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Araştırma Makalesi (Research Article)

Social Inclusion of Migrant Fisher Folks in Agricultural Extension Activities in Delta State, Nigeria

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Abstract:The study ascertained the level of social inclusion of migrant fisher folks in agricultural extension service benefits in Delta State, Nigeria. One hundred and forty-one (141) available fisher folks were used out of the 158 identified along purposively selected fishing communities in the study area. The intention was to use all the identified fisher folks, but in various communities covered, few of them excused themselves because of the appointments they had in various respective places. As a result 17 of them were not interviewed. Data were collected using interview schedule and questionnaire. Data were analysed using frequency counts, percentages and means. Inferential statistics was used in testing the hypotheses. The study found that the migrant fisher folks had a mean age of 41.50 years, most (81.56%) were married, majority (59.57%) had primary education and the highest formally educated of them had secondary education and an average household size of 5 persons and average fishing experience of 16 years. However, most (74.47%) of them did not subscribe to membership of fisheries related groups. Their level of social inclusion in agricultural extension services was poor (social inclusion index = 0.41). Their average annual fish catch was 2000 kg and this was adjudged to be poor. Their level of social inclusion positively influenced their level of fish catch ($r=0.65$) and their socioeconomic attributes also influenced their level of inclusion in agricultural extension service delivery. Most of the migrant fisher folks were socially excluded from agricultural extension service delivery. Social inclusion of migrant fisher folks should be encouraged, and migrant fisher folks need to be encouraged to subscribe to membership of fisheries related groups.

Nijerya Delta Eyaleti Tarımsal Yayım Çalışmalarında Göçmen Balıkçıların Sosyal İçerme

Makale Bilgileri

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Anahtar kelimeler

Tarımsal yayım hizmet sunumu,
Yakalama balıkçılık,
Balıkçılık grubu,
Göçmen balıkçılık çalışanları,

Öz: Bu çalışma, Nijerya Delta Eyaleti tarımsal yayım hizmet faydalarında göçmen balıkçıların sosyal içerme seviyesini belirlenmemiştir. Çalışma alanında bilinçli seçilen 158 balıkçı topluluklarından belirlenen müsait olan yüz kırk bir (141) balıkçı grubu kullanılmıştır. Amaç, belirlenmiş tüm balıkçıları kullanmaktır, ancak kapsanan çeşitli topluluklarda, birçoğu çeşitli yerlerde buldukları randevular nedeniyle mazeret bildirmişlerdir. Sonuç olarak, 17 tanesi ile görüşülmemiştir. Veriler görüşme programı ve anket kullanılarak toplanmıştır. Veriler, frekans sayıları, yüzdeleri ve ortalamaları kullanılarak analiz edilmiştir. Hipotezlerin test edilmesinde çıkarımsal istatistikler kullanılmıştır. Çalışma göçmen balıkçıların ortalama yaşlarının 41.50 yıl olduğunu, çoğunun (% 81.56) evli, çoğunluğun (% 59.57) ilkökul ve resmi olarak eğitilenlerin en az orta öğretime sahip olduğunu, ev halkında ortalama 5

Sosyal dışlanma,
Sosyal içerme

kişi bulunduğu ve 16 yıllık ortalama balıkçılık deneyimine sahip olduklarını ortaya koymuştur. Bununla birlikte, çoğunun (% 74.47) balıkçılıkla ilgili grupların üyeliğine abone olmadıkları görülmüştür. Tarımsal yayım hizmetlerinde sosyal içerme düzeyleri zayıf (sosyal içerme endeksi = 0.41) bulunmuştur. Yıllık ortalama balık avları 2000 kg olup, bu durum fakir olduklarını göstermektedir. Sosyal içerme düzeyleri balık avlanma seviyelerini olumlu yönde etkilemektedir ($r = 0.65$) ve sosyoekonomik özellikleri aynı zamanda tarımsal yayım hizmet sunumuna katılım düzeylerini etkilemektedir. Göçmen balıkçıların çoğu, sosyal hizmet dağıtım hizmetinden sosyal olarak dışlanmaktadır. Göçmen balıkçıların sosyal içermesi teşvik edilmeli ve göçmen balıkçı kişilerin balıkçılığa bağlı grupların üyeliğine abone olmaları teşvik edilmelidir.

1. Introduction

Fisher folks are those people (men and women) who engage in fishing to earn livelihood. They are usually found in coastal towns around rivers and seas/oceans. This set of people contributes much to the economy of Nigeria. The concept of migration connotes moving permanently or temporarily from one location, usually a community or settlement, to another. Recorded history reveals that migration in Africa dates back to the early part of 1600 (17th Century) (Abobi and Alhassan, 2015).

In Africa, and Nigeria in particular, migration is propelled by the need for security, fertile land for farming and settlement (Adepoju, 2005), fertile bodies of water for fishing and domestic use. Adepoju (1991) states that internal migration is prompted by the desire to have access to natural resource abundance. Fregene (2012) observes that migrant fisher folks contribute 85% of domestic fish consumed in Nigeria. Fishing, according to Abobi and Alhassan (2015), Sustainable Fisheries Livelihood Programme (SFLP) (2010). Supply 75% of the animal protein consumed and over 98% of the inhabitants in fishing communities depend on fishing and its related activities for their livelihood. Migration of fisher folks is shaped by historical patterns of available resource, apart from economic and political variables and not only a response to human population pressure.

Social inclusion implies involvement of individuals or groups of individuals in access to various opportunities, services and resources that are extant in a community or settlement or society. It also spans to involvement in planning and decision making. Social inclusion has become necessary because of the concern for people's welfare (Beall, 2002). It requires concerted efforts to formulate policies and moves to motivate institutions and societies to exhibit dynamism and show perpetual change from behaviours that encourage and nurse social exclusion (Beall, 2002).

Progress cannot be made in the agricultural sector without agricultural extension services. Agricultural extension services play crucial role in the transformation of agriculture. Therefore, inclusion of all and sundry stakeholders in agricultural extension services cannot be over emphasized. According to UNFPA (2011), efforts have been made to include migrant fisher folks in host community activities. These have been met with difficult and complicated equilibrium between the will of the indigenes and the desire of the migrant fisher folks as to whether they desire to participate actively in the host community. These activities are inclusive of social activities and extension activities in the community. It is therefore worthwhile to engage in this study to assess the level of social inclusion of migrant fisher folks in agricultural extension activities in the coastal communities of Delta State, Nigeria. Specifically, it was intentioned to describe the socio-economic characteristics of migrant fisher folks; ascertain their annual level of fish catch; determine their level of social inclusion; ascertain the influence of inclusion in extension service delivery on their annual catch; and determine the influence of their socioeconomic qualities on their social inclusion in agricultural extension services. It was hypothesized that migrant fisher folks' level of social inclusion in extension service delivery has no influence on their annual catch of fish.

2. Materials and Methods

The study was conducted between August and November, 2017, in Delta State, Nigeria. The state is demarcated into Delta South, Delta Central and Delta North Agricultural zones by the Delta

State Agricultural Development Programme (DTADP). It is situated within longitudes 5° 5` and 6° 45` east of the Greenwich meridian and latitudes 5° 52` and 6° 30` north of the equator. The state is one of the states that make up the Niger Delta Area and is irrigated by other rivers apart from River Niger and its tributaries. Capture fishery is one of the agricultural and economic activities engaged in by the inhabitants (indigenes and non-indigenes).

The population of the study includes all migrant fisher folks engaged in capture fishery in Delta State. Multistage sampling procedure was applied in the selection of respondents for this study. The first stage involved purposive selection of fishing communities located along river banks and Atlantic Ocean coastline in the state. Two fishing communities along River Niger bank were randomly selected from Delta North Agricultural zones. This led to selection of Illah and Ebuh. In Delta Central Agricultural zone, Boboroku and Igun were randomly selected from along River Ethiopie bank, Forcados and Koko were randomly selected from among fishing communities in Delta South Agricultural zone. Overall, 6 fishing communities were selected. The second stage involved the selection of migrant fisher folks. Migrant fisher folks in the selected communities were located in their various respective camps with the help of key informants identified in the various communities selected and were all intended for the study. However, out of the 158 of them identified, 141 could be reached as they were the ones available on the various days data were collected. The intention was to use all the identified fisher folks (universal sampling method), but in various communities covered, few of them excused themselves because of the appointments they had in various respective places. As a result 17 of them were not interviewed. The selection resulted to selection of 141 migrant fisher folks as shown in Table 1.

Table 1. Selection of migrant fisher folks.

Community	No of fisher folks located
Delta North Agricultural zone	
Illah	10
Ebuh	15
Delta Central Agricultural zone	
Boboroku	21
Igun	5
Delta South Agricultural zone	
Forcados	43
Koko	37
Total	141

Primary data were collected for the purpose of this study from the migrant fisher folks with the administration of structured interview schedule and questionnaire. The interview schedule and questionnaire were used for fisher folks with little or no formal education and those with reasonable level of formal education respectively. The first objective was analysed with the use of frequency counts and percentages. The second objective was addressed with means derived from 4-point Likert-type scale of very frequent = 4, frequent = 3; barely frequent = 2; not frequent = 1. The cut-off score was 2.50 (≥ 2.50 = high level of inclusion, < 2.50 = poor level of exclusion). The exclusion index was also computed. This was done by calculating the grand inclusion mean. The grand inclusion mean was computed by dividing the total means by the number of agricultural extension activities, while the inclusion index was computed by dividing the grand inclusion mean by the scale. This was to determine the level of inclusion of migrant fisher folks in agricultural extension activities. In objective three fish catch was measured in kilogramme (Kg) and addressed with the utilization of frequency counts and percentages. This was to ascertain their level of fish catch annually.

Objective four was to determine the influence of their level of inclusion in extension services on their annual catch (output). This was achieved with hypothesis 1.

Objective five was to ascertain the influence of their socio-economic characteristics on their level of inclusion in agricultural extension service activities. This was addressed with hypothesis 2.

Hypothesis 1 was tested with the application of Pearson Product Moment Correlation coefficient. The formula is given as follows:

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n(\sum x^2) - (\sum x)^2] [n(\sum y^2) - (\sum y)^2]}} \quad (1)$$

Where:

R= correlation coefficient

N = sample size

X= social inclusion

y= output

\sum = summation

Hypothesis 2 (HO₂) was tested with the application of regression model using three functional forms thus:

i. Linear function

$$Y = b_0 + b_1 + X_1 + b_2 + X_2 + b_3 + X_3 + b_4 + X_4 + b_5 + X_5 + b_6 + X_6 + e$$

ii. Semi-log function

$$\text{Lnb}_0 + b_1 + \text{In}X_1 + b_2 + \text{In}X_2 + b_3 + \text{In}X_3 + b_4 + \text{In}X_4 + b_5 + \text{In}X_5 + b_6 + \text{In}X_6 + e$$

iii. Exponential function

$$\text{Lny} = b_0 + b_1 + X_1 + b_2 + X_2 + b_3 + X_3 + b_4 + X_4 + b_5 + X_5 + b_6 + X_6 + e$$

Where:

Y = Social inclusion (number of extension activities involved in)

X₁ = Age (Years)

X₂ = Marital status (Married = 1, otherwise = 0)

X₃ = Level of formal education (number of years of schooling)

X₄ = Household (HH) size (number of persons)

X₅ = Fishing experience (Years)

X₆ = Group membership (Yes = 1, Otherwise = 0)

e = Error term

b₀ – b₆ = Regression coefficient

3. Results and Discussion

3.1. Socio Economic Characteristics of Migrant Fisher Folks

Most (79.43%) of the migrant fisher folks were in the age bracket of 40–50 and above years with a mean age of 41.50 years (Table 2). Majority (81.56%) were married with most (59.57%) of them having acquired primary education, as 12.77% had secondary education, while 27.60% had no formal education. None of them had tertiary education. This implies that the population of fisher folks in the study area is dominated by those who had low level or no formal education.

Table 2. Socio-economic qualities of fisher folks

Variables	Percentage (%)	Mean
Age (Years)		
20 – 29	1.33	
30 – 39	19.15	41.50 yrs
40 – 49	44.68	
50 and above	34.75	
Marital status	81.56	
Married	7.80	
Single	4.26	
Divorced	6.38	
Widowed/Widower		
Level of formal education	27.66	
No formal education	59.57	
Primary education	12.77	
Secondary education	0.0	
Tertiary education		
Household (HH) (no of persons)	5.67	
1 – 3	36.17	
4 – 6	32.62	5 persons
7 – 9	17.73	
9 – 12	7.80	
Above 12		
Fishing experience (years)		
1 – 5	4.96	
6 – 10	26.95	16 years
11 – 20	37.59	
Above 20	30.50	
Group membership	25.53	
Yes	74.47	
No		

The respondents had an average household (HH) size of 5 persons, indicating large (HH) sizes among the migrant fisher folks. The respondents had an average of 16 years' experience in capture fishery and many (74.47) of the respondents did not subscribe to membership of farmers'/fisheries groups. This has implications for extension services as extension contacts are currently made in specialized client groups as a result of the dearth of field extension workers. Agbamu (2011); Nnadi and Akwiwu (2003) observed that the ratio of extension agents to farm families is very poor. It will be easier for the respondents to be reached by extension agents when they constitute themselves into groups.

3.2. Level of Social Inclusion of Migrant Fisher Folks in Extension Service Delivery

Table 3 indicates that the migrant fisher folks had low level of inclusion. That is, their level of social inclusion in extension service delivery was poor as the mean scores of all the extension delivery services could not meet the cut of mean of 2.50. All the mean scores were < 2.50. Respondents were not involved in the meeting of migrant fisher folks' group with extension agents (Mean = 1.62). This confirms the earlier finding in Table 2 that most of them did not subscribe to membership of migrant fisher folks groups. This means that such group as fisher folks' groups may not be existing in the study area. The level of involvement in home/fishing site visit is also poor (mean = 1.42). Their involvement in input supply arrangement with extension agents was very poor (mean = 2.11). The same trend was found in their inclusion or participation in capacity building (mean = 2.18). Many of them were not furnished with information on better or more profitable market for the disposal of their catch (mean = 2.04). This trend is attributable to the nature of their fishing activities which take most of their time. While fishing, they move quite good distances on water and spend much of the time throwing nets and visiting the ones already set as trap. They also spend good time in maintaining their fishing net and disentangling them.

Table 3. Level of social inclusion of migrant fisher folks in extension service delivery

Agricultural extension delivery services	Mean
Meeting of migrant fisher folk groups and extension agents	1.62
Home/fishing site visit	1.42
Input supply arrangement	2.11
Capacity building	2.18
Information on better market	2.04
Demonstration of input usage	2.39
Teaching on improved fish processing methods	2.23
Assistance on loan processing	0
Agricultural shows	1.94
Field trips	1.87

Cut off = 2.50 (≥ 2.50 = high level of social inclusion; < 2.50 = poor level of social inclusion)

Grand social inclusion mean = 1.62

Social inclusion index = 0.41

Respondents were not involved in demonstration of input usage (mean = 2.39) and in teaching of improved processing/storage methods by extension agent (mean = 2.23). None of them was assisted with the processing of credit/loan by extension agents. Osuagwu et al. (2005) found that fisher folks hardly accessed micro credit. The fisher folks were poorly involved in agricultural shows and field trips (mean = 1.94) and (mean = 1.87) respectively.

The inclusion index of 0.41 implies that 41% of the fisher folks were involved in all the extension services delivery. This indicates poor level of overall involvement in extension service delivery. It means that the fisher folks were socially excluded from the most of the activities in the gamut of extension service delivery. This may have been prompted by the nature of their fishing activities; which makes it difficult for information on extension services to reach many of them. While fishing, they move on boats to and from different sites in the body of the water most of the times they invest in fishing. This is also not unconnected with their social class and level of education. According to the Salvation Army (2008), social exclusion is often linked with an individual's social class and educational status. Ofuoku (2014) found that extension agents had far more contact with farmers of higher educational status and social class. Extension agents' contact with farmers was determined by educational status and social class.

3.3. Annual Level of Fish Catch by Migrant Fisher Folks

Table 4 indicates that most (36.88%) of the migrant fisher folks had fish catches of 500–1 000kg; 17.02%; 1 100–1 500kg; 21.99%, 150–2 000kg; 15.60%, 2 100–2500 kg; and 8.51% achieved catches of above 2500kg annually. The fish catch, is poor compared to the catches of fisher folks in Asia, which is put at thousands of metric ton in one region (Bayagbona, 2011). It is importantly attributable to the poor level of inclusion in extension delivery activities.

Table 4. Annual level of fish catch by migrant fisher folks.

Quantity (Kg)	Percentage (%)	Mean
500 – 1000	36.88	2000 kg
1100 – 1500	17.02	
1501 – 2000	21.99	
2100 – 2500	15.60	
Above 2500	8.51	

3.4. Influence of Social Inclusion of Migrant Fisher Folks on Fish Catch

Table 5 shows that there is no significant influence of social inclusion in agricultural extension service delivery and the catch achieved by migrant fisher folks ($r = 0.561$) at 5% level of significance. In a related study, Ofuoku (2017) found a positive relationship between social inclusion of women farmers in farmers' groups' activities and crop output in Delta North Agricultural zone of Delta State, Nigeria. We further observed that the positive correlation was occasioned by the agricultural extension related activities of the group. This implies that with the enhancement of fisher folks inclusion in agricultural extension services delivery, there will most likely be increased catch of fish by them *ceteris paribus*.

Table 5. Estimation of influence of social inclusion of migrant fisher folks on their fish catch

Variables	Social inclusion	Fish catch
Social inclusion	1.000	0.561**
Fish catch	0.561**	1.00

**significant at 0.05 level

3.5. Influence of Socioeconomic Qualities of Migrant Fisher Folks on Social Inclusion in Agricultural Extension Service Delivery.

While determining the influence of socioeconomic attributes of fisher folks on their social inclusion on agricultural extension service delivery, the exponential functional form was chosen as the lead equation as a result of its having the highest R^2 value, number of significant variables and its consonance with *a priori* expectation. The R^2 value of 0.6905 is indicative of the fact that 69.05% variability in social inclusion of migrant fisher folks in extension service delivery is explained by the independent variables captured in the equation. The F-value was highly significant at 1% level of significance implying a regression of best fit. The result of the exponential regression analysis showed that the coefficient of age (0.4054520) had positive sign and significant at 1% level of probability. This indicates that a 1% increase in age will lead to 0.41% increase in migrant fisher folks' inclusion in extension service delivery. The coefficient of formal education (0.1000435) was positively significant at 10% level of significance. This means that a 10% increase in formal education will lead to a 0.10% increase in migrant fisher folks' inclusion in extension service delivery.

Table 6. Influence of socio-economic characteristics of migrant fisher folks on their social inclusion in agricultural extension delivery.

Variables	Linear	Exponential	Semi-log
Constant	-2094.080 (-1.23)	8.902944 (30.60***)	-3.4255 (-1.65*)
Age (X_1)	5339.02 (29.80***)	0.4054520 (15.66***)	4427.763 (3.65***)
Marital Status (X_2)	0.1032586 (1.03)	0.0000388 (0.19)	2158.852 (2.47**)
Formal Education (X_3)	0.298385 (1.48*)	0.1000435 (1.61*)	4366.267 (1.64*)
Household size (X_4)	0.171527 (0.50)	0.110423 (1.51*)	-503.3240 (-0.44)
Fishing experience (X_5)	454.9605 (1.47*)	0.2008108 (2.77**)	213.2124 (0.07)
Group membership (X_6)	381.1329 (1.06)	-0.1601073 (-1.27*)	4141.956 (2.24**)
R^2	0.5320	0.6905	0.6705
R-Adjusted	0.4285	0.6707	0.6559
F-ratio	0.0000***	0.0000***	0.0000***

*** $P \leq 1\%$; ** $P \leq 5\%$;

This is congruent with *a priori* expectation and conforms to the findings of Nandi and Akwiwu (2003); Agbamu (2006) who found that formal education enable farmers to seek for and access useful agriculture related information. This means formal education attainment will most likely push the fisher folks to seek the extension agents for information, even when they are not sought for by extension agents. Again, when their level of education is homogenous with that of extension agents, there arises a homophilous relationship between them and this will consequently lead to closer relationship resulting to frequent exchange of information.

Household size with a positive coefficient (0.110423) was also significant at 10% level of significance. This means that 10% increase in HH size will likely lead to 0.11% enhancement in the inclusion of migrant fisher folks in extension service delivery. This is attributable to the fact that large household size means more people to cater for. In order to meet up, they will look for ways to seek inclusion in extension service delivery as they expect more value from usage of extension information.

The coefficient for fishing experience (0.2008108) also signed positively with social inclusion of fisher folks in extension service delivery at 5% level of probability. This indicates that 5% increase in fishing experience would lead to a 0.20% increase in migrant fisher folks' inclusion in extension services.

The coefficient of fisher's group membership (-0.1601073) bore negative sign with social inclusion of migrant fisher folks at 10% level of probability. This means that 10% reduction in tendency to subscribe to fisher folks' groups would lead to -0.16% reduction in fisher folks inclusion in extension service by extension agents. This may be attributable to poor extension: farm family ratio, most extension services are currently delivered in groups. Ofuoku and Urang, (2012) assert that because of the low population of field extension agent in comparison to the number of farm families, extension outreach are currently carried out in groups. Ofuoku et al. (2008) found that fish farmers subscribe to self-help groups for the purpose of accessing extension service, among others. The nature of their livelihood activities may not allow them the opportunity to constitute and subscribe to membership of such groups that will facilitate extension contact. Group membership is therefore a salient variable in social inclusion in agricultural extension service.

4. Conclusion and Recommendations

Most of the respondents were not being reached by agricultural extension service and their level of involvement and therefore, social inclusion was poor. Respondents average fish catch (2000kg) was low compared to catches from other similar regions in the world.

The low level of fish harvest from the various water bodies was influenced by their poor level of social inclusion in agricultural extension services and their poor level of social inclusion was influenced by their socioeconomic attributes such as age, level of formal education, HH size, fishing experience and group membership. Conclusively, migrant fisher folks were highly excluded from agricultural extension service delivery benefits and their poor level of social exclusion adversely affected their level of fish catch.

Since migrant fisher folks contribute to fish production in Delta State, their social inclusion in agricultural extension service delivery should be encouraged. This will enhance the output from capture fishery and sustained employment of the migrant fisher folks.

Migrant fisher folks need to be encouraged to subscribe to membership of fisheries related groups. This will enable them to be socially included in agricultural extension services delivery, as extension services are currently delivered in groups as a result of the poor extension agent; farm family ratio. This will also aid them to access credit as most of these groups dispense credit to their needy members. These days micro credit from government is extended to the individuals through their groups.

References

- Abobi, S.M., & Alhassan, E.H. (2015). A review of fisheries related human migration in the Gulf of Guinea. *Journal of Coastal Zone Management*, 18(1), 1–7.
- Adepoju, A. (2005). *Migration in West Africa labour migration*. A paper prepared for the policy analysis and research programme of the Global Commission on International migration.

- Adepoju, A. (1991). South-north migration: the African experience. *International Migration*, (29)2, 205-221.
- Agbamu, J.U. (2011). Problems and prospects of agricultural extension service in developing countries. In Madukwe, MC. (ed.) *Agricultural Extension in Nigeria*. pp. 216 – 229. Ilorin, Nigeria: Agricultural Extension Society of Nigeria.
- Bayagbona, C.O. (2011). *Fishermen and utilization of trained personnel*. A paper delivered at the National Seminar on Manpower planning for Agricultural Development in Nigeria, held at Abuja by Federal Ministry of Agriculture, June 14 – 17. Pp. 265 – 277.
- Beall, J. (2002). *Globalization and Social Inclusion in Cities: Framing The Debate With Lessons From Africa and Asia*. Working paper series 02 – 27. Development studies Institute, London School of Economics and Political Science.
- Fregene, B.T.(2012): Fish farmers' perception of the influence of second National Fadama Development Project (Fadama II) on their livelihood in Oyo State, In: Kuponiyi, A.; Adeokun OA Adeola RG Farinde A J and Akinbile L A. (eds.), *Proceedings of the 21st Annual Congress of the Nigerian Rural Sociological Association (NRSA)* held at The University of Ibadan, Ibadan, Nigeria; 7 – 11 October, 2012, 1-11.
- Nnadi, F.N., & Akwiwu, C.D. (2003). Rural women's response to selected crop production technologies in Imo State, Nigeria. *Global Approaches to Extension Practice*, 1, 5 – 12.
- Ofuoku, A.U. (2014). Effect of social stratification on extension farmer's contact among poultry farmers in Delta State, Nigeria. *Tropical Agricultural Research and Extension*, 17(3-4), 143–152.
- Ofuoku, A.U. (2017). Social inclusion of women and agricultural activities in rural communities of Delta North Agricultural zone. *International Journal of Agriculture and Rural Development*, 20(2), 3270 – 3279.
- Ofuoku, A.U., & Urang, E. (2012). Effect of cohesion on loan repayment in farmers' cooperative societies in Delta State, Nigeria. *Agricultura-Science and Practice Journal*, 3 -4 (83–84), 131 –139.
- Ofuoku, A.U., Enaikele, M., & Nnodim, A.U. (2008). Cohesiveness of fish farmers' groups in Southern Nigeria. *Journal of Agricultural and Biological Sciences*, 3(4), 14 – 21.
- Osuagwu, C.N., Ofuoku, A.U., & Ebewore, S.O. (2005). *Rural migrant fisherfolks access to extension services in Oshimili North Local Government Area of Delta State*. Proceedings of the 19th Annual Conference of Farm Management. Association of Nigeria, held in Delta State University, Asaba Campus, October 18 – 20, pp. 274 – 278.
- Sustainable Fisheries Livelihood Programme (SFLP) (2010). *Contribution of fisheries research to the improvement of livelihoods in West African Communities*, case study: Nigeria, Lagos: Nigeria: SFPL/DFID – FAO.
- The Salvation Army (2008). The seeds of exclusion: social exclusion in the UK. Retrieved on January 12, 2018 from <http://hercules.oulu.fi/isbn951428539/html/x2692.html>.
- United Nations Family and Population Agency (2011). *International Migration and The Millennium Development Goals*. New York, USA: United Nations Family and Population Agency.