirements for professionalization. Moreover, the curriculum in tertiary institutions where extension agents are trained should be reviewed, and knowledge on professionalization and associated issues incorporated. Each of these recommendations will assist in institutionalizing professionalization in the agricultural extension sector. In due course, this will serve to enhance a competent, accountable and effective extension and advisory services delivery that is focused on driving sustainable agricultural development.

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