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Manuscripts submitted are not supposed to have been published or being considered for publication elsewhere. Papers should be between 3,000 and 5,000 words. Only electronic copy should be submitted; with 12 font size and Times New Roman font type and double line spaced. The TITLE of the paper should be followed by the names, initials and address(es) of the author(s). An ABSTRACT

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PERCEPTION OF THE EFFECTS OF MEMBERSHIP IN CO-OPERATIVE SOCIETIES ON THE SOCIOECONOMIC STATUS OF CO-OPERATORS IN KWARA STATE, NIGERIA

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ABSTRACT

This study examined the perceived effects of membership in co-operative societies on the socioeconomic status of co-operators in Kwara State, Nigeria. Specifically, the socioeconomic characteristics of co-operators were described and members' extent of participation and benefit derived in co-operative societies were determined. Multistage sampling procedure was used to select 120 select respondents for the study. Primary data were collected using interview schedule and described using frequency counts, percentages, mean and standard deviation while correlation analysis was used for inferential deduction. Results showed that majority (80.0%) of respondents were male and engaged in farming (75%) as major occupation. Majority (93.3%) always attended general meeting of their various co-operative societies, while 90% always contributed society monthly dues. Benefits enjoyed most by co-operators included credit service delivery to members (mean score = 2.78), market access for members' produce (2.52), skills acquisition program (2.07), capital formation for joint purchasing of input (2.04) and collective processing of farm produce (2.00). The least services enjoyed by co-operators were joint ownership of resources as collaterals in bank (0.98) and access to tractor use (1.18). Results of correlation analysis showed there was significant and positive relationship between socioeconomic status of co-operators and participation in co-operative activities ($r=0.57$) and benefits derived by members in co-operative societies ($r=0.9$). In conclusion, co-operators perceived that membership in co-operative societies could lead to high socioeconomic status. It is recommended that co-operative societies should leverage on co-operative resources as collateral to access bank loan so as to increase the benefits derived by co-operators and better enhance their socioeconomic status.

Keywords: Cooperative activities, participation, membership benefit, co-operators.

INTRODUCTION

Generally, a cooperative may be described as an association of persons who pool their resources together on mutual basis to solve specific socioeconomic problems (Otto and Ukpere, 2011). Cooperatives provide real economic benefits to farm families through increasing the stability of the farming sector, improving market access for their products and strengthening the farmers' position in the agri-food chain. Improving farmers' living conditions supports rural development and preserves the viability of rural communities (ILO, 2007). Cooperative organizations are thus widely recognized as necessary components of rural community development.

According to Wanyama, Develtere and Pollet (2008), cooperatives in Africa have significantly contributed to the mobilization and distribution of financial capital and have created employment and other income generating opportunities. Through community organizations, cooperatives serve as bases and platforms for bringing together economically weak members of the society with a view of enhancing their individual capacities (Alkali, 1991). Cooperatives aggregate people, resources and capital into economic units. Being voluntary, democratic and self-controlled business organizations, cooperatives offer institutional framework through which local communities gain control over productive activities from which they derive their livelihood (Wanyama *et al.*, 2009). The cooperative values and principles are especially important in the rural context – self-help, self-responsibility, democracy, equality,

equity, and solidarity, the ethical values of honesty, openness, social responsibility and the principle of caring for their members and their communities. (ILO, 2007)

While several literatures, as indicated in the foregoing paragraphs, have established significance and benefits derived by co-operators within co-operative societies. However, there is dearth of empirical evidence evaluating effects of membership in co-operative societies on members' socioeconomic status in Kwara State, Nigeria. This study aims at contributing to the existing body of knowledge on the significance of cooperatives to rural development by investigating the perception of the effects of membership in co-operative societies on socioeconomic status of members in Kwara State, Nigeria.

Objectives of the study

The general objective of this study was to examine the perceived effect of membership in co-operative societies on the socioeconomic status of co-operators of Kwara State, Nigeria.

Specific objectives were to:

1. describe the socioeconomic characteristics of member of co-operative societies;
2. determine extent of participation of members in co-operative activities;
3. ascertain the benefit derived by being a member of co-operative societies; and

Hypotheses of the study

The following null hypotheses were set for the study:

1. There is no significant relationship between extent of members' participation

in cooperative activities and perception of the effects of membership in co-operative societies on socioeconomic status.

2. There is no significant relationship between the benefit derived by members in co-operative societies and perception of the effects of membership in co-operative societies on socioeconomic status.

METHODOLOGY

The study is conducted in Kwara State, Nigeria. Farmers in co-operative societies registered with All Farmers Association of Nigeria (AFAN), Kwara State branch formed the population of the study. Information gotten from AFAN showed that the body has registered cooperative groups in 12 Local Government Areas of the state. A multi-stage sampling procedure was used to select the respondents for the study. First stage involved selection of 25% of the total number of Local Government Areas that had registered co-operative groups with AFAN. Three (3) LGAs namely Moro, Asa, and Ilorin East LGAs were thus selected. Each of these selected LGAs had 10 registered co-operative groups. At the second stage, 30% of the total numbers of cooperative groups in each of these LGAs were randomly selected totalling nine (9) co-operative groups. Finally, 35% of the total number of members of the chosen cooperative groups was selected. Accordingly, 46 individuals out of 130 in Moro LGA, 42 out of 120 from Asa and 38 out of 110 in Ilorin-East giving a total of 126 respondents, were sampled for the study. However, data from 120 respondents successfully interviewed during field survey were used for data analysis.

Primary data were collected through the use of structured interview schedule. Information elicited included: socioeconomic characteristics of co-operative farmers, extent of members' participation in co-operative activities, benefit members derived from co-operative societies, constraints to members' participation, and perceived effects of participation on co-operators socioeconomic status. The research instrument was validated by rural development experts. They were requested to critically examine the research instrument in relation to the study objectives. Their suggestions were used to amend the research instrument prior to field survey. Data collected were analyzed using both descriptive and inferential statistical tools. While frequency count, percentage, mean and standard deviation were used to summarize the data, Pearson Product Moment Correlation (PPMC) was used to test stated hypotheses.

The dependent variable of the study was socioeconomic status of co-operators. It was measured by requesting respondents to examine how they perceived membership in the co-operative societies affected their SES based on socioeconomic parameters provided using a 5-point Likert type scale. The options are scored as follows: Strongly Agreed, 5 points; Agreed, 4 points; Undecided, 3 points; Disagreed, 2 points and Strongly Disagreed, 1 point. Weighted mean score was obtained for each statement for ease of discussion. Also, total perception score per respondents was obtained and used to compute mean and standard error which was used to categorise respondents into three namely: favourable, indifferent and unfavourable category. Independent variables such as marital status, sex, level of education etc. were measured at nominal level, while numerical variables such as household size, income, etc. were measured at ratio level.

RESULTS AND DISCUSSION

Personal characteristics of respondents

Results in Table 1 show that majority (80.0%) of respondent were male, while 20.0% were female. Majority (29.2%) fell between 46-55 years age category, while very few (1.7%) were below 25 years. Mean age of respondents was 48 years with a standard deviation of 11. Also majority (96.7%) were married while only 3.3% were not married, had average household size of 7 members and earned average monthly income of about N55, 000. The results indicate that the respondents were close to the peak of their productive age range, earned relatively meagre income and would have financial responsibility to fulfil among family members, which perhaps could be reasons for their joining cooperative societies. The results also indicate that there were more males participating in cooperative societies than female in the study area. This could be as a result of their positions as household heads which comes with several responsibilities that they may want to leverage on cooperative support to meet.

Majority (75.8%) engaged primarily in farming while 15.8% engaged in trading and the remaining 8.4% were civil servants. Furthermore, majority (96.7%) of the respondents practised crop production and 3.3% engaged in fish farming. Average farm size was 4.7 acres. The implication of this is that rural farmers engaged mostly in farming as their major occupation. This agreed with the submission of Oluwatayo, Sekumade and Adesoji (2008) that rural dwellers mostly engaged in farming, they also take up to 90% of Nigeria total food production and they also earn their living from these small farms.

**Table 1: Distribution of respondents by their personal characteristics**

Variable	Frequency	Percentage
Gender		
Male	96	80
Female	24	20
Age		
25 and below	2	1.7
26-35	14	11.7
36-45	34	28.3
46-55	35	29.2
56-65	31	25.8
66 and above	4	3.3
Mean	48	7.5
Standard Deviation	11	
Marital Status		
Single	4	3.3
Married	116	96.7
Major Occupation		
Farming	91	75.8
Trading	19	15.8
Civil servant	10	8.3
Household Size		
6 and below	55	45.8
7-12	56	46.7
13 and above	9	
Mean	7	
Farm Size (acres)		
2.5 and below	29	24.2
2.51-5.00	39	32.5
5.01-7.50	35	29.2
7.51 and above	17	14.2
Mean	4.74	
Standard deviation	2.47	
Monthly income (N)		
10,000-60,000	87	72.5
60,001-110,000	27	22.5
110,001 and above	6	5

Source: Field survey, 2017

Membership in co-operative societies

Results in Table 2 show that over half of the respondents (55.5%) belonged to multipurpose co-operative societies, while 25.8% belonged to Credit/Thrift co-operative societies. Few (8.3% and 7.5%) belonged to produce marketing and producer co-operative societies, respectively and very few (2.5%) were members of processing co-operative societies. This indicates that most respondents belonged to multipurpose co-operative societies in the study area. This may be because they offer relatively more benefits than the single-benefit co-operative societies such as produce co-operative societies, credit/thrift co-operative societies. This is in contrast to the findings of Idrisa, Sulumbe, and Mohammed. (2007) and Ogunleye Oluwafemi, Arowolo and Odegbile (2015) where majority of co-operators in their study belonged to members of credit and thrift societies. This may be attributed to difference in interests of individual co-operators

and perhaps successes recorded by various co-operatives in the past. As membership in co-operative societies is voluntary, individuals may prefer to associate with co-operative groups that have been successfully known to protect members' interest and come to their aids in times of their needs.

Results further show that half (50%) of the respondents had been members of co-operative groups for up to 10 years. About 33% and 17% had been members of co-operative societies for between 11 to 20 years, and 21 to 30 years, respectively. Mean year of membership in co-operative society was 12.95 years. Also, about half (52.5%) were ordinary members in their co-operative groups, while 32.5% were executive members, and 15% committee members. The results indicate relatively long period of years' respondents had been participating in co-operative societies in various capacities ranging from

ordinary membership to holding executive positions. Sustained interests of respondents in

these societies may not be unconnected to benefits derived by members.

Table 2: Distribution of respondents by membership in cooperative societies

Variable	Frequency	Percentage
Types of co-operative societies		
Producer co-operative	9	7.5
Produce marketing	10	8.3
Credit and thrift co-operative	31	25.8
Processing co-operative	3	2.5
Multipurpose co-operative	67	55.8
Years of membership		
10 and below	60	50
11-20	39	32.5
21-30	20	16.7
30 and above	1	0.8
Membership status		
Ordinary members	63	52.5
Executive members	38	32.5
Committee members	18	15.0

Source: Field survey, 2017

Members' participation in co-operative activities – Results in Table 3 show that majority (93.3%) always participated in attending general meeting of their various co-operatives societies, while few (6.7%) only sometimes attended. Attendance of general meeting recorded a weighted mean score of 2.93. This indicates that the respondents used to partake in this activity. Based on mutually agreed rules, members often absent at general meetings may not derive full benefits of their membership in the co-operative societies. Majority (90%) of the respondents always participated in contribution of society's monthly dues. Similarly, majority (86.7%) contributed to discussion that brings about development and growth of their co-operative societies. These activities recorded very high weighed mean score of 2.83 and 2.82, respectively. These indicate that respondents attached importance to regular contributions, both financial and otherwise, associated with their membership within their co-operative societies. It might be that defaulters in payment of monthly dues would not have access to certain benefits, hence high proportion that participated in this activity. Results further show that partaking in 'preparation of annual plan of activities' and 'sharing of responsibilities during the end of year program' also recorded high weighted mean score of 2.17 and 2.20, respectively. These again are indications of the

importance respondents attached to partaking in co-operative activities, such as in deciding what activities to carry out, and when, where and how to do them.

However, only about 43% and 41% of the respondents participated in attending executive meetings and committee meetings, respectively. These activities recorded weighted mean score of 1.32 and 1.31, respectively. This indicates low membership participation in these activities. This is not unexpected given that only few proportion of members who are usually executive and committee members of an association are expected to attend their respective gatherings. In the same vein, partaking in approval of budget and following up with utilization of loan disbursed to members recorded a relatively low mean score of 1.84 and 1.80, respectively. It may also be that only a few members are saddled with accomplishing these tasks too.

Overall, the foregoing results indicate high degree of participation in co-operative activities by the co-operators in the study area. This is supported by the submissions of Osterberg and Nilsson (2009) who stated that participation of members in cooperative governance is certainly an important part of the success of cooperatives and Amini and Ramezani (2006), who regarded members' active participation in co-operative governance as the most important factor in success of cooperatives.

Table 3: Distribution of respondents by their participation in co-operative activities

Activities	Not at all	Rarely	Sometimes	Always	Mean
Attend general meetings	0	0	6.7	93.3	2.93
Attend executive meetings	55.8	0	0.8	43.3	1.32
Attend committee meeting	54.2	1.7	3.3	40.8	1.31
Contributions of monthly dues	2.5	1.7	5.8	90.0	2.83



Electing of executives members	24.2	5.0	15.8	55.0	2.02
Partake in preparation of annual plan of activities	7.5	10.8	38.2	43.2	2.17
Partake in approval of budget	24.2	9.2	25.0	41.7	1.84
Partake in sharing responsibilities during end of the year program	12.5	9.2	25.0	53.3	2.20
Follow up with utilization of loan disbursed	25.8	8.3	25.8	40.0	1.80

Source: Field survey, 2017

Benefits derived by members from co-operative societies – Results in Table 4 show that majority (83.3%) of respondents indicated they always had credit service delivery to members. This benefit ranked highest with a weighted mean score of 2.78. Majority (64.2%) also indicated ‘market accessibilities for produces’ as benefit derived from membership in co-operative societies and this benefit ranked second with a mean score of 2.52. benefitting from ‘skills acquisition programme’ and ‘collective processing of farm produce’ ranked 3rd and 4th, amongst benefits members derived from their co-operative societies. Other benefits above average mean value of 1.50 which members had access to included ‘joint use of resources’ (1.98), ‘provision of input at subsidized rate’ (1.83), ‘access to fertilizers and herbicides’ (1.60) and ‘access to improved seeds’ (1.53). ‘Co-operative access to bank loan’ ‘access to tractor use’, and ‘joint ownership of resources for bank collateral’ ranked lowest among benefits derived by members with mean scores of 1.30, 1.18 and 0.98, respectively.

These findings imply that members of co-operative societies in the study area enjoyed various services ranging from access to credit facilities, market accessibilities for member produce, capital formation for joint use if resources collective processing of farm produce, access to fertilizer, herbicides and improved seed to skill acquisition programs etc. Also, those who did not benefit from these services might either be less actively involved in their co-operative groups, or might belong to those groups that did not offer these services, i.e. processing co-operative societies mainly render services of collective processing of farm produce, while credit/thrift co-operative societies renders mainly credit services to their members. Respondents not benefiting well from use of tractor might be due to their small farm size, which may not be economically viable for mechanisation. However, lack of co-operative access to bank loan and inability of co-operators to leverage on use of joint resource ownership as bank collateral is not a good development as the co-operative societies would be denied access to larger funds from more institutionalized sources.

Table 4: Distribution of respondents by benefits derived in co-operative societies

Benefits	Not at all	Rarely	Sometimes	Always	Mean
Credit service delivery to members	0.8	3.3	12.5	83.3	2.78
Collective processing of farm produce	19.2	10.0	21.7	49.2	2.01
Market accessibilities for produces	4.2	4.2	27.5	64.2	2.52
Capital formation for joint purchasing of input	10.0	13.3	39.2	37.5	2.04
Skills acquisition program	10.0	11.7	40.0	38.3	2.07
Access to tractor use	41.7	11.7	34.2	12.5	1.18
Access to fertilizers and herbicides	29.2	11.7	30.0	29.2	1.60
Joint ownership of resources for collateral in bank	51.7	10.8	25.0	12.5	0.98
Access to improved seeds	29.2	11.7	35.8	23.3	1.53
Co-operative access to bank loan	34.2	11.7	44.2	10.0	1.30
Provision of input at subsidized rate	18.3	10.0	41.7	30.0	1.83
Joint use of resources	15.0	10.0	37.5	37.5	1.98

Source: Field survey, 2017

Perception of the effects of membership in co-operative societies on co-operators’ socioeconomic status – Results in Table 5 show that majority (96.6%) of the respondents believed that membership in co-operatives has helped them attain increase in their farm size. This statement

recorded a mean score of 4.38. Majority (96.6%) also concurred that membership in co-operative society has greatly enhanced their standard of living (mean score = 4.43) while for those engaging in other business endeavours aside farming, majority (97.5%) equally believed belonging to

their co-operative groups enabled them to expand their business (4.29). similarly, it is believed that membership helped co-operators witness regular and increased income over the years (4.14), enjoyed increase in farm productivity (3.93), and helped in acquisition of TV set (4.05), Radio (4.02), mobile phone (4.23) and mobile means of transportation (3.88). Furthermore, using mean plus/minus standard error (21.81 ± 0.68) to

categorise respondents based on overall perception score, results in Figure 1 show that 47.5% were favourably disposed to the idea that membership in co-operative societies improved their socioeconomic status. The results, overall, reveal that only about half of the respondents favourably perceived membership in co-operative societies as positively affecting and enhancing their socioeconomic status.

Table 5: Perception of respondents about the effects of membership in co-operative societies on the socioeconomic status

*SES parameter	S	A	U	D	SD	Mean
My membership in co-operative society has increased my farm size	43.3	53.3	1.7	1.7	0.0	4.38
Participation in co-operative has influenced my acquisition of mobile transport	29.2	44.2	13.3	11.7	1.7	3.88
I have witnessed regular and increased income over the years of my participation in co-operative	25.8	68.3	1.7	2.5	1.7	4.14
My participation in co-operative has brought me social prestige in my society	27.5	62.5	4.2	4.2	1.7	4.10
Through increased income, I have moved from a mud house to a blocked wall house	25.0	48.3	15.0	8.3	2.5	3.87
My farm productivity has greatly increased over the years due to my participation in co-operative society	25.8	64.5	5.8	2.5	1.7	3.93
I have diversified from rain-fed farming and acquired irrigation facilities	15.8	40.0	19.2	15.8	9.2	3.38
I have been able to buy a refrigerator for the storage of feeding stuffs and other uses	30.0	63.3	2.5	3.3	0.8	4.18
The regular income has assisted me to acquire a television set	18.3	74.2	2.5	5.0	0.0	4.05
The regular income has assisted me to acquire a radio	16.7	75.8	1.7	5.0	0.8	4.02
The regular income has assisted me to acquire a mobile phone	30.8	65.0	0.8	3.3	0.0	4.23
I have been able to well establish/expand my business aside from farming	32.5	65.0	1.7	0.8	0.0	4.29
It has greatly improved my standard of living	48.3	48.3	1.7	0.8	0.8	4.43

Source: Field survey, 2017

*SES – Socioeconomic status

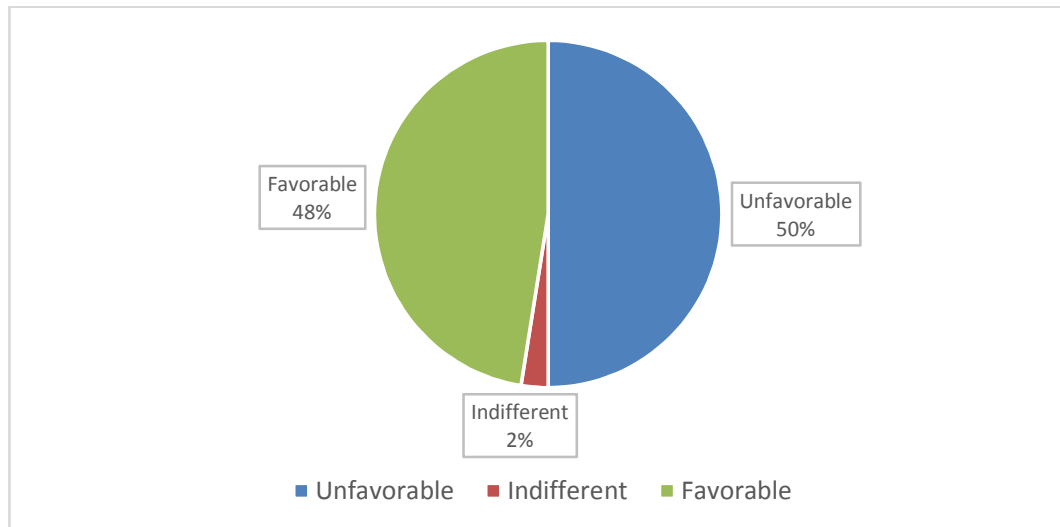


Figure 1: Categorisation of respondents based on total perception score

Results in Table 6 show that there was significant and positive relationship between socioeconomic status of co-operators and participation in co-operative activities ($r = 0.57$). Also, benefits derived by members in co-operative societies ($r = 0.9$) was highly related to their

socioeconomic status. The results imply that the more co-operators actively engaged in co-operative activities, the more the benefits derived and subsequently the more favourable their perception about the positive effects of membership in co-operative societies on their socioeconomic status.

Table 6: Relationship between *SES and participation in co-operative activities and benefits derived by members

Variable	r-value	p-value
Participation in co-operative activities	0.57	0.000
Benefits derived in co-operative societies	0.9	0.000

Source: Field survey, 2017

*SES – Socioeconomic status

CONCLUSION AND RECOMMENDATIONS

Respondents were members of various co-operative groups with multi-purpose co-operative societies being the most prominent one they belonged to. Respondents had been participating in these co-operative societies for a long period of time in various capacities ranging from ordinary membership to holding executive positions. Prominent among benefits enjoyed from membership in co-operative societies included access to credit facilities, market accessibilities for member produce, capital formation for joint use of resources, collective processing of farm produce, easier access to basic farm inputs, while they did not commonly benefit from co-operative access to bank loan and leverage on use of joint resource ownership as bank collateral. There was high degree of participation in co-operative activities and co-operators mostly 13 neighbours opined that membership in co-operative societies positively affected and enhanced their socioeconomic status. It is recommended that Community Based Organizations (CBOs) and Non-Governmental

Organizations (NGOs) working on grassroots development should encourage rural co-operative societies to leverage on use of co-operative resources as collateral to access bank loan so as to increase the benefits derived from their various co-operatives and thereby better enhance their socioeconomic status.

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PERFORMANCE ANALYSIS OF NATIONAL DIRECTORATE OF EMPLOYMENT GRADUATE POULTRY FARMERS IN IMO STATE, NIGERIA

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ABSTRACT

The study assessed performance of graduates of the poultry training programme under the Rural Agricultural Development and Graduate Training Scheme of National Directorate of Employment (NDE) in Imo State, Nigeria. Simple random sampling technique was used to select 90 NDE beneficiaries. Data were collected with a structured questionnaire and analyzed with descriptive statistics, Return on Investment (ROI) and multiple regression analysis. The result showed that farmers had mean age, household size, flock size and annual farm income of 43.4 years, 6 persons, 91 birds and N325, 500.00 respectively. The farmers had favourable perception ($\bar{X}=3.2$) of the programme. Poultry production enterprise was a lucrative business with a Return on Investment (ROI) of 138.40%. The multiple regression analysis result revealed that age (2.93***), marital status (2.00**), household size (-2.97***), farming experience (1.88*), flock size (2.98***), and poultry output (1.10*) influenced beneficiaries' performance on the programme. Sustenance of the programme is advocated to encourage unemployed youth's participation in the scheme.

Keywords: Performance, Poultry, Graduates, Farmers, NDE

INTRODUCTION

A major concern of the Federal Government of Nigeria is how to tackle the problem of unemployment in the country. Various regions in Nigeria have designed and executed several self-empowerment programmes to enhance the economic empowerment of the unemployed through training on different agricultural entrepreneurial skills (Nwaobiala and Nzeakor, 2016). In the past, successive governments, non-governmental organizations (NGOs), cooperatives and individuals through private initiatives as well as international organizations embarked on several programmes targeted at rural development. Most of these programmes had good objectives but due to some constraints such as wrong approaches and strategies employed, the issue of lack of development continues to affect the rural areas. There is no doubt that a number of rural development projects have been embarked upon to stimulate and create employment for the unemployed especially the youths. These programmes were seen to be neglected, ignored, underutilised or abandoned thereby making it impossible for government to achieve its aim of creating employment, which in turn will lead to development (Nwachukwu and Obineze, 2013; Ikoro, 2016). However, agricultural productivity will not increase if the capacity of farms and other actors in the agricultural value chain remain low, preventing them from innovating in agriculture which include new knowledge, processing and commercialization (Goni, Usman, Jaliya and Barma, 2013).

The National Planning Commission (2013) reported that in 2012 about 11.1 million people consisting the youths were unemployed in Nigeria. This enormous figure means that a great and dominant group of human resource must be

harnessed and utilised in order to advance agricultural intensification and development. National Bureau of Statistics (2013) affirmed that education for a large number of people in the rural areas is crucial for achieving sustainable development. The youths in both urban and rural areas need to be mobilized for proper impact to be felt in their communities (Adesope, 2007). Dike (2009) observed that vocational education and job training programmes have been an integral part of national development strategies in many societies because of its impact on human resource development, productivity and economic growth. According to Coombs (2003), training is generally through practical exposure, either informally as practical exposure to job, or in formal institutions established for the purpose of providing exposure to required skills (Nwaobiala, Ndukwe and Ekumankama, 2016).

One of the ways of bringing about improvement in poultry production in Nigeria is the provision of right information through appropriate channel and trainings that is accessible to farmers. Poultry production in Nigeria has undergone tremendous changes over the past decades genotype, management and technological advancement (Olaniyi, 2013). It has become one of the most important aspects of farming through creating business opportunities for entrepreneurs and employment (Ayande, 2015). The population of Nigeria poultry is about 150,682 million, out of which 25% are commercially farmed, 15% semi-commercially and 60% in backyards or small scale (Onwualu, 2011). This shows that small scale poultry producers dominate the industries and are responsible for the bulk of production in Nigeria. Arowolo, Ogunrombi, Apantaku and Adeogun (2017) report that poultry farming suddenly became the cheapest and easiest sector of animal

production that attracts the influx of many elites, civil servants and unemployed graduates into the practice of backyard poultry production as a way of supplementing the inadequate income, protein needs as well as overwhelming growth in the agricultural sector.

In order to curb the problem of unemployment in Nigeria and in recognition of the role agriculture can play as a spring board for employment generation and self-sufficiency in food production, the National Directorate of Employment was established in 1987 to awaken the interest of unemployed youth in agriculture and to explore the tremendous opportunities for employment and wealth creation in the agricultural sector and consequently, stem the rural-urban drift of the youth in agriculture (National Directorate of Employment, 2012). The agricultural training programme covers modern agricultural practices in the area of crop production, crop processing and preservation, livestock production and management. The scheme seeks to train the unemployed, especially the youths in various off-farm income-generating activities in the production and marketing of handicraft using cheap and easily sourced local raw materials. Graduates of these schemes are further empowered financially to set up a micro farm of their learnt skills (National Directorate of Employment, 2014). Since the establishment of the programme, it is not certain whether there is any empirical evidence on the performance of poultry farming among NDE graduates in the state. It is against this backdrop that the paper was undertaken to assess the performance of graduate poultry farmers' in National Directorate of Employment Agricultural Training Scheme in Imo state, Nigeria.

The specific objectives are to:

- i. describe the socioeconomic characteristics of poultry farmers in the study area.
- ii. ascertain farmers perception about the trainings received; and
- iii. determine the performance of poultry NDE agricultural graduates in the scheme.

The hypothesis stated for the study, in null form, is that there is no significant relationship between selected socioeconomic characteristics of respondents and their performance in the scheme.

METHODOLOGY

The study was carried out in Imo State. The state lies within latitudes 4° 45'N and 7° 15'N, and longitude 6° 50'E and 7° 25'E. It occupies the area between the lower River Niger and the upper and middle Imo River. The State is bounded on the east by Abia State, on the west by River Niger and Delta State; and on the north by Anambra State, while Rivers State lies to the south. The State is located within the rainforest belt of Nigeria, and the temperature ranges between 20° C and 30° C.

Agriculture is the major occupation of the people. Imo State is made up of 27 Local Government Areas (LGAs) and three Agricultural zones of Okigwe, Owerri and Orlu.

The NDE beneficiaries were chosen from the list of trained beneficiaries of Rural Agricultural Development and Training Graduates of NDE. A multistage random sampling technique was used to select LGAs and respondents. First, six (6) local government areas namely Owerri North, Owerri West, Isiala Mbano, Orlu, Ezinihitte Mbaise and Ohaji/Egbema, out of twelve (12) LGAs where the programme was located were randomly selected for the study. From the list, fifteen (15) practicing agricultural graduate trainees were randomly selected from six (6) Local government Areas giving a total of ninety (90) respondents. Data were analyzed using of descriptive statistics such as frequency distribution, percentages, mean scores, return on investment and inferential statistics (multiple regression analysis).

Measurement of variables

In order to assess perception of NDE poultry graduates on trainings received, eight (8) item perception statements were measured on 4 – point Likert-type rating scale of strongly agree = 4, agree = 3, disagree = 2, strongly disagree = 1. Respondents mean scores were computed for each of perception statements by adding the weights of 4, 3, 2, 1. A midpoint was obtained thus; $4+3+2+1=10/4 = 2.5$. Mean score greater than or equal to 2.5 implied perception and otherwise, unfavourable perception.

Model specification

The Return on Investment was used as proxy for performance of the trainees. The R.O.I. model gives profitability as a measure of the Rate of Investment. It expresses net revenue as a percentage of total investment.

Return on Investment (R.O.I) =

$$\frac{\text{Net Revenue per annum} \times 100}{\text{Total cost incurred per annum}}$$

1

Net revenue is given by Total revenue – Total cost

Where:

Total cost = Total variable cost + Total fixed cost

Beneficiaries with ROI higher than 50% were considered to be performing well. Those with ROI below 50% were considered poor performers.

Multiple regression analysis was used in determining factors influencing the performance of poultry beneficiaries in the programme (hypothesis). The four functional forms of regression model viz: linear, semi-log, exponential and 16ei-Douglas were tried. The best fit was chosen as the lead equation based on its conformity with econometric and statistical criteria such as the magnitude of R^2 , F-ratio and number of significant variables.



The function is specified as $Y = f(X_1, X_2, X_3, \dots, X_8 + e_i)$.

The four functional forms are expressed as follows:

Linear Function

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + e_i$$

Semi – log function

$$Y = L_n b_0 + b_1L_nX_1 + b_2L_nX_2 + b_3L_nX_3 + b_4L_nX_4 + b_5L_nX_5 + b_6L_nX_6 + b_7L_nX_7 + b_8L_nX_8 + e_i$$

Exponential function

$$LnY = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + e_i$$

Cobb Douglas Function

$$LnY = L_n b_0 + b_1L_nX_1 + b_2L_nX_2 + b_3L_nX_3 + b_4L_nX_4 + b_5L_nX_5 + b_6L_nX_6 + b_7L_nX_7 + b_8L_nX_8 + e_i$$

Where,

Y = Performance (Return on Investment) (N)

X_1 = Gender (male = 1, female = 0)

X_2 = Age (years)

X_3 = Marital status (married = 1, otherwise = 0)

X_4 = Education level (number of years spent in school)

X_5 = Household size (number of persons eating from the same pot)

X_6 = Farming experience (years)

X_8 = flock size (number)

X_{10} = poultry Output (N)

e_i = error term

RESULTS AND DISCUSSIONS

Socioeconomic characteristics of respondents

Table 1 shows that 57.78% of graduate NDE farmers were males. This implies that poultry farming is mostly practiced by males in the study area. The result is in consonance with Owoladee, Adebisi, Alonge, Adamu and Lawal (2017) as they obtained a similar result among poultry farmers in Oyo state, Nigeria. The mean ages for the beneficiaries were 43.40 years. This implies that the respondents were at the middle age signifying that they were within the agricultural production age range of 30 – 50 years quoted by Food and Agricultural Organization (2005). The mean household size of the farmers was 6 persons. This indicates that they had medium household size, which has implication on labour availability in poultry production. This result is in tandem with Abdullahi, Atala, Akpoko, Sami and Hara (2016) that household size play complementary role in any farming activity. Half (51.11%) of the respondents had secondary education. This implies that they are literates and aware of the importance of training which in turn affect their performance in the acquired skills. Again, the mean flock size of farmers was 91 birds. Flock size is an indication of economic strength of the farm which is likely to influence income that will support other aspects of the farm (Corsi, 2004; Augustine, 2010). The annual mean income derived from sales of poultry was N325,500.00. Onwuali, (2011) reported that income realized from the production of birds enhances competitiveness through value addition.

Table 1: Distribution of socioeconomic characteristics of respondents in the study area (n = 90)

Variables	Frequency	Percentage
Gender		
Male	52	57.78
Female	38	42.22
Age (years)		
21-30	13	14.43
31-40	30	33.33
41-50	25	27.77
51-60	20	22.22
61-70	2	2.22
Mean	43.40	
Standard Deviation	10.93	
Household Size (numbers)		
1-5	36	40.00
6-10	52	57.78
11-15	2	2.22
Mean	6	
Standard Deviation	2.7	
Education (years)		
No formal education	1	1.10
Primary education	15	16.67
Secondary education	46	51.11
Tertiary education	43	47.78
Poultry Flock Size (numbers)		
1 – 20	5	5.55
21 – 40	12	13.33

Variables	Frequency	Percentage
41 – 60	11	12.22
61 – 80	9	10.00
81 – 100	53	58.90
Mean	91 birds	
Standard Deviation	79.44	
Poultry Income (N)		
100,000 – 300,000	12	13.33
301,000 – 350,000	10	11.11
351,000 – 400,000	19	21.11
401,000 – 450,000	41	45.56
451,000 – 500,000	8	8.89
Mean	N325,500	
Standard Deviation	N232,114	

Source: Field Survey, 2014

Perception of farmers about the scheme

Data in figure 1 shows that respondents agreed that the scheme was not gender sensitive ($\bar{X}=2.8$), grants disbursed was adequate ($\bar{X}=2.7$), while the training received increased their poultry skills and output and were satisfied with the whole poultry packages taught ($\bar{X}=2.6$). Again, the respondents affirmed that the scheme enhanced

their felt needs ($\bar{X}=2.5$) and increased processing skills ($\bar{X}=2.4$). The mean perception score was 2.6 indicating that the farmers had favourable perception about the scheme. This result is in consonance with Innih and Dimelu, (2013) that perception and attitude of farmers to donor sponsored programmes enhances their performance.

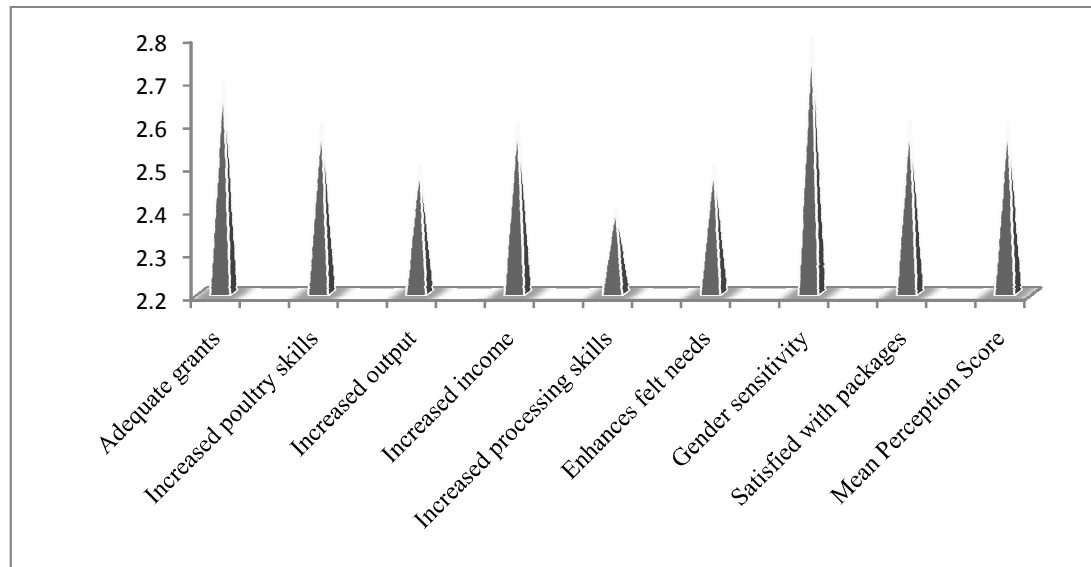


Fig. 1: Showing perception responses of farmers about the scheme's training

Return on investment analysis of poultry farming among NDE beneficiaries

The result in Table 2 indicate that the total revenue realized from poultry farming among beneficiary farmers was N703, 800.00, with total variable and fixed costs of N256, 100.00, and N 39,148.32 respectively as well as, Gross margin of N447, 700.00 and a Net Income N 408,551.68. The Return on Naira invested in poultry farming was N

1.52 indicating that any N1 invested by a farmer in poultry farming in Imo State amounts to N1.52. The result also indicates that the NDE beneficiaries had a high Return on Investment of 138.40% which is above 50% stated as the performance bench mark. This result is in conformity with the findings of Mbah (2013), where the return on investment on poultry production in Anambra State was 147%.

**Table 2: Return on Investment in Poultry Farming among farmers in the Study Area**

Items	Poultry Production (N)
Revenue	703,800.00
Total variable cost	256,100.00
Total fixed cost	39,148.32
Gross Margin	447,700.00
Net farm income	408,551.68
Return on Naira Invested	1.52
Return on Naira (%)	138.40

Source: Field Survey, 2014

Performance Decision: 50% and above = High Performers

Less than 50% = Low Performers

Factors influencing performance of NDE poultry graduate farmers in the study area

The result in Table 3 showed the Ordinary Least Square (OLS) multiple regression estimates of the determinants of NDE poultry farmers in the study area. The Linear functional form was chosen as the lead equation because of a high R^2 value, number of significant factors and agreement with *a priori expectation*. The R^2 value of 0.5228 indicates 52.28% variability in farm income was explained by the independent variables. The Z value of 4.71 was highly significant at 1% level of probability indicating that the regression was a good fit.

The coefficient for age was positive and significant at 1%. This implies that any increase in age is expected to lead to a corresponding increase in performance. This is against *a priori expectation* probably because the aged farmers seem to be more credible thereby making more sales than their younger counterparts. The result is in tandem with Ezech and Okudu (2008) that adult farmers had more production efficiency and productivity than their younger counterpart. The coefficient for marital status was negative and significant at 10% level of significance. This also implies that the poultry farmers who were single made more income than their married counterparts. This may be because they do not have overwhelming responsibilities affecting their production of livestock in the area. The coefficient for household size was negative

and highly significant at 1% level. This is against *a priori expectation* probably because large household sizes bring about huge consumption needs thereby leading to a decrease in the level of performance among the poultry farmers. Nwaobiala (2016) reported that even when members of such large household sizes are available for farming activities, there is high possibility of underutilisation of labour as most of the farmers rear small herds of animals or cultivate small areas of farm land. The coefficient for farming experience was positive and significant at 10% level of probability. This implies that experienced farmers performed better than their counterparts who had no or little poultry experience. This result is in agreement with Ibitoye, Shaibu and Akwu, (2014) that the more farmers remained in any farming business, the more they got acquainted with risk elements and ways of mitigating possible losses through them. The coefficient for flock size was positive and highly significant at 1% level of probability. This implies that any increase in flock size will lead to a corresponding increase in poultry performance. This is expected and in accordance with *a priori expectation*. The coefficient for poultry output was positive and significant at 10% level of probability, this is expected and in agreement with *a priori expectation*. This implies that the increase in poultry output will lead to a corresponding increase in performance of the beneficiaries in the enterprise.

Table 3: Regression estimates of the determinants of performance of NDE poultry farming beneficiaries in the study area

Variables	Linear+	Exponential	Cobb-Douglas	Semi-log
Constant	409481.70 (1.46*)	25200 (12.16***)	10.2124 (4.42***)	-424239.20 (-0.64)
Gender	-2503.59 (-0.04)	0.0802 (0.31)	0.1028 (0.40)	-1957.24 (-0.03)
Age	12444.99 (2.93***)	0.0235 (1.52*)	0.7626 (1.27*)	348923.50 (2.02**)
Marital Status	-67769.41 (2.00**)	-0.0725 (-0.56)	-0.1265 (-1.03*)	-78757.80 (-2.22**)
Education	-80542.95 (-1.47*)	-0.2126 (-1.06*)	-0.6448 (-1.66*)	-222673.30 (-1.88*)
Household Size	-355509.86	-0.1222	-0.4458	-117319.90

Variables	Linear+	Exponential	Cobb-Douglas	Semi-log
	(-2.97***)	(-2.80**)	(-2.75**)	(-2.50**)
Farming Experience	6323.10	0.0038	0.1323	30137.67
	(1.88*)	(0.32)	(0.80)	(0.63)
Flock Size	324.21	0.0025	0.2946	6886.34
	(2.98**)	(2.55**)	(2.36**)	(1.90*)
Poultry Output	341.97	0.0008	-0.1673	-44814.17
	(1.10*)	(-0.78)	(-1.30)	(-1.20*)
R ²	0.5228	0.3412	0.3001	0.40441
R Adjusted	0.4142	0.2644	0.2211	0.3255
Z	4.71***	3.14***	2.53**	2.60**

Source: Field Survey, 2014

Variables in parentheses are Z-values

+ = lead equation

P ≤ 10, ** P ≤ 0.5 and *** P ≤ 0.1

CONCLUSION AND RECOMMENDATIONS

The result from this study revealed that the poultry farmers had favourable perception of the trainings received from the scheme. The result indicates that the NDE graduate farmers had a high Return on Investment of 138.40% from poultry farming. Factors such as age, marital status, household size farming experience, flock size and poultry output influenced performance of the poultry farmers' in the scheme.

The study therefore recommends;

- Adequate funding of the scheme in order to sustain the scheme.
- Since poultry farming is profitable, the programme should sensitize the public on its benefit. This will encourage more unemployed youths to participate in the scheme.
- Follow – up and monitoring of graduated farmers to ensure that they judiciously utilise incentives and grants provided by the scheme.

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AWARENESS AND UTILISATION OF CASSAVA PRODUCTION TECHNOLOGIES AMONG FARMERS IN IMO STATE, NIGERIA

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ABSTRACT

The study examined farmers' awareness and utilisation of cassava production technologies in Imo State, Nigeria. A multi-stage random sampling procedure was used to select one hundred and twenty (120) cassava farmers. Data for the study were collected through a structured questionnaire and analyzed with descriptive statistics such as: frequency counts, mean scores and percentages and Pearson product moment correlation analysis (PPMC). The result reveal that 60.0% of the respondents were females, 55% were married with mean household size and farm size of 4.3 persons and 1.3 hectares respectively, while 45.83% had monthly contact with extension. Awareness was high (80.83%) among respondents and they utilised land preparation and ridge/mound making ($\bar{X}=2.8$), improved cassava cuttings, fertilizer application and weeding at intervals ($\bar{X}=2.7$), time of harvest($\bar{X}=2.6$), while pest and disease control and planting date and spacing had mean ratings of 2.4 respectively. The utilisation index of cassava production technologies was of 86.7%. The result of PPMC analysis ($r=1.02$) shows there was no significant difference between the farmers' levels of awareness and utilisation cassava production technologies in the study area. Increased extension contacts, farmers' access to and subsidy on farm inputs were advocated for effective utilisation of cassava production technologies in the study area.

Keywords: Awareness, technology, utilisation, cassava, farmers

INTRODUCTION

Nigeria has consistently maintained the leading position as world largest producer of cassava in recent years with an annual production record of 38.7 million metric tons (Food and Agricultural Organization, 2016). Cassava (*Manihotesculenta Crantz*) is an indispensable staple food for over 500 million people in tropical Africa but particularly in West Africa sub-region and a major source of energy with very high food security value similar to most cereal crops (Achinewhu and Onwuama, 2002). Cassava has a high income generating potential and can enable resource poor small holder producer to improve livelihood once they adopt and use appropriate production, processing and marketing opportunities (Ezedinma, 2007). There are numerous ways of processing and consuming cassava depending on locality. Cassava and its products hold a position of primary food security producer in Africa, especially in Nigeria. This is due to its adaptation to a wide range of production and environmental conditions including flexible planting, harvest cycles, diseases tolerance and processing. Alternative uses of cassava through value addition has resulted in emergence of wide food recipes from cassava through processing which involves the conversion of edible food to another form more acceptable or convenient to the consumer (Nwaobiala, Isiocha and Nwachukwu, 2009; Okoroafor and Nwaobiala, 2014). Cassava has been identified to promote agro-enterprises development in Nigeria and supports the National Agricultural Transformation Agenda (ATA) through market and value chain development and investment to unlock

growth opportunities, food security, jobs and income creation, value addition and competitiveness (Gwera, 2009).

National Root Crops Research Institute (NRCRI) Umudike and International Institute of Tropical Agriculture (IITA) Ibadan, has developed cassava varieties that has the potential to be disease tolerant, ability to survive under moisture stress and high yielding (National Root Crops Research Institute, 2012). Udealor and Asiegbu (2006) reported high cassava yield from use of improved varieties with suitable cultural practices. The rating of Nigeria as the world's leading producers of cassava may be due to the cultural and agronomic practices required for cassava cultivation through proper extension services. The cassava recommended practices include; site selection, ridging/mounding, use of improved cassava cuttings, use of fertilizer, herbicides application, use of insecticides, spacing, planting date and time of harvest(NRCRI, 2012).The awareness of these technologies is to ensure that these crops can be put to wider uses in the home, for income generation and possibly for export purposes. However, ever since the massive dissemination of these technologies to farmer groups in the agro-ecological zones (Abia, Akwalbom, Anambra, Cross River, Enugu, Ebonyi and the Imo States, farmers adoption and utilisation of improved production technologies has increased output and income in turn alleviates poverty (NRCRI, 2012;Nwaobiala and Nwosu, 2014).Awareness, information and innovation which are intended to improve agricultural production should be disseminated to farmers and ultimately meet their



needs. However, variations exist on relevant production technologies needed by farmers in Nigeria (Banmeke and Olowu, 2005; Sabo, 2007).

Various reports indicated that yield levels achievable in small farmers' farms have continued to be far below the yield levels achievable at agricultural research stations in Nigeria (Akoroda, 2011). There are clear indications that a gap still exist between levels of awareness and utilisation of cassava production technologies in the study area, despite all the efforts by extension delivery outfits in the country to disseminate improved agricultural innovations. In view of the above stated facts, this study was undertaken to analyze awareness and utilisation of cassava production technologies among farmers in Imo State, Nigeria

Specific Objectives were to;

- i. describe socioeconomic characteristics of farmers' in the study area.
- ii. ascertain levels of awareness of cassava production technologies by farmers in the study area, and
- iii. ascertain levels of utilisation of cassava production technologies by farmers in the study area.

Hypothesis stated for the study is that there is no significant relationship between awareness and utilisation of cassava production technologies among farmers in the study area.

METHODOLOGY

The study was carried out in Imo State. The state lies within latitudes 4° 45'N and 7° 15'N, and longitude 6° 50'E and 7° 25'E. It occupies the area between the lower River Niger and the upper and middle Imo River. The state is bounded on the east by Abia state, on the west by River Niger and Delta state; and on the north by Anambra State, while Rivers state lies to the south. The state is located within the rainforest belt of Nigeria, and the temperature ranges between 20° C and 30° C. The state is made up of 27 Local Government Areas (LGAs) and three Agricultural zones of Okigwe, Owerri and Orlu.

A multistage random sampling technique was adopted in the study. Purposively ADP contact farmers who were involved in cassava cultivation were chosen for the study. First, the three agricultural zones that make up Imo state namely; Owerri, Orlu and Okigwe were selected for the study. First, 2 blocks each was randomly selected from the three agricultural zones to give a total of 6 blocks (Owerri – Owerri North and Owerri South blocks: Orlu – Orlu and Nkwerre blocks and Okigwe – Obowo and Isiukwuato blocks). Also, 2 circles each were randomly selected from the selected blocks which gave a total of 12 circles. Finally, ten cassava farmers each were randomly selected from each of the selected circles to give a

sample size of 120 cassava farmers. Descriptive statistics such as frequency counts, percentages and means were used to analyze the objectives, while the hypothesis was tested with Pearson product moment correlation analysis (PPMC).

Measurement of variables

The levels of awareness of cassava production technologies in the study area were operationalised by asking the farmers to indicate whether they were aware of the stated cassava production technologies with response options of "Yes" and otherwise "No". The mean awareness percentage was obtained by adding individual percentages of the cassava production technologies and dividing by number of technologies. Furthermore, the percentages were shaped and categorised with awareness ratings;

1 – 66% = low Awareness

67 – 100% = High Awareness

The levels of utilisation of cassava production technologies was captured using a 3-point Likert type rating scale namely; always=3, occasionally = 2 and never = 1. The benchmarks were obtained thus; 3+2+1 = 6 divided by 3 to give 2.0. Mean scores of 2.0 and above implied utilisation and below no utilisation of cassava production technologies.

The mean was categorised using the following decision rule:

1.00- 1.50 (low)

1.51- 1.99 (moderate)

2.0 and above (high)

The utilisation indices of the respondents were calculated by dividing the total mean utilisation score by 3 – point Likert type rating scale.

RESULTS AND DISCUSSION

Socioeconomic characteristics – The socioeconomic characteristics of respondents are shown in Table 1. The result reveals that a high proportion (60.0%) of the respondents was females, while 40.0% were males. This result is in tandem with the findings of Ejechi (2015) who found that female farmers dominated cassava farming in Nassarawa state, Nigeria. The result also shows that 55% of the respondents were married, with mean ages of 51.2 years. The implication of this result is that the farmers were not energetic and productive in cassava farming activities. The ages are considered to be responsible to take any rational decision in the uptake and use of any innovation/technology. The mean household size for the farmers was 5.3 persons with a farm size of 1.3 hectares. Household size in turn provides cheap labour for agriculture and other remunerative activities. The result however, agrees with Onuk, Tochukwu, Agwu, and Ajibo (2013), as they found household labour providing farm power needs of

farmers in Enugu state, Nigeria. The relative small size of the farmers may be as a result of the land tenure system prevalent in the country. The result agrees with (Abugu *et al.*, 2013) who reported that majority of farmers in south east Nigeria are small scale farmers, on the average cultivate less than 2 hectares of land. A moderate proportion (45.83%)

of the respondents had a monthly contact with extension. Farmers' contact with extension has proven to increase agricultural output through dissemination of improved technologies. The result agrees with Ajala, Ogunjimi and Farinde (2013) as they obtained a similar result among cassava farmers in Oyo state, Nigeria.

Table 1: Distribution of respondents by socioeconomic characteristics (n = 120)

Variables	Frequency	Percentage	Mean
Gender			
Male	49	40	
Female	71	60	
Age (years)			
20 – 30	6	5.00	
31 – 40	15	12.50	
41 – 50	32	26.67	51.2 years
51 – 60	47	30.17	
61 – 70	20	16.66	
Marital Status			
Single	11	9.17	
Married	66	55.00	
Divorced	4	3.33	
Widowed	34	28.33	
Separated	5	4.17	
Household Size (numbers)			
1 – 3	33	27.50	
4 – 6	53	44.17	5.3 persons
7 – 9	19	15.83	
10 – 12	15	12.50	
Farm Size (hectares)			
0.1 – 1.0	44	36.67	
1.1 – 2.0	62	51.67	1.3 hectares
2.1 – 3.0	14	11.66	
Extension Contact (numbers)			
1 – 2	55	45.83	
3 – 4	29	25.84	
No Contact	34	28.33	

Source: Field Survey, 2015

Awareness of cassava production technologies

Data on Table 2 shows that majority (95.8%) of the respondents were aware of fertilizer application while 95% were aware of site selection/land clearing and use of improved cassava varieties, whereas majority (93.3%) that were aware of ridge/mound making. The farmers (84.16%) were aware of weeding at intervals,

88.3% of them time of harvest, while 79.16%, were aware of pest and diseases control and planting date and spacing (77.5%). Ugwoke, Mathew-Njoku, Anaeto and Okereke (2009) affirmed that awareness of any given technology facilitates adoption and utilisation, which translates to increased output and income for farmers.

Table 2: Distribution of respondents by levels of awareness of cassava production technologies

Cassava production technologies	Aware		Unaware	
	Frequency	Percentage	Frequency	Percentage
Site selection/ land clearing	114	95.0	6	5.0
Ridge/mound making	112	93.3	8	6.7
Use of improved cassava cuttings	114	95.0	6	5.0
Planting date and spacing (1mx1m at angle 45 ⁰)	93	77.5	27	22.5
Fertilizer application (rate and time of application)	115	95.8	5	4.2
Pest and disease control	95	79.2	25	20.8
Weeding interval	101	84.2	19	15.8



Cassava production technologies	Aware		Unaware	
	Frequency	Percentage	Frequency	Percentage
Time of harvest	100	83.3	20	16.7

Source: Field Survey 2015

The result on the categorisation of farmers' levels of awareness of cassava production technologies (Table 2b) indicates that cassava farmers had high awareness (80.8%) of the technologies. Since majority of the farmers have high level of awareness of these technologies, they have the propensity of adopting and utilising the

technology. This finding is in consonance with Akinbile, Akwiwu and Alade (2014) that awareness of innovation gives a high probability that it would be adopted. Therefore, such innovation if embraced by the farmers; will further improve their production and a livelihood.

Table 2b: Categorisation of farmers levels of awareness of cassava production technologies

Levels/categorisation (%)	Frequency	Percentage
Low 1 – 66	23	19.2
High 67 – 100	97	80.8

Source: Field Survey 2015

Utilisation of cassava production technologies

The distribution of respondents according to levels of utilisation of cassava production technologies is shown in Table 3. The result indicate that majority (71.7%) of the respondents always utilised site selection/land clearing and ridge/mound making with the mean scores of 2.8 respectively. Again, (88.3%), 79.2% and 72% of the respondents always utilised improved cassava cuttings, fertilizer application and weeding technologies respectively with mean score 2.7. Furthermore, 53.5% and 52.5% of the farmers

always and occasionally utilised pest and disease control and planting spacing with the mean utilisation score of 2.4. The grand mean utilisation score for cassava production technologies was 2.6, indicating high utilisation with an index of 0.867, meaning that the farmers utilised 86.7% of these technologies. Nwawuisi, Okoye and Odaji (2007) obtained a similar result among farmers that adopted and utilised TMS 30211 and TMS 3001 cassava varieties in Ebonyi state, south-east Nigeria.

Table 3: Distribution of Respondents by levels of utilisation of cassava production technologies

Cassava Production Technologies	Always	Occasionally	Never	Total	Mean utilisation score
Site selection/ land clearing	98(71.66)	21(17.50)	1(0.83)	337	2.8
Ridge/mound making	98(71.66)	21(17.50)	1(0.83)	337	2.8
Use of improved cassava cutting	106(88.33)	14(11.67)	0(0)	318	2.7
Planting date and spacing (1m x 1m at angle 45°)	53(44.17)	63(52.50)	4(3.33)	289	2.4
Fertilizer application	94(79.17)	22(18.33)	2(1.67)	328	2.7
Pest and disease control	62(51.67)	46(38.33)	12(10)	290	2.4
Weeding interval	83(72.00)	35(29.13)	2(1.67)	321	2.7
Time of harvest	63(52.50)	55(45.83)	2(1.67)	298	2.5
Grand Mean					2.6
Utilisation Index					0.867

Source: Field Survey, 2015

Relationship between awareness and utilisation of cassava production technologies

The results in Table 4 show the relationship between awareness and level of utilisation of cassava production technologies in the study area. The result reveals a correlation local government areas of 1.02, indicating no positive relationship between awareness and utilisation of cassava production technologies in the study area

Therefore, the null hypothesis which states that there is no significant relationship between awareness of cassava production technologies and farmers' level of utilisation is hereby accepted. This result is in consistent with Okanade, Olaniyi and Ogunleye (2005) who obtained a similar result among cassava farmers in Surulere Local Government Area of Oyo State, Nigeria.

Table 4: PPMC analysis of awareness and utilisation of cassava production technologies in

Variables	Coefficient	Correlation(r^2)
Awareness	0.134	1.02
Utilisation	0.128	
Sample Size	120	

Source: STATA 4A Result

CONCLUSION AND RECOMMENDATIONS

The study revealed that respondents were aware and utilised fertilizer application, site selection /land clearing, use of improved cassava varieties, ridge/mound making, weeding at intervals, time of harvest, pest and diseases control and planting date and spacing. The study showed no significant difference between awareness and utilisation of cassava production technologies in the study area.

The study therefore recommends

- Need for increased extension contacts to create awareness of cassava production technologies among farmers in the study area.
- Timely distribution of high yielding cassava varieties is advocated in order to increase output. This is informed by the time bound nature of farming.
- Since there was the utilisation of cassava production technologies, farmers should have access to fertilizers, improved cassava cuttings, herbicides, credit and subsidy in order to encourage effective utilisation of the technologies.

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AN ASSESSMENT OF CONSEQUENCES OF PASTORALISTS AND CROP FARMER'S CONFLICTS ON RURAL LIVELIHOODS IN OYO STATE, NIGERIA

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ABSTRACT

The occurrence of conflicts over the use of competing natural resources between crop farmers and pastoralists in Nigeria were on the increase in recent times. The study investigated the consequences of pastoralists and crop farmer's conflict on rural livelihoods in Oyo state, Nigeria. A three-stage random sampling technique was used to select 90 farmers from six communities contiguous with pastoralists' settlements for the study. Data were collected with the aid of a structured questionnaire. The results revealed that home and farm destruction as well as sustaining of wounds and injuries with relative important indices of 0.66 and 0.65 respectively were incidences significantly affected during the conflicts. Similarly, reduction in crop yields, and farm income with 0.76 relative importance indices each accompanied the conflicts. In addition, reduction in food quality and quantity (0.71), farm job abandonment (0.72), sleepless night (0.64), and fear and anxiety (0.65) were reported by the respondents. Therefore, it was concluded that pastoralists and crop farmers' conflicts had negative consequences on every on many facets rural livelihoods in Oyo State. It was recommended the government and non-governmental organizations should come to the aid of the farmers to cushion the effects of the damages. All the stakeholders should come together and discuss and agree on amicable solutions to the problems. The government can be the mediator

Keywords: Destruction of farm, livelihood, reduced farm output, income, farm job abandonment and reduction in food quality

INTRODUCTION

In recent times, pastoralists and crop farmers have engaged each other in a destructive warfare that is threatening the peace and stability of Nigeria. The Fulani in Nigeria are found in Sahel savannah of the country (Agbaje et al 2013). However, they have to migrate down south and some areas of the middle belt to as a result of perpetual drought in the ecological zone which have reduced pasture and water availability (Umar, 2006). Consequently, the pastoralists migrated southwards to graze their livestock.

In the process, the migration of these has caused more harm than good in all these areas (Abugu and Onuba, 2015). For instance, between the year 2000 and 2015, there have been reported cases of conflicts and confrontation between the *Fulani's* and the indigenes of the areas they migrated to (Abugu, and Onuba, 2015). The media (print and electronics) is filled with reported cases of clashes between the *Fulani's* from the North and the inhabitants of the Plateau, Kogi, and Benue in the middle belt region of the country and some parts of the Eastern region (Abugu and Onuba, 2015).

The Sun New (2014) reports the clashes between the *Fulani's* and the *Agatu* people of Benue State and the clashes left several people dead. In the eastern parts of the country, like, Uzouwani (Enugu State), Ezeagu and Umuahia (Abia State), such clashes have not gone unnoticed. In 2013, the press media (Vanguard) reported that the *Fulani* killed three people and caused significant damage to crops in Umuahia, Abia State. The case of Benue State is pathetic as the

Fulani have become an army of occupation to the inhabitants of the areas.

The South-west region is not exempted from the unrest caused by the *Fulani* herdsmen. Recently, The Nation (2016), reports that armed herdsmen invaded Oke- Ako area in Ikole Local Government of Ekiti State and killed a farmer on his plot. Many of these acts have also occurred in agrarian communities of Oyo, Osun and Ondo States whereby crops were damaged and lives were lost.

The conflict had been primarily about resource use, damage to crops, blocking of transhumant corridors (Burtali) (Mohammed, 2013), farming along the valleys and stream/river banks and uncomplimentary agricultural policies by government. However, the recent conflict had assumed a dangerous dimension with the infusion of ethnic, religious and political factors into it. Cattle rustling, availability of dangerous weapons, intra-pastoralists conflicts, mercenary elements and dangerous drugs were added dimensions to the conflict (Mohammed, 2013). It is believed that many herdsmen who are involved in violent clashes with farmers in Nigerian villages are not Nigerians Ibrahim (Abdul' Aziz, 2014). According to Mohammed (2013), the Nigerian Constitution has given every citizen the fundamental right to freedom of movement in search of legitimate businesses. This may be held as the perception of the pastoralists over the use of natural resources, transhumance pastoralism is seen along these lines. Also, the ECOWAS Transhumance Protocol of 1998 and ECOWAS Protocol of Free Movement of Goods and Persons in West Africa guaranteed,



access to grazing rights in other countries in the ECOWAS zone including Nigeria.

Most of the crises were reported on the news; however, there is a dearth of information about the consequences of the conflicts on the livelihoods of the farmers in Oyo state. It is against this background that the study focused on answering the following research questions. What are the causes of conflicts among the farmers and the pastoralists in the study area? What are the consequences of the conflicts on the livelihood of inhabitants? What are the socio-psychological consequences of herdsman/ farmers conflict?

The goal of the study is to assess the Consequences of pastoralists and crop farmer's conflicts on rural livelihoods in Oyo State, Nigeria

The specific objectives are to;

1. Identify the various causes of conflicts between the pastoralist and farmers in Oyo state
2. Examine the physical, economic and psychological consequences of the conflicts on the farmers and the pastoralist
3. Investigate the magnitude of the physical, economic and psychological consequences of the conflicts on the farmers and the pastoralist

METHODOLOGY

The study was carried out in Oyo State, Nigeria. Oyo State is a landlocked state in southwest geo-political zone of the country, with its capital at Ibadan. It is bounded on the north by Kwara State, in the east by Osun State, in the south by Ogun State and in the west partly by Ogun State and Republic of Benin. The state was created in 1976 from the former Western State in 1991. The state is homogenous mainly inhabited by the Yoruba tribe. Oyo State has approximately an area of 28,454 square 29neighbours and is ranked 14th state by size in Nigeria. The landscape consists of old hard rocks and dome-shaped hills, which rise gently from about 500 meters in the southern part and reaching a height of about 1,219 metre above sea level in the northern part. Perennial rivers such as Oba, Ofiki Ogun, Oyan, Osun, Sasa, Erinle and Oni River originate from these highlands. The Climate is equatorial, notably with dry and wet seasons with relatively high humidity. The dry seasons span from November to March while the wet seasons starts from April and ends in October.

The average daily temperature ranges between 25° C (77.0° F) and 35° C (95.0°F). A two-stage sampling technique was employed to draw the sample for the survey. The first stage involved a purposive selection of six towns from Oyo State where pastoralists and crop farmers conflicts were prevalent. The towns include Okeho, Shaki, Iseyin, Aiyete, Igboho, and Kishi. The second stage involved snow-ball selection of 15

farmers and four while four Pastoralist from each town whose farms were destroyed by the herds of in recent times. Thus, a total of 90 farmers and 24 herdsman were selected and used for the study. The difference in the farmers and pastoralist number was due to the prevalent of crop farmers in the area, when compared to the pastoralist. A well-structured interview schedule was used to obtain the information from the respondents. The data collected were analyzed using Descriptive statistics such as frequency counts and percentages and mean. Relative Important Index was used to measure the socio-psychological consequences of the conflicts on rural livelihoods.

The Relative Important Index (RII)

$$RII = \frac{\text{Sum of Weights } (W_1 + W_2 + W_3 + \dots + W_N)}{A \times N}$$

Where W = weights assigned to each factor by the respondents and it ranges from 1 to 5 where '1' is less important and '5' is extremely important.

A = highest weight (i.e. 5 in this case), and N = total number of respondents.

Weighted score

$$= \frac{\text{No of SA} \times 5 + \text{No of A} \times 4 + \text{No of U} \times 3 + \text{D} \times 2 + \text{SD} \times 1}{A \times N}$$

Any weighted score below three is considered as not important and vice versa. The consequences were classified into four aspects namely, physical, economic, the social and psychological aspects. Between three to eight variables were used to measure these consequences. It is imperative to note that the mean point for the variables is 2.50 and any variable found to be greater than the mean point is considered to be more relevant while any variable found to be lesser than the mean point are considered to be less important or relevant.

RESULTS AND DISCUSSIONS

Causes of pastoralists and crop farmers' conflicts

The result in Table 1 revealed the major causes of pastoralist and farmers' conflict in Oyo state. The result indicated that 96.67, 83.33, 73.33, and 48.89 percent of the of the rop farmers reported that encroachment of farmland, crop damage, stealing of crops and competition for food and water respectively were the major causes of the conflict. The findings support the assertions of (Adelakun et al., 2015) that damage to crops is one of the major causes of farmers-pastoralist conflicts in Oyo state. The damage done to crops implies a reduction in the productivity and income of the respondents. Also, Dimelu et al. (2017) discovered that socioeconomic, security, production practices and institution-related factors were the major factors causing farmer-pastoralist conflicts in Kogi state Nigeria. On the contrary, the pastoralists

The herdsman in Oyo state opined that (Table 1) the causes of conflicts between them and

the farmers include crop damage (91.67%), deliberate hostility (83.33%), ethnic rivalry (83.33%), farm encroachments (75.9%) and competition for food and water by man and animal (75.0%). . Since the farmers and the pastoralist were able to identify the major causes of conflicts

between them, it is imperative that the problems could be easily solved if all the stakeholders could come together, discuss and agree on amicable solutions to the problems. The government can be the mediator.

Table 1: Distribution of respondents based on the causes of pastoralist and farmers' conflict in Oyo state

Causes of conflict	Farmers (N=90)		Herdsmen (N=24)	
	Freq.	%	Freq.	%
Encroachment of farmland	66	96.67	18	75.00
Crop Damage	87	83.33	22	91.67
Ethnic rivalry	33	36.67	20	83.33
Indiscriminate bush burning	16	17.78	4	16.67
Stealing of crops	75	73.33	12	50.00
Competition for land and water	44	48.89	18	75.00
Deliberate hostility by other parties	16	17.78	6	25.00
Little respect for traditional rulers or landowners	22	24.44	20	83.33
Low awareness of stock routes	23	25.56	8	33.33
Depleting soil fertility	5	5.56	8	33.33
Low level of compliance to stock routes	31	34.44	8	33.33
Declining influence of traditional rulers	26	28.89	2	8.33

*Multiple responses

Source: Field Survey, 2017

Distribution of respondents based on consequences of conflict on farmers' livelihood

The effects were measured under four parameters; physical, economic, social and emotional effects. In terms of the physical effects, it was discernible in Figure 1 that the major physical effects of pastoralist-farmers conflict on rural livelihood were farm destruction, sustenance of injury, pollution of water, and assault as indicated by 93.33, 92.22, 90 and 85.56 percent of the respondents respectively. Other physical effects of pastoralist/farmer's conflict were the death of family members (40%), raping (11%). Idowu (2017) reported massive death toll of many innocent lives and actors as grave consequences of farmers-herdsmen's conflict in Nigeria Olayoku (2012) noted that between the year 2006 and 2014, Nigerian Watch database recorded 615 violent deaths related to cattle in the year 2006 and a massive increase in the death toll in 2011. Likewise in the year 2013, Sunday Trust recorded a total of 300 deaths (human or cattle) between January 1 and May 20 in the North Central states of Taraba,

Nasarawa, Plateau, Nasarawa, Kogi and Benue states respectively.

The major consequence to the pastoralist was sustenance of wound and injury (50%). These findings agreed with Sulaiman and Ja' afar (2010) who reported that several human lives were lost during the farmer-pastoralist conflicts in Bauchi state from 2003-2008. Also, Olabode and Ajibade (2010) revealed that the frequent causes of Fulani/farmers' conflict in Oke-Ero Local Government Area of Kwara State were the destruction of crops by cattle. Since Pastoralist-farmers' conflict threatens the existence and survival of farmers and their sources of livelihoods, there is an urgent concern to nib the problem to the board through sustainable solutions. Farmers were mostly at the receiving end of the crisis. This might be as a result of the ability of the pastoralist to move along with their animals to other locations for grazing. The government should ensure that the rural communities have adequate access to drinkable water throughout the year.

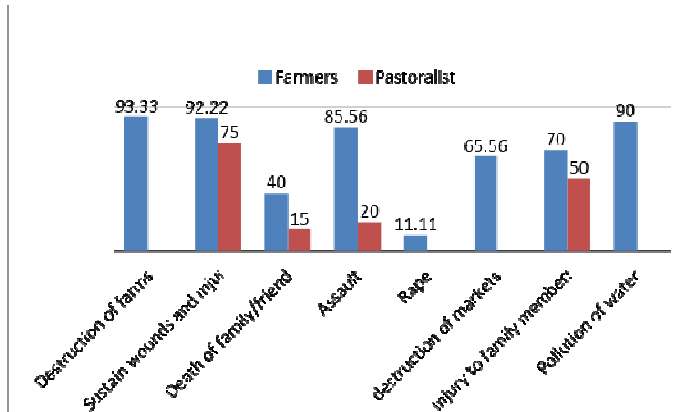


Figure 1: Effects of pastoralist-farmers conflict on rural Livelihood

Economic effects of pastoralist-farmers conflict on rural livelihood

Among the farmers, Figure 2 revealed that 94.44 of the respondents suffered from reduced income and output respectively, while 92.22 and percent of the respondents suffered from low crop yield. A few of the pastoralists (15.0, 18.0 and

48.0%) suffered from low productivity reduced animal production and reduced income respectively. There is the need for the government, private investors, and non-governmental organizations should come to the aid of the farmers in the study area through compensation to cushion the economic effects of the damages

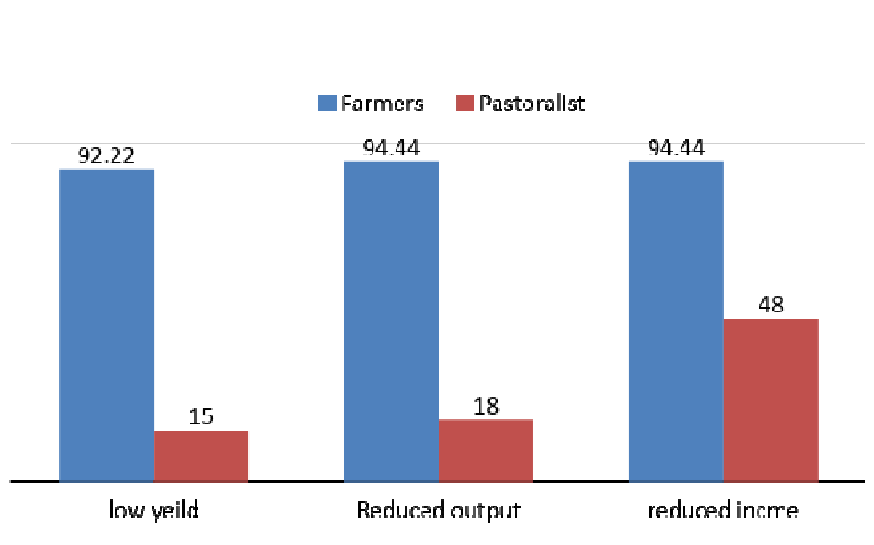


Figure 2: Economic effects pastoralist-farmers conflict on rural livelihood

Socially, the study (in Fig. 3) revealed that 86.67, 62.22 and 57.78 percent of the crop farmers suffered from personal and family health, self-esteem and social relationships respectively (Figure

3). None of the pastoralist suffered any social consequences. This might be because of the level of damage suffered by them was mild when compared to the farmers.

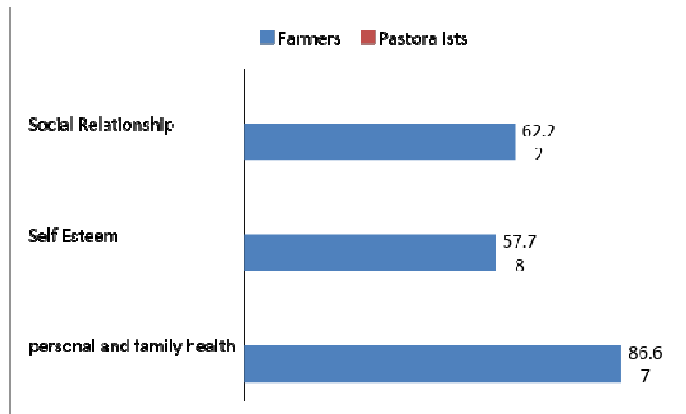


Figure 3: Social effects of pastoralist-farmers conflict on rural Livelihood

Psychological effects of the conflicts in Oyo state were Stress, worry and Anxiety, fear, and Anger as shown by 90.00, 82.22 and 74.44 percent of the respondents respectively, Stress, according to Bruce (1998) is a mental physical and emotional

strain on the body. It occurs occasionally and in response to a stressor. It is instructive to note that the farmers were more hard hit than the pastoralists.

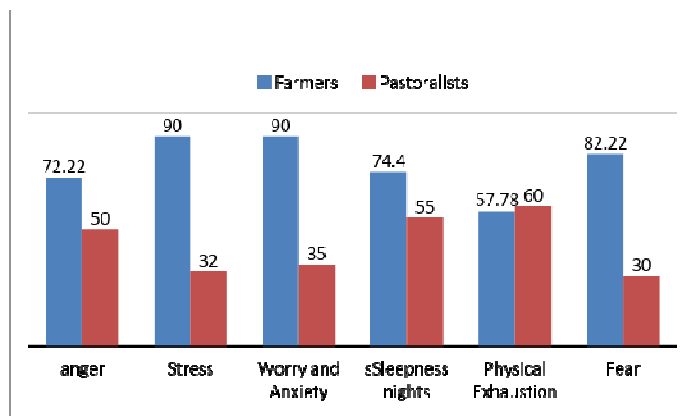


Figure 4: The Psychological consequences of pastoralist-farmers conflict on rural livelihood

Distribution of respondents based on the magnitude of the consequences of conflict on farmers' livelihood

The result in Table 2 revealed the distribution of respondents based on the extent of the consequences of pastoralist and farmers' conflict on farmers' livelihood in Oyo state. Two (home and farm destruction) as well as sustaining wound and injury) out of the five variables were the physical effects of the conflicts mostly felt among the rural inhabitants. All the economic variables affected respondents due to pastoralist and farmer's conflict in Oyo state. Four of the six psychological variables greatly affected respondents as a result of the conflicts. They are fear (0.71), stress (0.72), sleepless night (0.64), worry and anxiety (0.65) and were accorded 5th, 4th, 9th, 7th, positions respectively. According to Castro (2017), emotion deeply informs motivation; while strong emotional intensity provides the energy for action. Weak intensity manifests as low energy,

producing ineffective or meaningless responses. In essence, a farmer who could not sleep that is afraid or anxious would definitely have weak emotions and would not have enough energy for actions, thus leading to ineffectiveness and low productivity. Worry according to Borkovec, William Ray, and Stöber (1998) inhibits emotional processing, produces anxious and depressive experiences.

Adisa (2017) revealed varying degrees of psychological, physical and socioeconomic dimensions to the effects of the conflict among respondents from all sides (farmers and herdsmen). Also, (Odoh, 2012) justifies the necessity to develop and adopt various coping strategies to mitigate the effects of conflicts between farmers and herdsmen.

In terms of the magnitude of the consequences of the conflicts on herdsmen, only one out of the eighteen variables was relevant and this is the sustenance of wound and injury with a relative importance index of 0.646. It shows that



the farmers bear mostly the consequences of pastoralist and farmers' conflict.

Table 2: Distribution of respondents by the magnitude of the effect of pastoralist and crop farmer's conflict

Extent of conflict effect on rural livelihood	Farmers			Pastoralists		
	Mean	RII	Rank	Mean	RII	Rank
Physical effects						
Farm destruction	2.62	0.66	6 th	1.25	0.313	15 th
Sustain wound and injury	2.60	0.65	7 th	2.58	0.646	1 st
Death	2.07	0.52	16 th	1.67	0.417	9 th
Assault	2.33	0.58	10 th	1.42	0.354	13 th
Rape	2.03	0.51	17 th	1.42	0.354	13 th
Destruction of market	1.98	0.49	18 th	1.17	0.292	17 th
Economic effects						
Crop yield	3.02	0.76	1 st	1.17	0.292	17 th
Reduce output	3.04	0.76	1 st	1.25	0.313	15 th
Reduce income from crops	3.02	0.76	1 st	1.17	0.292	17 th
Social effects						
Personal/family health	2.28	0.57	14 th	1.67	0.417	9 th
Self esteem	1.69	0.42	19 th	1.67	0.417	9 th
Social relationship	2.30	0.58	10 th	2.08	0.521	3 rd
Psychological effects						
Anger/emotional exhaustion	2.32	0.58	10 th	2.17	0.542	2 nd
Stress	2.84	0.71	5 th	1.83	0.458	6 th
Fear	2.87	0.72	4 th	1.83	0.458	6 th
Sleepless night	2.57	0.64	9 th	2.08	0.521	3 rd
Family inconveniences	2.32	0.58	10 th	1.83	0.458	6 th
Physical exhaustion	2.14	0.54	15 th	1.92	0.479	5 th
worry/anxiety	2.61	0.65	7 th	1.58	0.396	12 th

Source: Field survey, 2017

CONCLUSION

It could be affirmed that Pastoralist-farmers' conflict in Oyo state negatively impacts the livelihoods of the farmers. Both the farmers and the herdsmen suffer damages from the conflicts that arose between them. The farmers were mostly affected by the conflicts than the herdsmen.

The physical, economic, social and psychological aspects of rural farmers were greatly affected by the conflicts. The effects of the conflict were felt more by the farmers than the pastoralist

RECOMMENDATION

The study recommends that efforts should be made to make grazing laws in Oyo state to curb Pastoralist-farmers' conflict.

1. Grazing land should be provided for the animals during off season. Also, efforts should be made to provide silage and hay during the period of wet seasons and made available during dry seasons.
2. The government, private investors, and non-governmental organizations should come to the aid of the farmers in the study area through compensation for the damages done during the conflicts.
3. Farmers should be encouraged to plant either castor plant, Sennaalata or

Jathropha plants around their farms. Sennaalata plants put off animals, while castor plant is very poisonous to animals. Animals are naturally repelled by the smell of jathropha plants.

4. Adequate security measure should be provided for both the farmers and herdsmen in Nigeria. The security of lives of both the farmers and herdsmen are very important, hence all conflict resolution strategies should be employed to prevent further occurrence
5. Entrepreneurs should look into the commercialization of silage and hay production and processing
6. Adequate security measure should be provided for both the farmers and pastoralist in Nigeria.
7. All the stakeholders should come together and discuss and agree on amicable solutions to the problems. The government can be the mediator

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EFFECTS OF FADAMA III COMMUNITY INFRASTRUCTURE PROVISION ON INCOME OF MEMBERS OF FADAMA USER GROUPS (FUGS) IN ANAMBRA STATE, NIGERIA

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ABSTRACT

The study determined the effect of Fadama III community infrastructure on income of members of Fadama User Groups FUGs in Anambra State. The specific objectives of the study addressed the influence of rural market, processing facilities, water borehole and credit support facilities on income of members of FUGs in Anambra State. A sample size of 375 beneficiaries was drawn from a rural community in the state. A structured Questionnaire administered was administered to respondents. Regression analysis was used to determine the influence of community infrastructure (Rural markets, borehole, processing facilities and credit support) on members of Fadama User Group's income. Findings revealed that Fadama III Community Infrastructure had significant and positive influence on the income of members of Fadama User Groups. The *f*-ratio of 5.50 was significant at 1% level. This implies that the independent variable (rural market, water borehole processing facilities and credit) had a substantial influence on the dependent variable (income). Equally, the *t*-statistics of coefficient of all independent variables was significant at 1% level. *T*-values (2.655, 1.105, 1.936 and 2.057) were all significant at 1% level. The null hypotheses were all rejected and alternate hypotheses were all accepted, which implied that rural market, water borehole, processing facilities and credit support have a significant influence on the income of FUG members. The rural market had the most significant influence on the income of Fadama User Groups. In view of the findings, the research recommended that the project should be replicated in other states that have not benefited and that rural communities should be effectively mobilized to join FUGs to take advantage of the programme where there is the absence of community infrastructure

Keywords: Fadama, Community, Infrastructure, Income.

INTRODUCTION

Nigeria is plagued with the problems of under development, uneven distribution of resources and incomes, low productivity, food insecurity, poor public infrastructure, among others (Ekong, 2003).

FAO statistics on the profile of rural development in Nigeria shows that 70% of Nigerians live in rural areas, 73% of the poor people are rural dwellers, and 95% are extremely poor, living below poverty line. Nigeria is thus categorized as low income, food deficit country (FAO, 2012). Similarly, FMARD (2001) reported that Nigeria's rural communities are characterized by the following: Lack of portable water and, the prevalence of water borne disease, low income and employment opportunities, poor access roads and means of transportation, malnutrition and under-nutrition, poor shelter, health, educational facilities with prevalence of environmental and ecological hazards such as desertification and erosion. Economists generally agree that a major way to break the prevailing cycle of poverty is through an efficient infusion of capital and adequate infrastructure facility. According to Olayiwola and Adeleye (2005), infrastructural facilities refer to those basic services without which primary, secondary and tertiary productive activities cannot function. Broadly, this includes all public services like transportation, water supply and communication. Developed Countries of the world ensure the provision of infrastructure to improve the livelihoods of their citizens and their quality of life (Khoza, 2009). Infrastructure is seen as an

umbrella term for many activities and basic structure and facilities necessary for a country to function efficiently. It is designed as the totality of basic physical facility upon which all other economic activities in a system depend.

Rural infrastructure, according to Abumere (2002), is the system of the physical, human and institutional form of capital which enables rural residents to perform better in their production, processing and distribution activities, as well as help improve the overall quality of life. The talk of transforming rural-Nigeria has remained the focus of successive governments in recent years. Rural transformation in Nigeria has become imperative in view of the fact that rural Nigeria constitutes the largest percentage of the Nigerian society.

Government over the years has introduced programmes meant to improve the infrastructural facilities towards increasing agricultural productivity and income of farmers. Prominent among them are; Directorate of Food, Rural Road and Infrastructure (DFRRI), River Basin Development Authority (RBDA) and National Agricultural Land Development Authority (NALDA). In spite of the above efforts, infrastructural developments in rural place suffered a long set back. Top-down planning approach was mostly used to implement development programmes, particularly infrastructure, which had negative impact. This had mainly led to the development and execution of infrastructure that failed to match the needs of community (Idachaba 2006).

The design of National Fadama Development Projects (NFDP), was thus a strategic response by the stakeholders to alleviate the aforementioned problems among rural dwellers. The project has been in phases NFDP I, NFDP II and NFDP III. The success recorded in the Fadama phase I and II by participating States culminated in the third phase of the National Fadama Development Project (NFDP III). Fadama III has 6 components, and they include; Capacity building, local governance and communication, Small-scale community-owned infrastructure, Advisory service and input support development, Support to the Agricultural Development Programmes, (ADPs) sponsored research and on-farm demonstrations, Asset acquisition for individual Fadama Users Groups (FUGs)/Economic interests and Project management, monitoring and evaluation. The Development objective of National Fadama Development Programme (NFDP III) is to sustainably increase in the income of farmers and other economic groups and to empower communities (World Bank 2004). The project is anchored on Community-Driven Development (CDD) approach which gives the control of resources and decisions to the benefiting members of Fadama User Groups. The project is being funded by World Bank, FGN, State Government, local government councils and the benefiting cooperatives. This is a credit to Federal Government but grants to States and benefiting communities (World Bank, 2009). The provision of efficient infrastructure is now widely recognized as indispensable to agricultural process as it is a known fact that infrastructure can support economic growth, reduce poverty and make development sustainable (Fakayode, 2008). Though rural infrastructure serves as catalyst for development and income generation, most of them in Nigeria are either not available or in deplorable conditions and this militates against the prospects of better living standards, employment, income and other forms of economic activities (Ale, Abisuwa and Ologinagha, 2011). For example, before Fadama III interventions, there were deplorable conditions of rural markets in the study area for evacuation of agricultural produce, the absence of market leads to perishability of agricultural produce, which eventually leads to damages and mostly reduces price of agricultural produce. Also, transportation cost of travelling long distance looking for available market for sales was high. This equally encourages consuming all that is produced and discourages production for commercial purposes. This has led to loss of income of farmers in Anambra state. There was no availability of borehole facilities in the area to support agricultural and other related activities. Most of the farmers in the area cultivate cassava and rice. They lack processing mills. Majority of

them travel long distance looking for processing mills, which waste time and money. Basically, failure to process farm produce adds little or nothing to the value and price of the produce. Ahmed (2013) reported that post-harvest losses were making Nigerian farmers poor. Farmers find it difficult to procure farm input (seedlings, fertilizers, Etc), which adversely affects their income. Whereas Chizari and Zare (2000) stressed that effect of credit on agricultural production is positive and significant, Limao and Venables (1999), cited in Inoni and Omotor (2009) observed that poor infrastructural facilities were responsible for poor productivity in agriculture which affects farmers' income negatively. These have been prevalent in the agricultural areas in Anambra State. Despite the recent success in addressing the state of infrastructure through Fadama I and Fadama II projects, much more remains to be done to improve the existing low level of infrastructure and services. The operation of Fadama III is designed to allow communities to identify and act on their most urgent needs of infrastructure, thereby impacting positively on income of rural dwellers. The issues indeed raised our interest to investigate the state of establishment of infrastructure that will boost income of FUG members in Anambra State.

The broad objective of the study was to ascertain the effect of Fadama III community infrastructure on the income of Members of Fadama User Groups (FUGs) in Anambra state. The specific objectives were to:

- i. ascertain the Fadama III Community infrastructure executed by FUGS members
- ii. determine the influence of rural markets on the income of members;
- iii. examine the influence of rural borehole on the income of members;
- iv. identify the influence of cassava processing facilities on the income of members; and,
- v. ascertain the influence of credit support on the income of member

Hypotheses of the study

- H₀₁ The establishment of rural markets has no significant influence on the income of FUGs members.
- H₀₂ The provision of water borehole has no significant influence on income of FUGs members.
- H₀₃ The provision of cassava processing facilities has no significant influence on income of FUGs members
- H₀₄ Credit support facilities has no significant influence on the income of FUGs members

METHODOLOGY



Study area – The study was carried out in Anambra State in Southern Eastern Nigerian. The State has a population of 4,055,038, with density of 846/km² (2,200/sqm) and a total land mass of 4,854km² (NPC, 2006) Anambra is rich in natural gas, crude oil bauxite, ceramic and has an agricultural resources percent arable soil. Its Boundaries are formed by Delta state to the west, Imo state and Rivers state to South, Enugu state to the east and Kogi to the North. The population of the study consists of all members of registered Fadama User Groups (FUGs) that benefited from Fadama III Community Infrastructure in Anambra State. There are 245 FUGs that benefited from Community Infrastructure of Fadama III. The FUGs had membership strength of 6,125 (ADP, Fadama Office, Awka). For the purpose of this research, a multi-stage sampling procedure was adopted. There are four (4) Agricultural zones in Anambra state (Anambra, Awka, Aguata and Onitsha). In the first stage, two (2) Agricultural Zones were randomly selected out of the four (4) agricultural zones. These are; Anambra and Awka agricultural zones. The zones were selected because they are dominant in agricultural activities. In the second stage, three (3) local government areas were selected from each of the 2 agricultural zones, making a total of 6 LGAs. Third stage, three (3) communities were selected from each of the (6) LGAs, making a total of 18 communities. One FUGs was randomly selected from each community, given a total of 18 FUGS. The researchers used two trained enumerators to administer and collect the questionnaire from the respondents. 375 copies of the questionnaire were administered, while 351 were returned.

Using Taro Yamane (1967) formulae to determine the sample size from the population of 6,125, a sample size of 375 was established.

Sources of data – The data for the study were sourced mainly from primary and secondary sources. Primary data were sourced from the respondents through structured questionnaire.

Method of data analysis – A Theoretical mean of 2.5 was taken as a criterion to judge the mean for all items. Therefore, any item that equals 2.5 and above was accepted, while an item with less than 2.5 was rejected. The Hypotheses were tested using one way ANOVA, multiple regression was run to determine the influence of infrastructure on the income of users. Descriptive statistics (mean, frequency counts, percentages) were employed to describe the socioeconomic characteristics of the respondents, Also inferential statistics such as multiple regression analysis was employed to address issues raised in research questions and hypotheses 1 to 4. It was analyzed to determine the influence of Fadama III Community Infrastructure on the income of members of fadama User Groups Multiple regression models were used

to test the entire hypotheses in order to ascertain the effect of Fadama III Community Infrastructure on the income of Fadama User Groups. The regression was run using SPSS package to determine the effect of the independent variables on the dependent variable. The t-test was used also to perform a test of significance of the explanatory variables at the alpha level of 5%.

Community Infrastructure = Independent variables

Income = Dependent variable

The model is implicitly specified as follows;

$$Y_1 = f(X_1, X_2, X_3, X_4 \dots X_n + e.i)$$

The models are further explicitly specified as follows.

$$Y_i = b_0 + b_1X_{1i} + b_2X_{2i} + b_3X_{3i} + b_4X_{4i} + e.i$$

Where

- 1 = Rural Market,
- 2 = Borehole facilities
- 3 = Processing facilities
- 4 = Credit support

Components of independent variables are; rural markets, water borehole facilities, cassava processing facilities, credit support.

Regression Analysis

Y = Income

X₁ = Rural markets

X₂ = Water borehole facilities

X₃ = Processing facilities

X₄ = Credit Support

ei = Error Term design to capture the effects of unspecified variables in the model.

Income (Y) = F (Fadama III community infrastructure)

RESULT AND DISCUSSION

Socioeconomic Characteristics

Respondents on Socioeconomic characteristics on table 1 shows the sex, age, marital status, educational qualification, monthly income, monthly farm output, Fadama Projects benefited from. The Table shows that 55 % are females, while 45% are males. This shows that female folk are more involved in Fadama III projects than males. Majority of the respondents fell within the age bracket of 41-50 years with highest percentage of 39%. This is followed by those that fall within the age bracket of 51-60 representing 28%. This shows that the FUGs beneficiaries are still in their productive age and carrying responsibility in their various households.

Also majority 72% of the respondents were married, while a good number (46%) had First School Leaving Certificate, followed by those (35%) having SSCE with 35%. The remaining fifteen percentages (15%) have no formal education and only 2% had Bs.C/HND. Majority (51%) of the respondents have been in cooperative (FUGS) between 3 – 5 years. Their average years of

membership of FUGS are 3years. Fourth-four percent (44%) of the respondent have had 11 – 15 years farming experience, and their average farming experience stood at 11years. This shows that agriculture has to being a major and dominant

occupation in the agricultural zones of Anambra state. Forty-five percent 45% of the respondents earned between N11,000-N15,000 while 23% made between N16,000 and N20,000 per month. Their average monthly income was N26,000.00

Table 1: Distribution of respondents by their socioeconomic characteristics

Variables	Frequency	Percent	Parameters
Gender			
Male	157	44.73	
Female	194	55.27	
Age (Years)			
21 – 30	28	7.98	Mean = 45.18
31-40	53	15.09	
41-50	137	39.03	
51-60	98	27.92	
61-Above	35	9.97	
Marital status			
Single	84	24	
Married	253	72	
Divorced	8	2.3	
Widowed	6	1.7	
Educational Status			
No Formal Education	53	15	
FSLC	163	46	
Senior Secondary School Certificate	123	35	
NCE/OND	10	3	
HND/BSc	2	1	
Duration of membership of FUG (years)			
< or = 1	14	4	Mean = 3.35
1-3	123	35	
3-5	179	51	
> 5	35	10	
Farm experience (Years)			
< 5	63	18	Mean = 11.36
6 – 10	74	21	
11-15.	154	44	
16- 20	42	12	
> 20	18	5	
Monthly Income (N)			
< 1000	0	0	Mean = 26,105
1,000 – 5,000	31	8	
6,000 – 10,000	48	14	
11,000 – 15,000	157	45	
16,000 – 20,000	80	23	
21,000 – 50,000	35	10	
Above 50,000	0	0	
Total	351	100.0	

Source: Field survey: 2016

Fadama III community infrastructure executed by of FUGs members

The use of 4 point likert scale was applied to ascertain the Fadama III Community Infrastructure executed by FUGs members in which 2.5 mean (x) was adopted as the decision threshold therefore, for each of the item listed in table 3 depicting rural markets; water-borehole

facilities; cassava; processing mills; and credit support facilities, any response below means (x) = < 2.5, indicates non execution, while responses of mean (x) > ≥ 2.5, it indicates execution based on the result, all the members of Fadama user groups in the study area accepted that Fadama III community infrastructure were executed in the study area since the entire mean were above 2.5.

**Table 2: Distribution of respondents by the various Fadama III community infrastructure projects executed by members of FUGs**

Fadama III community Infrastructure provided	Mean	Decision
Rural market		
Rural markets are established in each rural community	3.87	Accepted
Programme managers see to the uplift/maintenance of rural markets	3.57	Accepted
Members of FUGs are allocated stalls on the basis of equality	3.34	Accepted
Members are exempted from paying market tolls	3.01	Accepted
FUG members/participants are permitted to transact every day	3.64	Accepted
Water Borehole facilities		
Water borehole facilities are established in every community	3.32	Accepted
Members see to the maintenance of the facilities	3.24	Accepted
Members of FUG are exempted from paying for the water	2.92	Accepted
Members benefit from the water facilities which they use in their processing and other Agricultural endeavour	3.48	Accepted
The water rush all week day and members use them for domestic use	3.34	Accepted
The money realized is used for maintenance of the of the borehole facilities	3.32	Accepted
Cassava processing mills		
Processing facilities are established in each rural community	3.5	Accepted
Managers/members see to the maintenance and uplift of the processing facilities	3.24	Accepted
Members are exempted from paying fees during processing	2.96	Accepted
Money realized from the processing mills are used in maintaining the machines thereby saving member the cost	3.38	Accepted
Credit support facilities		
Members obtain credit facilities without collaterals	3.78	Accepted
Members obtain facilities for productive activities	3.66	Accepted
Rigorous documentation procedures are avoided, unlike formal financial institutions	3.20	Accepted
Repayment scheme is structured to lessen the burden of members .	3.56	Accepted
Loan to members are interest-free	2.66	Accepted

Source: Field Survey, 2016

Effect of FADAMA III community infrastructure on rural income

From the regression result in Table 3, it is seen that all the independent variables (rural markets, rural boreholes, processing facilities and credit support) had positive and significant influence on rural income. The coefficient of N59,327.93 for rural markets suggests that a one unit increase in rural markets will result in more than N59,000 increase in rural income; a coefficient of N26,290.96 for water borehole suggests that a one unit increase in the establishment of water boreholes will result in an increase of more than N26,000 in rural income; a

coefficient of N41,579.487 for cassava processing facilities suggests that an increase of one unit in cassava processing facilities will result in an increase of more than N41,500 increase in rural income; and a coefficient of N44,996.328 for credit support suggests that an increase of one unit in credit support will lead to an increase of more than N45,000 in rural income. It was also observed that though the coefficient of multiple determinations was less than three percent, the F ratio of 5.50 was significant at 1% level, thus, suggesting that the independent variables had a substantial influence on the dependent variable.

Regression Estimates (Effects of FADAMA III Community Infrastructure on Rural Income.

Model	Coefficient estimates	t-value	p-value
(Constant)	-208231.941	-1.606	0.109
X ₁ –Rural markets	59327.926	2.655	0.008
X ₂ –Rural boreholes	26290.956	1.105	0.053
X ₃ –Processing facilities	41579.487	1.936	0.054
X ₄ –Credit support	44996.328	2.057	0.040
R ²	0.060		
Adj R ²	0.049		
F	5.497 (Sig. @ 0.001)		

Tests of Hypotheses

Hypothesis one

The establishment of rural markets has no significant influence on the income of FUG members. In testing hypothesis one, which states that establishment of rural markets have no significant influence on the income of FUGs members; it has been observed that the t-statistic of the coefficient of the rural market variable (N59,327.926) was significant at the 1% level. Therefore, the null hypothesis is rejected and the alternative hypothesis which states that establishment of rural markets has a significant influence on the income of FUGs members is accepted. This supports the submission of Olagunju (2012) which stressed that provision of market and road infrastructure will improve the income of the rural households in the rural areas and will reduce rural-urban migration. And equally corroborate with views of FAO (2003) which says that efficient market system can provide better prices for producers, reduces cost and increases income.

Hypothesis two

The provision of water borehole has no significant influence on the income of FUG members.

In testing hypothesis two, which states that provision of water boreholes have no significant influence on the income of FUGs members; it has been observed (in table 4) that the t-statistic of the coefficient of water boreholes variable (N26,290.956) was significant at the 1% level. Therefore, the null hypothesis is rejected and the alternative hypothesis which states that provision of water bore holes has significant influence on the income of FUGs members is accepted.

Hypothesis three

The provision of cassava processing facilities has no significant influence on the income of FUGs members. In testing hypothesis three, which states that establishment of processing facilities have no significant influence on the income of FUG members; it was been observed (Table 4) that the t-statistic of the coefficient of cassava processing facilities variable (N41,579.49) was significant at the 1% level. Therefore, the null hypothesis is rejected and the alternative hypothesis which states that establishment of cassava processing facilities has a significant influence on the income of FUG members is accepted. This finding corroborates with the submissions of Oluwasola (2010) which states that cassava processing facilities enterprises help in the development of sub-sector to generate income and employment for farmers household. He stressed further that it reduces post-harvest loss, add value to farm products and enhanced the food security of a nation.

Hypothesis four

Credit support facilities have no significant influence on the income of the FUGs members.

In testing hypothesis four, which states that credit support has no significant influence on the income of FUG members; it was observed (Table 4) that the t-statistic of the coefficient of cassava processing facilities variable (N44,996.328) was significant at the 1% level. Therefore, the null hypothesis is rejected and the alternative hypothesis which states that credit supports have a significant influence on the income of FUG members is accepted. This is in line with the views of Ijere (1998), opined that agricultural credit is considered as the catalyst that activates other factors of production and makes under-used capacities functional for increased production and income. Also, IFAD (2000) cited in Jumare (2006), stressed that primary aim of credit programmes is to alleviate poverty by increasing borrowers' earnings.

SUMMARY AND CONCLUSION

The result shows that Community infrastructure had a significant influence on the income of members of Fadama User Group in Anambra State. The result shows that for a given unit of Community Infrastructure, income increases. Rural market, processing facilities and credit support facilities have been identified as indispensable in increasing the income of FUGs members in Anambra State.

Accordingly, the theory of Community Driven Development has been useful in actualizing Fadama III project because it provides control of development process, resources and decision making authority directly to the communities. In order to consolidate and strengthen this project, the researchers hereby recommend as follows:

- i. i That, the project should be replicated to other rural areas and state that have not benefited from the project.
- ii. ii That, project tenure should be extended so that rural people would benefit immensely from the project.
- iii. iii That, Government should encourage rural farmers to join FUGs and take advantage of the project. Government should organize sensitization programme to advocate the need for people to take advantage of the project.
- iv. iv That other Agricultural projects to be implemented should take cue from Fadama III Project. The management and the implementation processes have shown that it is beneficial to the fadama users



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APPRAISAL OF RURAL BANDITRY IN “KAMUKU” FOREST IN BIRNIN GWARI LOCAL GOVERNMENT AREA OF KADUNA STATE, NIGERIA

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ABSTRACT

The study examined rural banditry, causes and its perceived effect on the rural economy in Kamuku forest in Birnin Gwari local government area of Kaduna State. It used quantitative tool (questionnaire) to collect data from 300 randomly selected respondents (i.e. 30 respondents each from 10 districts in Birnin Gwari LGA while qualitative data (in-depth interview) were sourced from ten (10) knowledgeable informants (i.e. one each from the ten districts purposively selected). Data collected were analyzed using descriptive statistics. The result shows that 72.3% were male respondents and 88.2% had attained the age of 30 to 45 years while 69.3% respondents were married and they had 6 to 15 children. Facilitating factors to rural banditry were poverty (57.2%), greed (11.9%), corruption (18.3%), and poor security (12.6%). Overwhelming proportion (92.2%) of the respondents indicated that bandits are prevented them from farming (27.4%), hunting (25.7%), obtaining forest food (14.3%), firewood and medicinal herbs (24.8%) while 67.4% of the respondents agreed that rural banditry affects the rural economy. The results further reveal that the presence of “Kamuku” forest makes rural bandits to have safe haven to engage in cattle rustling in Birnin Gwari LGA. This study indicated also that the presence of security personnel had not yielded the desired result as these bandits still steal or loot their farm produce/livestock, indiscriminately kidnap women and children particularly girls as well as commit crimes such as armed robbery, rape in the community. This study recommended that security operatives should keep on carrying routine patrol and go into the interior part of the forest for proper policing. It was also suggested that the concerned individuals, stakeholders, Kaduna State government and non-governmental organizations should work hand-in-hand to get rid of activities of rural bandits in the study area.

Keywords: Cattle Rustling, “Kamuku” Forest, Pastoralists, Rural Banditry

INTRODUCTION

In Northwest Nigeria, particularly in Kaduna State and most especially in Birnin Gwari Local Government Area, criminal gangs are engaged in rural banditry by stealing cattle and livestock leading to the displacement of rural dwellers. The theft of animals forces the rural inhabitants to migrate southward; causing environmental degradation, population growth, increase in the price of cattle, regional instability influence and exacerbates farmers/herders conflict dynamics. Rural banditry and cattle rustling appear to be increasing by the day because of several interconnected issues involving tensions between farmers and pastoralists exploited by criminals masquerading as herdsmen. The phenomenon appears to be connected to government security inadequacies, identity and intergroup relations and the worsening socioeconomic conditions of the people. The rural areas are populated by farmers and pastoralists who form the economic foundation of the nation contributing over 40% of Nigeria's Gross Domestic Product in recent years (Augustine, 2015). Rustling and other animal theft has a different significance in the context of perennial conflict between pastoralists and crop farmers. Hence, conflicts are driven by insecurity perpetuated by grazers in this area. For instance, the growing menace of cattle rustling by armed gangs and bandits appears to differ in terms of

scale and economic consequences in “ungoverned” spaces, and territories between Kaduna, Katsina and Zamfara States. These armed gang and bandits routinely raid cattle ranches owned by traditional pastoralists.

The rising incidence of cattle rustling as a part of the problem of rural banditry may not be unconnected to the problem of small arms and light weapons that have found their way into the hands of non-state actors, now a part of the wider challenge of human security confronting Nigeria. Although it is difficult to obtain reliable data in Nigeria, it has been suggested that between 7 and 8 million illicit small arms and light weapons are in circulation in West Africa alone, with a huge number entering Nigeria (Chuma-Okoro, 2013).

This is largely a result of porous borders, including the affinity between border communities which consider any stringent border control as an infringement upon the social and cultural rights of the people (Chuma-Okoro, 2013). This estimate is far above the figure of 1-2 million illicit small arms in the early 2000s (Egwu, 2014). Public policy responses must recognize that most of the factors potentially driving the proliferation of small arms and light weapons are linked to the decline in state capacity and the human security dilemma facing both the state and citizens. The situation in many parts of Nigeria resembles broader Sahel region governance voids. For instance, ungoverned space



provides a power vacuum, which is at times filled by religious extremist groups and/or criminal elements who have taken over remote areas where the State presence is reduced or non-existent (Aning, 2009).

According to Mohammed Bello Tukur, Secretary of Myetti Allah Cattle Breeders Association of Nigeria (MACBAN), there is weak state capacity to regulate and establish effective governance which accounts for the high level of illegal activities perpetrated by criminal gangs and networks. Most especially, in the Birnin Gwari area of Kaduna State which is a death trap where cattle rustling and other related criminal activities have become concentrated. Tukur further noted that Birnin Gwari, through Funtua, Faskari, parts of Zamfara going to Anchau is not safe due to cattle rustlers and bandits. Every cow there has been stolen including cows belonging to some Nigerian army generals and top civil servants (Tukur, 2013). It is therefore, necessary to critically appraise the conditions of the people living in Birnin Gwari LGA contiguous to "Kamuku" forest so as to enhance their wellbeing and productivity. Rural banditry affects the rural economy negatively because it impedes on production and imperils the lives of people in the rural.

The problem of cattle rustling in Birnin Gwari LGA of Kaduna State is worsened by the proliferation of small arms and light weapons, affected by conflict, especially in the African Sahel region, due to lack of successfully-implementation of disarmament programmes. More often than not, targeted groups merely cross porous borders, acquiring new identities in the process. The difficult terrain of many rural areas, particularly the scenario around "Kamuku" forest coupled with poor communication, lack of social amenities such as good roads, adequate power supply and health facilities and poverty aggravate the situation, transforming it into ideal space for rustling, smuggling, and small arms trade. These conditions also provide potential routes for terrorist activities. These core challenges of human security are increased further by democratic governance's failure to deliver development and livelihood security for either individuals or groups of people in the study area. Also, perhaps, major violent crises have been manifestations of the deteriorating human security situation and the failure of democratic governance in Birnin Gwari LGA. It has also sparked discourses that frame conflicts between different occupational groups, such as crop farmers and grazers.

It is against this backdrop that this study deems it appropriate for the rural dwellers not to be left in the hands of bandits because they are significant to the national economy and constitute about 70% of the nation's population (Augustine, 2015). It is therefore imperative to put the activities

of bandits in context and deal with it effectively so as to enable rural dwellers to carry out their activities to boost rural economy. This and many others were investigated in this study.

The aim of this study is to appraise rural banditry in "Kamuku" forest of Birnin Gwari LGA, Kaduna State, Nigeria. The specific objectives are to:

- i. describe the socioeconomic characteristics of respondents in the study area
- ii. examine the factors that causes rural banditry in Birnin Gwari LGA of Kaduna State;
- iii. ascertain the type of crimes committed by bandits in the study area
- iv. determine the perceived effects of rural banditry on the rural economy as well as communal and Government efforts to curb it, and
- v. proffer practical solutions to the problem of rural banditry in contiguous to "Kamuku" forest in the study area.

METHODOLOGY

Birnin Gwari is a Local Government Area in Kaduna State (Northwest geo-political zone) of Nigeria with its headquarters in Birnin Gwari. The LGA has a landmass of 6,185 km² and a population of 252,363 estimated by the 2006 census, but with a projected population of 335,076 in 2015. Birnin Gwari LGA is located along Kaduna – Lagos Express way at about 125km from Kaduna. Birnin Gwari is located at Latitude 12° 20' N and Longitude 9° 10' E (Fadama Report, 2008). It lies in the western part of Kaduna State and shares boundaries with Zamfara State to the North, Kogo forest reserve of Kastina State to the East and North East of Giwa LGA and to the West Niger State ("Kamuku" Park Report, 2010). The LGA has sixteen districts namely; Birnin Gwari central, Gayam, Bugai, Kutemeshi, Tabanni, Dogon Daa, Kakaangi, Randagi, Kzege, Kungi, Maganda, Saulawa, Saminaka, Gwaska, Bagoma and Kuyello. The area is largely agrarian and most residents are either farmers or livestock keepers. Crops grown in the area includes maize, rice, wheat, groundnut and guinea corn. The predominant language spoken is Hausa though there is the presence of residents from other part of the country

For the quantitative data, this study used simple random sampling to distribute three hundred (300) questionnaires to 30 respondents each in 10 districts (Birnin Gwari central, Bugai, Tabanni, Dogon Daa, Kakaangi, Randagi, Kungi, Maganda, Saminaka, Gwaska) of the LGA under study. In addition, to complement the quantitative data, qualitative data vis-à-vis in-depth interview method was solicited from ten (10) knowledgeable informants purposively selected based on their age

long experience and involvement in security matters in the study area. (i.e. one informant each were selected from the ten districts). Descriptive statistics was used to analyze the data obtained.

Of the three hundred (300) questionnaires distributed, only two hundred and ninety three 293(97.6%) were retrieved from the respondents and analyzed

RESULTS AND DISCUSSION

Socioeconomic characteristics

This section discusses the results collected during the survey. Figure1 shows the distribution of respondents by age. It can be seen that young people between the age of 18 and 29 years constituted 11.9% while those who were aged 30 years and above made up 88.2%. This implies that majority of the respondents are in their reproductive age in the study area.

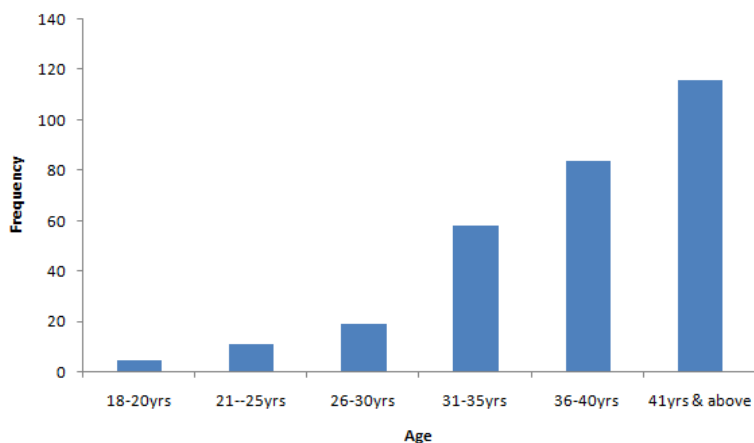


Figure 1: Distribution of respondents by age

Figure 2 shows the sex distribution of respondents. The survey reveals that significant proportions (72.3%) were males while 27.7% were

females. This clearly shows that the male respondents participated actively in this study.

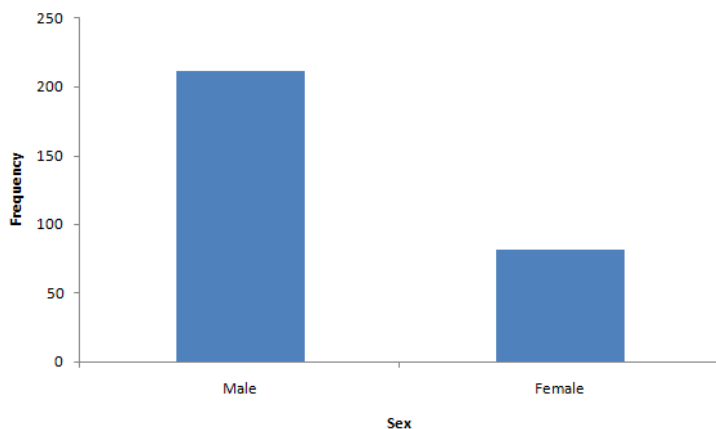


Figure 2: Distribution of respondents by sex

Figure 3 shows the distribution of marital status of respondents. Majority (69.3%) of the respondents were married while 31.7% were single.

This indicates that significance proportions of the respondents are single during the survey.

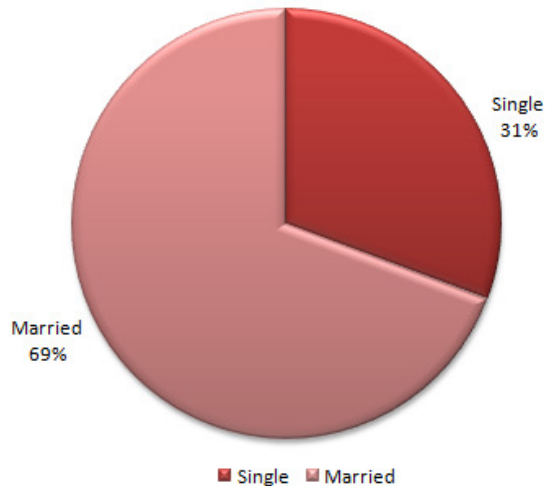


Figure 3: Distribution of respondents by marital status

Figure 4 presents the level of education of respondents. The Figure indicates that 47.1% had secondary education while 10.5% of the

respondents had tertiary education. The finding of this study shows that majority of the respondents had secondary education in the study area.

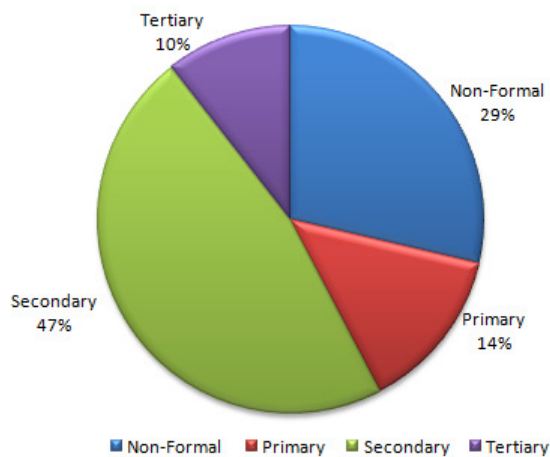


Figure 4: Distribution of respondents by level of education

Table 1 shows the data collected on the occurrence of banditry and rustling. Significance proportions (58.5%) of the respondents of the view that banditry occurred frequently in their communities while 22.2% said it rarely occurs in their communities and few (19.0%) stated that it had never occurred. Thus, the result further reveals

that 81.0% of the respondents have had experience with bandits and rustlers in their communities. This finding is in tandem with Rufai (2017) who said that several attacks are carried out by bandits against settlements of herders/farmers. They kill, steal cows and farm produce in Nigeria.

Table 1: Occurrence of banditry in the study area

Options	Frequency	Percentage
Occurs frequently	172	58.5
Rarely occurs	65	22.5
Has never occurred	56	19
Total	293	100

Source: Field Survey, 2017

Data presented in Table 2 show that majority (57.2%) said that poverty is the major

cause of rural banditry while 18.3% indicated that corruption involving security agents and

government officials is the main cause and 12.6% said that it was poor security. This means that rural poverty is responsible for banditry and rustling in the study area. The finding of this study is in line with those of Eldis (2016) and Rufai (2017) who noted that several factors may be contributing to frequent banditry and theft of livestock while poverty and corruption amongst the security agents, insurgency, population and resource pressures also abound in rural areas.

During an in-depth interview with an informant from Bugai district, he maintained that:

Poverty is prevalent in this area despite the fact that majority of the rural dwellers in this community are farmers, herders and hunters. Mun talakawa ne a wana kararmar hukuma (We are poor people in this LGA). They have large family size (extended in nature) which

affect their livelihoods. The bandits/rustlers are contributing to their low standard of living due to their activities in this area.

Another informant from the Birnin Gwari central district during an in-depth interview disclosed that:

People say that the rich also cry, unfortunately, the poor too also cry nowadays. We are living in the world where the quality of life of most people is low. Even in this community, majority of us are poor peasants who find it difficult to eat three square meals in a day even as rural dwellers; and ironically we are the producers and consumers of our farm produce. Shortage arises as a result of these bandits/rustlers.

Table 2: Respondents view on causes of banditry and rustling

Views	Frequency	Percentage
Rural poverty	168	57.2
Greed	35	11.9
Corruption	54	18.3
Poor security	40	12.6
Total	293	100

Source: Field Survey, 2017

Table 3 presents the type of crimes committed by rural bandits. A significance proportion (33.7%) of the respondents were of the view that looting of farm produce and cattle theft are the main crimes committed while 66.3% indicated crimes such as rape, kidnapping/abduction and murder. This shows that looting of farm produce/cattle theft the order of the day in Birnin Gwari LGA. The finding of this study agrees with those of Chikwuma and Francis (2014) who observed that recently, the rate of rural banditry and cattle rustling in the northern part of Nigeria most especially in herding and farming communities affect farm produce and livestock.

An in-depth interview conducted with an informant from Gwaska district agrees with the quantitative data that:

Really, looting of our farm produce and theft of cattle are the orders of the day in Birnin Gwari community. Apart from kidnapping our wives and daughters, even our animals are not left out. We cannot freely rear our animals here because of these rustlers.

Another informant from Maganda district hinted that:

We have read and watched in the mass media how bandits and rustlers are terrorizing the people in Birnin Gwari axis of Kaduna State. Most especially, due to this economic recession, many criminals are found in "Kamuku" forest reserve. They steal so many things, kidnap people and run to this forest for safe haven.

Table 3: Views of Respondents on the types of crimes committed by bandits in the study area

Options	Frequency	Percentage
Looting of farm produce/cattle theft	101	33.7
Theft of other domestic animals	92	30.7
Rape	23	7.8
Kidnapping/abduction	56	19.2
Murder	28	7.7
Total	293	100

Source: Field Survey, 2017



Table 5 shows the effects of banditry on rural communities. Majority (67.4%) of the respondents said that it prevents farming, herding and hunting activities in rural areas while 32.6%

were of the view that it causes communal conflicts, loss of livelihood/income and lower standard of living.

Table 5: Respondents Views on perceived effects of banditry on individuals, households and communities

Effects	Frequency	Percentage
Prevents farming activities	80	27.4
Prevents livestock rearing	75	25.7
Hinders hunting	42	14.3
Communal conflicts	31	10.4
Loss of livelihood/income	50	17
Lower standard of living	15	5.1
Total	293	100

Source: Field Survey, 2017

Table 6 shows the communal efforts adopted to end banditry and cattle rustling. Majority (48.1%) said that vigilante/night watching was the main method use to curb rural banditry/cattle rustling followed by 23.5% who responded to peace meetings while 28.4% stated that there should be cooperation with other communities and reporting bandits to security agencies.

In-depth interview with an informant from central senatorial district of Kaduna State noted that:

We thank the Almighty Allah in this community that most of us are vigilante members. We complement the efforts of security personnel by carrying out night vigil to protect our people from attack by bandits/rustlers. We report and/or arrest and hand over some bandits to security agents. Cattle rustlers are not also spare by us. They kill some of us during gun battle and we kill them too. No gain no pain

Table 6: Communal Efforts Adopted to Curb Rural Banditry/Cattle Rustling

Communal Efforts	Frequency	Percentage
Vigilante/night watch volunteers	141	48.1
Peace meetings	69	23.5
Cooperating with other communities	48	16.5
Reporting criminal activities to security agencies	35	11.9
Total	293	100

Source: Field Survey, 2017

Table 7 shows the views of respondents on government efforts to curb rural banditry. Thirty seven percent of the respondents said that joint-military operations, followed by 31.6% who believed that government focused on the formation of peace committees while 19.7% indicated task

forces. The remaining 1.4% of the respondents said that government has focused more on sensitization and promotion of cattle ranching. This implies that joint-military operations can tackle the menace of banditry in the study area.

Table 7: Government efforts to curb rural banditry

Options	Frequency	Percentage
Joint-military operations	109	37.3
Formation of peace committee	93	31.6
Formation of anti-banditry task force	58	19.7
Sensitisation	15	5.1
Promotion of ranching	18	6.3
Total	293	100

Source: Field Survey, 2017

Table 8 shows suggestions by respondents on how best to curb banditry and rustling. Twenty three per cent of the respondents were of the view that increase security presence in rural areas will

ameliorate this menace, 19.1% advocated cooperation with rural dwellers while 18.5% believed that intelligence gathering/sharing between security agencies is the solution. The

remaining (57.7%) said that intelligence gathering/sharing use of livestock trackers/GIS,

closure of illegal livestock markets, control of light arms and small weapons will solve the problem.

Table 8: Practical and Sustainable Ways to Curb Rural Banditry

Practical and sustainable ways	Frequency	Percentage
Intelligence gathering/sharing	54	18.5
Use of livestock trackers/GIS	37	12.5
Cooperation with rural dwellers	56	19.1
Increase security presence in rural areas	68	23.2
Closure of illegal livestock markets	46	15.9
Control of light arms and small weapons	32	10.8
Total	293	100

Source: Field Survey, 2017

CONCLUSION

The study examined rural banditry, causes and its perceived effect on the rural economy in Birnin Gwari LGA of Kaduna State. The study discovered that the facilitating factors to rural banditry were poverty (57.2%), greed (11.9%), corruption (18.3%), and poor security (12.6%). Poverty. Looting of farm produce and cattle theft (33.7%), theft of other farm animal (30.7%) as well as abduction (19.2%) were found to be the predominant acts of bandits which has led to reduction in farming activities/ livestock rearing, hunting and has increased the level of communal conflicts, Loss of livelihood/income as well as lowering the standard of people living in the study area.

RECOMMENDATIONS

In the light of the findings of this study the following recommendations are made:

- Rural poverty and deprivation needs to be urgently addressed to stem the increasing tide of rural banditry and its negative effects on the rural economy.
- Rural areas like the ones found in the study area are not adequately equipped to address the challenges of rural banditry and cattle rustling. Therefore, there is an urgent need to strengthen the traditional security system and its conflict resolution component to fill the gap of the declining capacity of State formal security agencies to meet the security needs/challenges of rural areas.

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THE EFFECTS OF INSURGENCY ON PRICES OF AGRICULTURAL PRODUCE IN SELECTED MARKETS IN IBADAN METROPOLIS

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ABSTRACT

The study investigated the effect of insurgency on prices of agricultural produce in selected markets in Ibadan metropolis, Oyo state, Nigeria. Structured interview schedule was used to collect data on respondents' socioeconomic characteristics, perceived effect of insurgence activities on changes in prices, non-insurgency factors associated with changes in prices of agricultural produce and changes in prices of common agricultural produce from ninety six respondents using snow ball and simple random sampling techniques. Data were analyzed using both descriptive and inferential statistics. The findings revealed that majority (58.4%) of the respondents were between the age range of 31–50 years; male (59.4%) and Muslims (70.8%). A large proportion (40.6%) had First School Leaving Certificate as their highest education qualification and had 11–20 years of marketing experience (50.0%). Most (76.0%) patronized markets in northern states and the patronages were mostly done fortnightly (66.7%). Beans topped the list of the most transacted agricultural crop produce with an average of 49.5 bags per trip. Majority of the respondents (99.0%) agreed that increased transportation cost was among the non-insurgency factors associated with non-availability and increased price of agricultural produce. There was a striking observable difference ($t = -10.824$; $p < 0.05$) in the prices of agricultural produce between 2012 and 2014; relationship between non-insurgency factors and change in price of agricultural produce was not significant ($r = 0.029$; $p > 0.05$). Based on the findings, it was concluded that significant increase in the price of the five agricultural produce considered for the study over the period of 2012 and 2014 was occasioned by Boko Haram insurgency. It was therefore recommended that in order to stop this trend, government at all levels and other stakeholders should ensure that all hands are on deck towards ending Boko Haram insurgency in Nigeria.

Keywords: Boko Haram insurgency, Market prices, Agricultural produce.

INTRODUCTION

Nigeria, which was one of the richest 50 countries in the early 1970s, has retrogressed to become one of the 25 poorest countries at the threshold of the twenty first century (World Bank, 2011); which in turns has attracted the attention of scholars, leaders, and international community over the years on developmental interventions. Although different scholars have different perspectives on development, most students and practitioners of development accept that it must mean progress of some kind. Human Development Report (2010) opined that human development is the expansion of people's freedom to live long, healthy and creative lives; to advance other goals they have reason to value; and to engage actively in shaping development equitably and sustainably on a shared planet. People are both the beneficiaries and the drivers of human development, as individuals and in groups.

Although there are different perspectives to development, yet there is a general consensus that development will lead to good change manifested in increased capacity of people to have control over material assets, intellectual resources and ideology; and obtain physical necessities of life (food, clothing and shelter), employment, equality, participation in government, political and economic independence, adequate education, gender equality, sustainable development and peace. However, the reality of the world today is that many countries are very poor and cannot meet their development needs. Wealth is concentrated in the hands of a few people while

the majority wallows in abject poverty. Hence, development at the grassroots level becomes pertinent.

Democratic government which has been defined in various ways by different people contains the ingredients required to bridge the gap between the poor and the rich. Democratic government as defined by Abraham Lincoln is "the government of the people, by the people and for the people". Democratic government means government by persons freely chosen by and responsible to the governed.

Democracy contains some basic principles which spell out its dividends amidst other forms of government. These include citizen participation; equality; political tolerance; accountability; transparency; regular, free and fair elections, economic freedom; control of the abuse of power; bill of rights; accepting the result of elections; human rights; multi-party system and the rule of law. It is clear that Nigeria transited from military rule to civilian rule in 1999, yet Nigeria is still very far from entrenching democracy. It should be recognized that establishing and strengthening democracy is an ongoing process demanding continuous effort and imagination. Indeed, democracy at its core, is a state of mind, a set of attitudinal dispositions woven into the fabric of a society, the concrete expression of which are its social institutions. Lack of true democratic government in its entirety has led to so many vices in Nigeria which ranges from insurgency in the northeast, militancy in the Niger Delta to IPOB agitations in the southeast.



Over the years, insurgency has created widespread insecurity across Nigeria, increased tensions between various ethnic communities, interrupted development activities, frightened off investors and generated concerns for Nigeria's northern 51 neighbours. Insurgency has been responsible for nearly daily attack in Bornu and Yobe states and was behind the January 20th attack in Kanu state that killed nearly 200 people and three major attacks in Abuja, including the bombing of United Nation Head Quarters (Eme, 2012).

The insurgency in Nigeria is still most felt in the northern states and across Nigeria. The development constitutes a fresh challenge for the citizens who are already contending with the scarcity of foodstuffs and the consequent inflation that has hit the city's food market.

The increasing spread of nefarious activities of the insurgency in Nigeria and the destruction of lives and property is a serious issue that could not be dismissed in Nigeria since July 2009 and specifically with the attack of the United Nations building at Abuja in 2011. The sect, having no clear structure or known chain of command was responsible conservatively for the death of over 1200 people (Jimmoh, 2011). Northern Nigeria is the major source of food supply to other parts of the country especially the southern part. Hence, effects of insurgency on prices of agricultural produce are subjects of issue in Nigeria especially, Ibadan metropolis, where majority of their foodstuff come from the north. Therefore, it is imperative to evaluate the effect of insurgency on changes in prices of agricultural produce in selected markets in Ibadan metropolis.

The general objective of the study is to examine the effect of insurgency on prices of agricultural produce in selected markets in Ibadan metropolis.

The specific objectives are to:

- i. examine the personal characteristics of the respondents;
- ii. assess respondents' perception of the effects of the insurgence activities on changes in prices and availability of agricultural produce in the study area;
- iii. identify non-insurgency factors associated with changes in price of agricultural produce in the study area;
- iv. determine changes in the prices of agricultural produce in the selected markets.

The hypothesis is stated in the null form as follows:

H₀1: There is no significant difference in the prices of agricultural produce between 2012 and 2014

METHODOLOGY

The study was carried out in Ibadan metropolis, Oyo state. Oyo state is made up of thirty three Local Government Areas (LGAs). It is bounded in the north by Kwara state, in the south by Ogun state, in the west by Republic of Benin, and to the east by Osun state. Oyo state is located between latitude 5°5N and 9°0N and longitudes 2°5E and 5°55E. Ibadan consists of eleven LGAs with five core urban LGAs (Ibadan north, Ibadan southwest, Ibadan northeast, Ibadan northwest and Ibadan southeast). Each of these LGAs has specific food items market. For Ibadan north, there is Bodija market, for Ibadan southwest, there is Oritamerin market, and for Ibadan northeast, there is Oje market. The people residing in Ibadan are Hausas', Igbos' and Yorubas' in majority. Agricultural activities in Ibadan include fish farming, crop farming and livestock production. The climate favours all year round production of arable crops such as maize, yam, cassava, rice, cocoyam and tree crops like kola nut, cocoa, orange, etc.

The target population comprises male and female adults who are traders of food items such as beans, onions, dry maize and goat in Bodija and Oritamerin markets.

A two-stage sampling technique was used to select respondents for the study. The first step involved snow ball sampling which was used to generate a list of marketers who patronized the northeastern markets. In the second stage, simple random sampling was used to select forty six respondents from Oritamerin market and fifty respondents from Bodija market. This gives a total of ninety six respondents which was used for the study.

Data were collected from primary source. Primary data were obtained using interview schedule with both open and close ended questions to elicit information from the respondents.

The independent variables of the study were: respondents' socioeconomic characteristics, respondents' perception of the effects of insurgency on availability of agricultural produce, non-insurgency factors associated with changes in price of agricultural food produce, and extent to which insurgency has affected patronage in the selected markets. The dependent variable was changes in the prices of agricultural produce in the selected markets.

Respondents' sex, religion, marital status, educational status, membership of marketing association and ethnicity were measured at nominal level; while age of the respondents was measured at interval level.

Perception of the effects of the insurgence activities on changes in price and availability of agricultural produce – Respondents were asked to respond to statements on perception of the effects

of the insurgency on changes in prices and availability of agricultural produce. This was measured on a 5 point Likert scale of Strongly agree scored 5, Agree scored 4, Undecided scored 3, Disagree score 4 and Strongly disagree 1 for positively worded statements and reverse for negatively worded statements. Indices of perception of the effects were obtained and categorized into low, moderate and high effects on pricing of agricultural produce. Respondents scores that fall between mean \pm 1SD were categorized as moderate, while scores outside this category were categorized as low (for less) and high (for greater).

Non-insurgency factors associated with changes in price of agricultural produce – Respondents were asked to indicate other factors responsible for increased price of agricultural produce over the last three years. These factors were measured as Strong factor, Weak factor, and Not a factor. Scores of 2, 1, 0 were assigned respectively. Weighted mean was calculated and used to rank each of these items in order of importance.

The dependent variable for the study was changes in price. This was measured at interval level as respondents provided the price of the five agricultural produce (beans, groundnut, goat, dry maize and onion) as at 2012 and the present prices. Change in price was then obtained by subtracting the current price from the price of 2012. The score thus obtained formed the scored for the dependent variable of this work. This was then be categorized into two, as high and low level of change, using the mean score as the benchmark.

RESULT AND DISCUSSION

Socioeconomic characteristics of respondents – The findings in Table 1 show that a large number of the respondents were in their active years, as 29.2% were each aged 31 – 40 and 41 – 50 years old. This implies that more agile people were involved in food marketing in the selected markets. Prominence of more respondents aged between 31 to 50 years could also be due to the nature of the business as it requires travelling

for a long period of time to purchase food items from the northeastern markets. Kebede (2001) and Nwaru (2004) asserted that age of agro-enterprise stakeholders is important in determining productivity.

Table 1 also shows that higher proportion (59.4%) of the respondents were males. This may also be traceable to the stressful nature of marketing activities as well as the fact that it requires travelling over a long period of time, which are often associated with absenteeism from homes. Women hardly leave home for long period of time, since they are more saddled with domestic responsibilities than men.

Furthermore, most (70.8%) of the respondents were Muslim. The Islamic religious identity for which the northern Nigeria has been known for may be responsible for this, as the northern part of Nigeria over the years has been known to be the strong hold of Islam in Nigeria.

In addition, more (40.6%) of the respondents had primary school education, only 31.3% had secondary education while 12.5% had no formal education. Following this result, it could be said that majority of the respondents were literate. This literate feature of majority of the respondents implied that they could assess information on security against insurgency in the northeastern part of Nigeria. This could help to improve the business venture of the respondents in the northeastern part of Nigeria.

The Table also shows that majority (74.0%) of the respondents were married. It could be suggested based on the finding on marital status that a good number of the respondents enjoyed spousal supports in the prosecution of their business venture.

Table 1 further show that 50.0% of the respondents had 11 – 20 years of marketing experience. It could be inferred from this finding that respondents could assess the price situation of food items over the years and identify what has changed recently and how these are traceable to the insurgency situation in the northeastern part of Nigeria.

Table 1: Distribution of respondents based on socioeconomic characteristics n = 96

Variables	Frequency	Percentage
Age		
≤30	12	12.5
31-40	28	29.2
41-50	28	29.2
51-60	21	21.9



Variables	Frequency	Percentage
61-70	7	7.3
Sex		
Male	57	59.4
Female	39	40.6
Religion		
Christianity	27	28.1
Islam	68	70.8
Marital status		
Single	14	14.6
Married	71	74.0
Divorced	7	7.3
Widowed	4	4.2
Educational status		
No formal education	12	12.5
Primary	39	40.6
Secondary	30	31.3
OND/NCE	8	8.3
HND/B.Sc/B.A	6	6.3
Post graduate	1	1.0
Years of marketing experience		
≤10	21	21.9
11-20	48	50.0
21-30	20	20.8
31-40	3	3.1
>40	4	4.2

Source: Field Survey, 2014

Respondents' perception of the effects of the insurgence activities on changes in prices and

availability of agricultural produce in the study area

From Table 2, it is seen that more respondents perceived the effect of insurgence activities on changes in prices and availability of agricultural produce to be moderate. The mean score is 53.13 ± 9.46 . Hence, only 8.3% respondents had less than the mean score, making up the population that perceived the effect of insurgence activities on changes in price and availability of agricultural produce to be low; while 17.7% of the

respondents had above the mean score, making up the population that perceived the effect of insurgence activities on changes in price and availability of agricultural produce to be high. It could be implied from this finding that majority of the respondents opined that insurgence in the northeastern Nigeria has moderately affected availability and pricing of agricultural produce in the study area.

Table 2: Respondents' perception of the effects of the insurgence activities on changes in prices and availability of agricultural produce n = 96

Effect	Frequency	Percentage	Minimum	Maximum	Mean	SD
Low	8	8.3	40.0	78.0	53.13	9.46
Moderate	71	74.0				
High	17	17.7				

Source: Field Survey, 2014

Non-insurgency factors associated with changes in price of agricultural produce

Table 3 reveals that 95% of the respondents agreed that increased transportation cost contributed to the changes in prices of agricultural produce; 76% agreed that reduced number of produce traders contributed to the changes in prices of agricultural produce; while

50% agreed that festivals also contributed to the changes in prices of agricultural produce. These are some of the non-insurgency factors associated with changes in price of agricultural produce in the study area. Over the years, not only insurgence related factors had led to increased prices of food, non-insurgency related factors had also contributed to the changes in price of agricultural produce.

Table 3: Non-insurgency factors associated with changes in price of agricultural produce

Non-insurgency factors	Frequency	Percentage
Increased transportation cost	95	99.0
Reduced number of produce traders	76	79.2
Climate change	33	34.4
Increasing shop rent	39	40.6
Festivals	50	50.0

Source: Field Survey, 2014

Change in prices of common agricultural produce

Table 4 indicates the mean change in price between the period of 2012 and 2014 for the five agricultural commodities being considered in the study. The study revealed that for all the commodities, beans witnessed the largest percentage increase over the years with 89.10% increase. This was followed by goat with 44.69%

increase; onion with 42.59% increase; and dry maize with 18.32% increase. However, the price of groundnut dropped by 1.16%, and this was the only agricultural commodity that experienced decrease in price. The reason for this decrease in price was not covered in this study. The implication of this finding is that prices of agricultural produce from northern Nigeria have continued to increase as a result of insurgent activities in the area.

Table 4: Change in prices of common agricultural produce



Agricultural produce	Price in 2012/unit	Present price/unit	Percentage change
Beans	14532.5	133395	89.10% (increase)
Groundnut	6500	6425	-1.16% (decrease)
Goat	7300	13200	44.69% (increase)
Dry maize	4652.17	5695.65	18.32% (increase)
Onion	6333.33	11033	42.59% (increase)

Source: Field Survey, 2014

Difference in the prices of agricultural produce between 2012 and 2014

Hypothesis three states that there is no significant difference in the prices of agricultural produce between 2012 and 2014. The finding in Table 5 revealed that the null hypothesis is rejected. It is indicated therefore that there is a

striking observable difference in the prices of agricultural produce between 2012 and 2014. It could be true that insurgency may not be the only factor responsible for this difference, yet respondents firmly expressed their disposition that insurgent might be the factor responsible for this difference.

Table 5: Difference in the prices of agricultural produce between 2012 and 2014

Period	Mean	Frequency	Std. Dev.	T	df	p-value	Decision
2012	2.95	96	0.99	-10.824	95	0.000	Significant
2014	3.74						

Source: Field Survey, 2014

CONCLUSION AND RECOMMENDATIONS

Based on the findings, it was concluded that significant increase in the price of the five agricultural produce considered for the study over the period of 2012 and 2014 was occasioned by Boko Haram insurgency. It was therefore recommended that in order to stop this trend, government at all levels and other stakeholders should ensure that all hands are on deck towards ending Boko Haram insurgency in Nigeria.

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FACTORS MILITATING ACCESS TO CREDIT AMONG POTATO FARMERS IN UMUAHIA NORTH LOCAL GOVERNMENT AREA, ABIA STATE

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ABSTRACT

Access to credit has been a big problem to farmers in developing countries and to potato farmers in Umuahia North Local Government area in Abia state, it has been an uphill task. Financial institutions shy away from giving loans to farmers because of the variability and the risk inherent in agriculture. This leads to setbacks in government's bid to diversify the economy through agriculture. The research was centered on the factors militating access to credit among potato farmers in Umuahia North LGA, Abia state. The research identified the sources of finance available to the farmers; determinants of access to loan by farmers and the constraints faced by the farmers in accessing loans in the study area. In the bid to achieve the objectives, descriptive and inferential statistics were used to analyze the data procured from 72 respondents used for the study. From the data analysis, personal savings (84.7%), loans from esusu groups (76.4%) and cooperative societies (69.4%) were the main sources of finance in the study area. Results from the regression analysis showed that sex, marital status, education, household size, cooperative membership and value of collateral were significant and determinant factors having varying degrees of influence in farmers' quest for loan acquisition in the study area. Collateral requirement, high interest rate and hidden charges, were the major limitations faced by farmers trying to obtain loan in the study area. Credit packages meant for farmers are often diverted; Government, through its agencies, should ensure that the credit packages set aside for farmers are not diverted but used to achieve the desired effect.

Keywords: Credit Access, Farmers, Potato, Loans, Constraints

INTRODUCTION

Agriculture in developing countries in Africa has failed to live up to its expectations of feeding the people in the society. This is evidenced by an upward trend in the importation of food commodities which otherwise could have been locally produced. This has increased the cost of living among other effects. This development could be attributed to many factors that include lack of government support, subsistence nature of agriculture in the area, use of crude implements, inadequate roads and transport facilities, inadequate storage facilities, inadequate access to credit among others. Among the entire problems mentioned, inadequate access to credit is chief; farmers with adequate capital base can cater for the aforementioned problems. Crude implements could be replaced with mechanized farming, subsistence farming for commercialized farming, etc. According to Agbo, Iroh and Ihemezie (2015), credit provides cash reserves required to fast track the process of production and consumption in the next cycle. It provides an opportunity for the farmers to meet their consumption requirements and input needs. The unforeseen circumstances surrounding agriculture have made it an uphill task for farmers to obtain credit from financial institutions. Most financial institutions scare away the farmers with high interest rates and tedious procedures in obtaining loans. This has discouraged farmers from seeking financial help from financial institutions and potato farmers are no exception.

Potato is grown in all parts of Nigeria because it requires soil that is moderately fertile. The major breeds of potato widely grown in the

country include Irish potato, sweet potato and the orange-fleshed sweet potato. The crop is grown for both man and animal consumption. Potato is a rich source of Vitamins C, E, A, Carbohydrates and minerals like Zinc and Iron. They can be processed into chips, starch and flour. They also serve as a raw material for the manufacture of wide range of industrial products, such as starch, liquid, glucose, ethanol and they can serve as a substitute for wheat flour in bread making. Potato farmers have many challenges facing them which range from inadequate land to lack of funds for production and processing of their produce.

Although the Nigerian government through the central bank of Nigeria has set aside some credit facilities to be accessed by farmers with a very low interest rate but the reality on ground shows that these funds are not accessed by farmers instead most commercial banks have diverted these to other uses which deprives the farmers from benefiting from the facility. Most of the potato farmers are rural based and having access to credit will improve grass root development by increasing their output that will improve their standard of living, enhance their use of modern technologies and enhance ways of improving their output and pay back the borrowed fund.

The objectives of the paper were to identify the sources of finance available to the farmers; identify the determinants of access to loan by farmers and determine the constraints faced by the farmers in accessing loans in the study area.



METHODOLOGY

Study area - The study was conducted in Umuahia North Local Government Area of Abia state. Umuahia is one of the agricultural zones of the state and potato is one of the major product from the zone. Major occupations of the residents include farming, artisanship, civil service and trading. (National Population Commission; 2015). The major crops grown in the area include: cassava, maize, potato, okra, vegetables. Etc

Sampling and sample size - A multi-stage sampling technique was employed in sample selection. In the first stage, the two major clans in Umuahia North Local Government Area were selected namely Ibeku and Ohuhu. In the second stage two villages from these two clans were selected because of the existence of outsized potato farmers in the areas. In the third stage 18 farmers were randomly selected from each of the four villages giving a grand total of 72 respondents that were used for the study.

Method of data analysis - Objectives one and three were analysed using descriptive statistics while objective two was analyzed using multiple regression.

Model specification - The ordinary least squares multiple regression model used in the study is specified as:

$$Y = f(X_1, X_2, X_3, X_4, X_5, \dots, X_n) \dots\dots\dots(1)$$

Where;

Y= amount of loan accessed (N)

X₁ = Age (years)

X₂ = Sex (male=1, female=0)

X₃ = Marital status (married=1, otherwise= 0)

X₄ = Education (years)

X₅ = Household size (number)

X₆ = Experience (years)

X₇ = Value of collateral (N)

X₈ = Cooperative membership (member=1, otherwise=0)

RESULTS AND DISCUSSION

Sources of finance available to the farmers in the study area

Table 1 shows the various sources of finance available to the Potatoes farmers in the study area. The data were collected using a multiple responses whereby the respondent can select more than one source of finance available to them.

Table 1: Showing the various sources of finance available to the potatoes farmers

Credit Sources	Frequency	Percentage
Personal savings	61	84.7
Friends and relatives	34	47.2
Cooperative societies	50	69.4
Informal institutions (esusu)	55	76.4
Financial institutions	37	37.3
Loans from individuals	19	26.3
Nongovernmental organization (NGO)	25	34.7

Field survey 2016; multiple responses

The results reveals that different sources of finance identified in the study with different levels of patronage of each source as indicated by the farmers in the study area. Personal savings had the highest level of patronage (84.7%) by farmers as the source of financing their farming activities. This implies that the majority of the potatoes farmers started their farming business with self-mobilized savings.

Informal financial institutions such as “esusu” were indicated by 76.4% as source of financing their potato farm. This implies that besides personal savings, local informal financing institutions aide farmers with soft credit to run their activities. This goes to prove the importance of grass root financing to the economic welfare of the people generally.

The result shows that 69.4% of the potatoes farmers were financially assisted by their various cooperative societies. This is a positive indicator that the functionality of cooperative societies is widely recognized and as well been

practised in our society today, which would go a long way in helping local farmers access loans with the aim of boosting productivity.

Friends and relatives which is a form of informal financing as well is been patronized by 47.2% of the respondents in the study area. Although it is an easy source of financing, the major disadvantage is that it is usually soft and short term financing, meaning that it is not an advisable source of financing for farmers having long-term financial obligations like maturity period of crops, building, machineries and Plant.

The result indicates that Formal financial institutions (i.e. Banks and Microfinance banks) and Non-Governmental organisations (NGO) sponsored only 37.3% and 34.7% of the potato farmers. Such low level of patronage may be indicative of the high and stringent measures adopted by the financial institutions in granting loans to farmers such as high interest rates, high collateral demand etc.

Loans from Individuals received the lowest (26.3%) level of patronage by the potato farmers in the study area. This is as a result of the reluctance of prominent individuals in our society in investing in agriculture especially potato farming citing the risk involved in agriculture and its rate of returns as key factor of hindrance, they prefer to invest in the trending Oil and Gas sector.

The findings are not encouraging because Nigeria as a nation is still fighting food security and the high rate of poverty level in the country

and potato farming would go a long way in boosting the economy of Nigeria since it is widely consumed and can be exported to earn foreign exchange.

Analysis of the factors affecting access to loan by potato farmers in the study area

The results from the analysis of the determinant factors affecting access to loan by farmers in the area were presented in Table 2. The analysis was carried out using multiple regressions and shown in Table 2.

Table 2: Factors affecting access to loan among potato farmers

Variables	Linear+	Semi-log	Exponential	Double log
Intercept	-6.038 (-3.709)***	49.354 (14.503)***	-55.259 (-2.275)*	-64.038 (-21.111)***
Sex	0.000 (3.089)***	-1.537E-006 (-1.178)	-1.431 (-0.906)	1.186E-008 (2.609)**
Age	0.000 (-1.089)	-1.537E-006 (-1.178)	-1.431 (-0.906)	1.186E-008 (0.009)
Marital status	2.102 (1.759)*	-0.001 (-1.084)	-.442 (-2.133)*	-0.011 (-1.409)
Education	-1.292 (-1.892)*	-0.011 (-1.409)	.779 (3.034)**	0.001 (1.779)*
Household size	-9.104E-005 (-40.545)***	-1.479E-006 (-57.443)***	-62.169 (-97.323)***	0.000 (0.503)
Experience	0.870 (1.234)	2.444E-006 (21.447)***	65.056 (39.606)***	0.005 (0.688)
Value of collateral	1.186E-008 (.009)**	1.056E-008 (0.689)	-.038 (-1.111)	-1.537E-106 (-1.178)
Cooperative membership	0.108 (2.432)**	0.000 (-0.079)	0.651 (1.442)	0.589 (5.471)
R ²	0.926	0.962	0.986	0.698
R ⁻²	0.920	0.959	0.987	0.699
F- ratio	72.551***	47.143***	10.195***	43.967***

Source: Field Survey, 2016, Values in Parenthesis is t-ratio; + lead equation

*, ** and ***implies significance level at 0.10, 0.05 and 0.01 probability levels respectively

The results of the multiple regressions analysis of the determinant factors affecting access to loan among potatoes farmers in the study area were summarized in the Table 2 above revealed an F ratio of 72.551 that was significant at 1% level showing goodness of fit of model for analysis. The Linear functional forms was chosen as the lead equation for this study based on statistical reasons as the value of regression coefficient of determination (R^2) shows that 92% of the independent variables could have influenced the changes in the dependent variable. The result shows that sex, marital status, Education, Household size, cooperative membership and value of collateral were significant.

Sex of the farmer interacted positively with credit access at 1% significant level. This means that male farmers may stand better chance of

obtaining credit when compared to the female farmers. The results showed that men have access to loan more than the women do in the study area. This might be because of men in area meeting the loan requirements needed to obtain loan when compared to the women in the area. In addition, men own most businesses in the study area and this might increase their need for loan than their female counterparts. Ololade and Olagunju (2013) believed that been a female reduces your chances of accessing credit.

The result indicated that marital status had a positive coefficient and has significant effect on loan access of potatoes farmers in the study area at 10% level. The positive relationship between the marital status of the potatoes farmers and their ability to access loan is because married farmers are perceived to be responsible and far-sighted with



finance than unmarried individuals; as a result, the loan facilitators rely on their strength of financial responsibility and through that can liberally give them loan. Ololade and Olagunju (2013) discovered that married loan applicant stood a better chance to obtain loans than those who were single.

The results also indicated that variable the educational attainment of the farmers was positively related to their access to loan (significant at 10%). This implies that an increase in the educational status of the potato farmers leads to an increase in the farmer's ability to access loan. This might be as a result the exposure that comes with education. Farmers who are educated make better decisions in choosing loan options and the requirements that comes with it. Adegbite and Adeleye (2011) found out that higher educational qualification of the farmer increases his chances of accessing loans.

The coefficient of regression also revealed that Household size of the potatoes farmers were positively related to their access to loan and is significant at 1% level. This implies that increasing household size increases the loan access of the farmer because as the numbers of the members of the farmers' household increases, the farmer has a cheap source of labour which paves way for

increased productivity and the possibility of the farmer to pay back the loan borrowed. Also, if the members of the household are gainfully employed, it will increase the ease of repayment as the household members might contribute to that effect.

The value of the collateral presented by the potatoes farmers is positively related to their accessibility of loan (significant at 5% level). This is because most of the financial institutions usually demand collaterals of very high value from the farmers. This means that the higher the value of the collateral, the higher the possibility of the farmer acquiring the required loan. Elias, Ahmad and Patil(2015) believed that large land holdings increased the probability of the farmer accessing loans from financial institutions as the farmer can cultivate in large quantities with improved technology to offset his debts and the land can serve as collateral for the loan.

The results further indicates that cooperative membership has a positive relationship with the farmers access to loan and significant with the dependent variable. It is significant predictor of loan accessibility at 5% significance level. This is because cooperative societies usually aide their members when they want to access credit facilities. They also act as trustees or agents of the farmers.

Table 3: Constraints of access to credit by farmers in the study area

Constraints	Frequency	Percentage
Inadequate information	36	50
Income	23	31.9
Terms and conditions	35	48.6
High interest rates	42	58.3
Hidden charges	48	66.6
Bureaucratic process	30	41.7
Collateral requirement	56	77.8

Field survey 2016; Multiple responses

The farmers who are potato farmers in the study area ranked the major problems affecting their access to credit as shown in Table 3.

From the results in Table 3, it was observed that 77.8% of the respondents agreed that collateral requirement needed to access credit from financial institutions limits their access to credit in the study area. Most farmers in the study area are poor and do not have the needed collateral to access loans. Often times, financial institutions scare away the farmers with high collateral requirements. Okojie *et al* (2010) from their research reported that the poor have limited access to financial services, and the main source of finance for the majority of rural women in Edo state is their contribution to the savings/market associations.

Hidden charges were identified by 66.6% of the respondent as a factor affecting access to

credit. Most farmers complained that although the loan applied for was disbursed late, the interest inherent has started accumulating before they received the loan and the financial institutions did not agree to count from when the farmer received the loan. In addition, there are some hidden administrative charges that the farmers do not know about but are made to pay by the financial institution. Some applications fees the borrowers were meant to pay also added up to hidden charges paid by farmers in their bid to access credit from financial institutions.

High interest rate was another factor dissuading farmers' access to loan. The interest rate charged by financial institutions is on the high side for the poor farmers. These have the effect of making work hard in order to meet up with the interest requirements of the loan and sometimes the farmer has nothing to gain after the loan and the

interest have been paid. Although the Nigerian government has tried to provide credit schemes with no interest rate for the poor farmers it has been observed that funds from these schemes were often are diverted and the poor farmers do not benefit from them. Mgbenka and Mbah (2016) observed that although Federal Government of Nigeria (FGN) has established credit schemes such as the Agricultural Credit Guarantee Scheme (ACGS) and Agricultural Credit Support Scheme (ACSS) to ensure farmers' access to agricultural credit, the situation has not improved substantially.

Information is an essential ingredient in agricultural development programmes but Nigerian farmers seldom feel the impact of agricultural innovations either because they have no access to such vital information or because of poor dissemination. Half of the farmers (50%) complained of not being informed or lacked the adequate knowledge of the government efforts at providing credit with little interest rates. This has denied these farmers the opportunity of benefitting from these schemes.

Other limiting factors to farmers' access to loan in the study area include terms and conditions of the loan, bureaucratic process involved in the loan processing and the farmers' income.

CONCLUSION AND RECOMMENDATIONS

Access to credit plays a pivotal role in the productivity of farmers and potato farmers are no exception. The research portrayed the factors limiting farmers' access to credit in Umuahia North Local Government Area, Abia state. Collateral requirement, high interest rate and hidden charges, were the major limitation among others faced by farmers trying to obtain loan in the study area. The study recommends that:

- i. There should be monitoring teams at national, state and local government levels to monitor the management and usage of agriculture fund allocation and farm inputs. This will help check embezzlement and reduces corruption to a great extent.
- ii. Adequate information should be made available to farmers through television and radio jingles. Extension agents should be well equipped as they interact with the farmers face to face and reach them at their levels.
- iii. Financial institutions should be guided by the central bank on the collateral

requirements demanded from farmers and to reduce the charges the farmers are made to pay before the loans they applied can be processed.

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LIVELIHOOD DYNAMICS AND SOCIOECONOMIC STATUS DIFFERENTIALS OF SEMI-URBAN AND URBAN FARMING HOUSEHOLDS IN AKWA IBOM STATE

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ABSTRACT

The study assessed livelihood dynamics and socioeconomic status differentials of semi-urban and urban farming households in Uyo, Local Government Area (LGA), Akwa Ibom State. One hundred and thirty-one respondents were selected through a gender-based stratified proportional sampling procedure from Anua Offot (urban=81) and Ikot Oku Idio (semi-urban=50) communities of Uyo, LGA. Focus Group Discussion, house listing, interview using questionnaire and infrastructure checklist were used to collect data. Descriptive and inferential statistics were used in data analysis. Thirteen major livelihood activities classified as agricultural, trading/marketing, micro processing and service-oriented were identified. There was a significant difference in the number of livelihood activities between urban and semi-urban households ($p=0.0069<0.05$) especially in service-oriented activities ($p=0.0012<0.05$). Significant differences existed in socioeconomic status between urban and semi-urban farming households ($p=0.2547>0.05$). Agriculture based livelihoods were dominant in urban (20.9%) and semi-urban (30%) locations while service-oriented livelihoods earned the highest mean incomes in both urban (₦54,000) and semi-urban (₦56,000) locations. Pair-wise ranking revealed most preferred livelihoods in both locations were as follows: men and youths (poultry production, transport business and trading on cement); youths (traditional bag manufacture and Information Communication Technologies Services) and women (agro-processing, petty trading, soap making and hair dressing). The study concluded that significant differences existed in livelihood activities and socioeconomic status between urban and semi-urban farming households in Uyo LGA, Akwa Ibom State. It was recommended that opportunities in service-oriented livelihoods be provided for farming households in both locations. Even development of the area should target location-specific livelihoods of farming households to improve their socioeconomic status and further reduce differentials.

INTRODUCTION

Democracy as an acceptable means of social control and order has great potentials to stimulate development as direct dividends of participatory government. Oruonye (2013) posits that grassroot democracy can be seen as a tendency towards designing political processes where as much decision-making authority as possible is shifted to the lowest level of organization. This is one of the strongest points in favour of democracy especially as it guarantees the active involvement of the so-called grassroots. Rural development on the other hand deals with the process of improving the living conditions of rural communities in such a way to bridge the gap between the rural communities and their urban counterparts so as to make the rural economies self-sustaining and retentive of its population which has been drifting steadily to the urban centres (Oruonye, 2013). Studies therefore need to regularly evaluate if government is fulfilling this important function of ensuring that the grassroots reap development as a direct dividend that democracy should offer. Evaluating urbanization, livelihoods and the areas transiting from rural through semi-urban areas becomes imperative for meaningful scientific efforts.

As a country experiences urbanization, significant changes in livelihoods and socioeconomic status also occurs in the urban, semi-urban and rural areas. Satterthwaite *et al* (2010) describes urbanization as the increasing share of a nation's population living in urban areas

(and thus declining share of living in rural areas. In line with this, Afriyie, *et al*, (2013) observed that urban expansion exposes peri-urban communities to a number of challenges including land use changes, tenure insecurity, high cost of living and transformation in peri-urban livelihoods. On the other hand, Carney (1998) describes a livelihood as capabilities, assets (including both material and social resources) and activities necessary for a means of living. There is a consensus by researchers that livelihood options across urban, semi-urban and rural areas are diverse depending on factors influencing them.

One major effect of urbanization is the gradual displacement of agricultural activities coupled with high cost of living as a result of the emergence of monetary economy (Afriyie *et al*, 2013). It is also argued that the process of urban growth and their implications for farming and farm sizes are likely to be shaped by global influences as well as localized aspects (Djurfeldt, 2013). Similarly, urban areas and cities present a variety of opportunities for residents to generate wealth but at the same time also a myriad of challenges to the urban poor as they tend to depend on the cash economy for their livelihoods (Ayerakwa, 2017). As a result of the interactions between rural and urban areas, the peri-urban dwellers are exposed to a wide range of livelihood options and choices including farm and non-farm-based activities (Abass *et al*, 2013). Satterthwaite *et al*, (2010) posited that individual household members engaged in different activities while sharing

resources and assets. From the forgoing, it is obvious that livelihood dynamics will likely correlate with socioeconomic status differentials when contrasted between the semi-urban and urban farming households. Dossa *et al* (2011) reported significant differentials in low and medium socioeconomic groups in livestock rearing. On the basis of asset ownership and access to utility, the study showed that the poorest and low income and high-income households were motivated to urban farming by income generation and nutritional status improvement and savings, and income source diversification respectively (Dossa, et al, 2011). Examining households access, and dependence upon a diversity of occupational sectors is a central theme in many development studies and is often discussed in the context of poverty, urbanization, household risks, conservation and coping strategies (Cinner and Bodin, 2010). Although in recent times considerable attention in research have focused on urban and peri-urban agriculture (Ayerakwa, 2017), extant literature hardly explore livelihood dynamics in the context of socioeconomic status between the location divide (Ayerakwa, 2017; Mougeot, 2011 and Uwem, 2016). This study therefore is designed to fill this gap by providing information on the livelihood dynamics in the context of socioeconomic status between the urban and semi-urban of Uyo Local Government Area as a case study. In order to highlight the impacts of urbanization on natural resources usage; this will help in designing effective development and conservation strategy for even development for the rural economy which has a multiplier effect on the urban economy. Accordingly, the specific objectives of the study include, to:

1. describe the socioeconomic characteristics of semi-urban and urban farm households in Uyo LGA
2. analyze the socioeconomic status of semi-urban and urban farm households in Uyo LGA.
3. identify and categorize livelihood activities of semi-urban and urban farm households in Uyo local government area
4. establish livelihood activities differentials between Urban and Semi-Urban Areas of Uyo
5. analyse livelihood diversification between semi-urban and urban farm households in Uyo LGA and
6. estimate income earned from key livelihood activities of semi-urban and urban farm households in Uyo local government area

METHODOLOGY

The study locations of Anua Offot (urban) and Ikot Oku Idio (semi-urban) both lie between 5.03778N and 7.94737E along Nwaniba road

which stretches out to the limit of Uyo capital City Development Area (NEWMAP, 2017). Land inheritance as a tenure system is still practiced which explains fragmentation of holdings. The farm lands are undulating with a tropical climate of high temperature of humid (wet) rainfall zone is dominated by annual rainfall of 2500-3000mm. The Anua community is the host to a missionary hospital, St. Lukes hospital which has been in existence for more than 50 years with a School of Nursing and Midwifery within the same premises.

Ikot Oku Idio is an adjoining community to Anua with more agricultural based activities being carried on by the inhabitants. This semi-urban area shares a common gully erosion site which stretches through the communities with crop production activities taking place around the gully erosion site. The Anua Offot study location is gradually expanding into Ikot Oku Idio with a mixture of natives and non-natives found residing in both areas. This makes it a suitable site for a study that is premised on the urban and semi-urban characteristics. In Anua Offot, less land is available for agriculture while Ikot Oku Idio is gradually experiencing increase in non-farm livelihoods just like Anua Offot. The traditional institutions of family kingship is still enduring in the communities where five royal families of Nung Ekong, Ikot Umo Udo, Nung Mbom, Ikot Eda and Nung Obio Akama take active part in community development projects.

The survey design was used for the study. One in-depth interview, Focus Group Discussion was conducted in each of the study location. House listing of all buildings at farm sites around gully erosion sites (Anua Offot and Ikot Oku Idio) was carried out. This provided the sampling frame for the study. Ten percent (10%) of household heads on the basis of gender were selected through a stratified proportional sampling procedure. Respondents were picked from each stratum via a simple random sampling procedure. In Anua offot, 25 females, 39 males and 17 youths were selected while in Ikot Oku Idio 23 males, 15 females and 12 youths were picked. In all, a total of 81 and 50 respondents in Anua Offot and Ikot Oku Idio were selected respectively. This gave a sample size of 131 respondents. The questionnaire was the instrument used to conduct personal interview with the respondents. Infrastructure check list was designed and used to determine households' access and availability of infrastructure to them. Descriptive statistics (mean, frequencies and ranking) were used to analyze socioeconomic characteristics and status of farming households while inferential statistics one-way Analysis of Variance (ANOVA) and paired t-test were used to analyze differentials in livelihoods and socioeconomic status of respondents.



RESULTS AND DISCUSSION

Socioeconomic characteristics

The respondents in the study were predominantly people in the active age. Respondents mean age from the urban area (Anua Offot) was almost the same (mean=41.94) with that of the semi-urban dwellers (Ikot Oku Idio; mean=41.52). The implication here is that a greater population of the active labour force were engaged in agriculture in both areas. This also means that there is a tendency for multiplicity of livelihood activities in the area since they have the physical strength and energy to be engaged in diverse activities at the same time.

The result agrees in part with findings by Uwem, (2016) and Gautam and Andersen, (2016) where the active urban population were found to be engaged in farming activities in addition to other income generating activities. Similarly, there was a high proportion of married households in Anua Offot (65.4%) when compared to Ikot Oku Idio (60%). This is in line with Ekong (2003) who reported that marriage was a cherished culture of the people of the area.

Larger household sizes were more in proportion in Ikot Oku Idio (mean=7.12) than in Anua Offot (mean=6.81). As means of survival, households' diversification of livelihood activities

is likely. This is a means of responding to more responsibility in providing for the semi-urban households with high probability of increasing and further exerts pressure on resources for sustenance. As a strategy, relatively large households tend to engage in livelihoods that are labour-intensive using family labour which is cheaper and readily available depending on the composition.

In the two study locations, the mean number of years spent to acquire formal education in the urban (mean=10.14) semi-urban (mean=10.04) and was nearly the same. In spite of the similarity, there was a higher proportion of graduates of tertiary institutions engaged in urban farming in the semi-urban (24%) than in the main urban area (16%). This result is consistent with similar findings by Uwem (2016) identified a high proportion of graduates as urban farmers which was also confirmed by Dossa *et al* (2011) who reported that urban households members (including unemployed graduates) were motivated into farming by the need to address the food security of their households. It also confirms the assertion that diversification of livelihoods of semi-urban and urban farming households was a strategy for coping with economic and environmental shocks and instrumental to poverty reduction (Gautam and Andersen, 2016).

Table 2: Socioeconomic Characteristics of semi-urban and urban farm households in Uyo

Item	Socioeconomic Characteristics	Study Location of farm households					
		Anua Offot (urban)			Ikot Uko Idio (semi-urban)		
		F (N=81)	%	Mean	F (N=50)	%	Mean
1	Age(Years)						
	<21	2	2.5		1	2.00	
	21-30	13	16		9	18.00	
	31-40	22	27.2		17	34.00	
	41-50	26	32.1		10	20.00	
	51-60	11	13.7		8	16.00	
	>60	7	8.5	41.94	5	10.00	41.52
2	Marital Status						
	Single	20	24.7		14	28.00	
	Married	53	65.4		31	60.00	
	Widowed	8	9.90		6	12.00	
3	Household size						
	1-3	14	17.30	6.81	8	15.30	7.12
	4-6	23	28.40		16	30.50	
	7-9	29	35.80		19	37.40	
	10-12	11	13.60		6	11.50	
	>12	4	4.90		3	5.30	
4	Educational Attainment						
	No formal Education	2	2.5	10.14	2	4.00	10.04
	Primary	24	24		16	32.00	
	Drop out	4	4		2	4.00	
	Secondary	35	35		18	36.00	
	Tertiary	16	16		12	24.00	

Source: Field Survey, 2017

Table 2b: Socioeconomic Characteristics of semi-urban and urban farm households in Uyo continued

Item	Socioeconomic Characteristics	Study location of farm households					
		Anua Offot (urban)			Ikot Udo Idio (semi-urban)		
		F (N=81)	%	Mean	F (N=50)	%	Mean
1	Religion	f	%		F	%	
	Christian	90	73		44	86	
	Traditionalist	6.2	5		6	12	
	Atheist	3.7	3		0	0	
	Islam	0	0		1	2	
2	Ethnic Composition						
	Ibibio	42	48.1		29	57	
	Annang	22	20.9		13	26	
	Oron	7	4.90		3	6	
	Others	10	26.10		6	11	
3	Monthly Income (N:K)						
	<10,000	10	12.3	37,122	7	14	33,744
	10,001-30,000	24	24		19	38	
	30,001-50,000	27	27		14	28	
	50,001-70,000	16	16		9	18	
	>70,000	4	4		1	2	

Source: Field Survey, 2017

The result (Table 2b) also revealed that the dominant religion in the area was the Christianity with a lower proportion of households recorded in the urban (73%) than in the semi-urban areas (86%) while traditionalist (12%) were the next dominant belief system; and Islam being the third dominant religion in Ikot Oku Idio (2%). The Ibibios made up the highest percentage of the three ethnic groups in both Anua Offot (48.1%) and Ikot Oku Idio (57%). The result is in tandem with Ekong (2003) who reported that marriage was a cherished culture of the people of the area as well as holding multiple belief system but with Christianity being the dominant of all. The mean income from the urban (N37,122) was higher than the mean amount earned (N33,744) by the semi-urban households. This shows that livelihood activities in the urban areas of Uyo LGA generated higher income earnings to households than those in semi-urban areas. There was a tendency for livelihood activities in the urban areas to lead to improved socioeconomic status than those of the semi-urban areas. Livelihood dynamics in the semi-urban had a tendency to move towards those activities in the urban that brought the highest income to households. This supports Ekong, (2003) who reported that the need to have better livelihoods by people had resulted in migration to the urban areas of Nigeria. Similarly, the dominant monthly income of range of N30,001-N50,000 was recorded in Anua Offot (27%) while a lower range of N10,001-N30,000 was dominant among farmers in Ikot Oku Idio (38%). This result is slightly lower than that by Uwem (2016) where the monthly income of 29% of urban livestock farmers in Uyo was N32,000-37,000. Similar findings by

Ayerakwa (2011) and Mougeot (2011) reported that urban agriculture as an important economic survival option for cities dwellers of diverse socioeconomic status. This is reflected in the household income for which this study adopted the minimum wage as a benchmark for classification. By implication, livelihood dynamics is influenced by the process of urbanization. The asset base of a given household in terms of skills and tangible productive asset accumulation accounts for the diversities of livelihoods that it is engaged in. This also agrees with the assertion that the transition from semi-urban to urban is accompanied by livelihood dynamics and consequently socioeconomic differentials within and between both urban and semi-urban locations which is supported by previous studies (Gautum and Andersen, 2016; Wuder *et al*, 2014).

Socioeconomic status of semi-urban and urban farm households in Uyo LGA

The study explored the socioeconomic status households engaged in farming and other livelihood activities using a number of indicators. Socioeconomic status classified households into poor, average and rich on the basis of the equivalent monthly salaries workers from the junior staff, senior and very senior officers to correspond to poor, average and rich status. Other indicators used to compare socioeconomic status were households' expenditures on various items, sources of energy for household lighting, cooking and domestic water usage. Waste disposal methods, mode of land acquisition, types of houses occupied as well as the material for which the construction of the roofs were considered as indicators of



socioeconomic status. From the results of this study, households in the poor status class were more in the Anua Offot(urban) (13%) than in the Ikot Oku Idio(semi-urban)(10%);contrastingly, a higher proportion of households were recorded in the average class in the urban(Anua Offot) (49%) than in the semi-urban(Ikot Oku Idio(29%) while the rich households were still more in the urban(19%) than in the semi-urban area of study(12%).These results confirm the prevalence of urban poverty (Gautam and Andersen, 2016) and further agrees with Dossa *et al* (2011) who classified households into low, medium and high socioeconomic status as being engaged in urban farming as well as other livelihood activities.

The result also showed that the semi-urban farming households spent greater proportion of their income (55%) on food than the urban

households (50%) while expenditures on health, transport, housing, household items were the same; expenditure on clothing and education were higher among urban respondents (mean=10%) than the semi-urban (mean=8%). This agrees with study by Dossa *et al* (2011) who reported high expenditure pattern among urban residents' farmers in three West African cities including Kano, Nigeria.

Similarly, more urban farming households (58%) patronized hospital for their health care needs than the semi-urban households (42%).This confirms the position by Uwem (2016) who posits that urban households have access to modern infrastructure before the semi-urban or rural ones. This result also confirms the findings which indicate continued poor living conditions of non-urban dwellers when compared urban to their counterparts (Sanda, 1988).

Table 3: Socioeconomic Status of semi-urban and urban farm households in Uyo LGA

Item	Socioeconomic Characteristics	Study Location of farm households			
		Anua Offot (urban)		Ikot Udo Idio (semi-urban)	
		F (N=81)	%	F (N=50)	%
1	Social Status	F	%	f	%
	Poor	13	16	10	20
	Average	49	60.5	29	29
	Rich	19	23.50	12	12
2	Itemised Household Expenditure				
	Food	4	50	28	55
	Clothing	8	10	4	7
	Education	8	10	4	8
	Household Items	4	5	3	5
	Transportation	4	5	3	5
	Health	8	10	5	10
	Housing	8	10	5	10
3	Health Services				
	Hospital	47	58	21	42
	Chemist	61	75.3	40	78
	Traditional Birth Attendant	14	17.3	9	18
	Herbalist	18	22.2	13	26
	Church	38	46.9	24	48

Source: Field Survey, 2017

The study revealed that more households (53.1%) in the urban used kerosene and public power supply (PHCN) as energy source in domestic lighting compared to their semi-urban counterparts (44%). On the contrary, a higher proportion of households in the semi-urban (52%) used PHCN and rechargeable lamps (RL) than

those residing in the urban area (38.3%). There were slight differences in the use of PHCN and private generators (PG) between urban (85.2%) and the semi-urban respondents (86%) as well as in the mix of use of PHCN and kerosene with more in Ikot Oku Idio (62%) than in Anua Offot (55.6%).

Table 3: Socioeconomic Status of semi-urban and urban farm households in Uyo LGA

Item	Socioeconomic Characteristics	Study Location of farm households					
		Anua Offot (urban)			Ikot Udo Idio(semi-urban)		
		F (N=81)	%	Mean	F (N=50)	%	Mean
1	Sources of Energy for Household Lighting						
	Kerosene +Public Power supply (PHCN)	43	53.1		22	44	
	Kerosene +Rechargeable Lamps	20	24.7		19	38	
	Public Power supply(PHCN) + Rechargeable Lamps	31	38.3		27	52	
	Kerosene + Private Generator	51	62.9		30	58	
	Public Power supply (PHCN) + Private Generator	69	85.2		44	86	
	Public Power supply (PHCN) + Kerosene	45	55.6		32	62	
2	Major Sources Energy for Household Cooking						
	Kerosene +Fuel wood	33	40.7		20	40	
	Fuel wood +cooking gas	34	41.9		23	46	
	Kerosene + Cooking gas	56	69.1		33	64	
3	Sources of Water Supply Household						
	Boreholes	71	87.70		43	83.9	
	Rain water	30	37.00		26	50.0	
	Piped water	10	12.50		7	14.0	
	Stream	0	0		3	6.0	
	Water vendor	8	9.9		4	8.0	

Source: Field Survey, 2017

This suggest that households of the low or medium socioeconomic status (SES) tend to depend more on cheaper energy sources for household lighting than those in the medium and high SES who could afford sources (mix) that may be costlier. This is consistent with the findings by Dossa *et al* (2011) who reported that urban farm households in the low SES had no access to electricity where as 75% of those in the high SES had.

Expectedly, more farm households in the urban location (69.1%) used kerosene and cooking as sources energy for household cooking than their semi-urban counterparts (64%). Similarly, energy mix including fuel wood were more utilized by semi-urban households (40-46%) than the urban respondents (40.7-41.9%). Arild *et al* (2014) earlier reported that the poor relied more heavily on subsistent products such as wood fuels and wild fruits harvested from natural areas. On sources of water for households, boreholes were the primary source of household water supply in both the urban (87.7%) and the semi-urban areas (83%) which is an indication of low access to public water supply. This contrast sharply with findings by Dossa *et al* (2011) who reported more than 75% of respondents who had piped water present in their homes in a study of urban farming which incorporates both locations also used in this study.

Result also showed that the commonest method of waste disposal was dumping in the bush by the semi-urban households (56%) whereas the highest proportion of urban households used the refuse bins more (77.8%) (Table.3b). Use of refuse bins attract bills which goes to confirm that since there are no bushes to dump waste, the urban households are compelled to use them. Afriyie *et al* (2013) opined that urbanization exposes peri-urban areas to changes in land use, pollution and high cost of living. On mode of land ownership, the semi-urban households acquired land mostly through inheritance with a high number of respondents in the semi-urban (54%) than in the urban (46.9%). Djurfeldt and Jirstrom (2013) reported that urban growth had their implications for farming and challenges in farm sizes and they were likely to be shaped by both global influences as well as more localized aspects.

Result of the study also showed that more urban households lived in blocks of flat(53%) than semi-urban households (42%); corrugated iron sheets were the primary materials used in construction of roof tops of buildings most of the buildings in the semi-urban Uyo (66%) than the urban areas of the capital city (61.7%). This an evidence of gradual expansion of the urban into the semi-urban areas changing the socioeconomic dynamics of the population (Arild *et al* (2014); Dossa *et al*, 2011; Afriyie *et al*, 2013)



Item	Socioeconomic Characteristics	Study Location of farm households					
		Anua Offot (urban)			Ikot Udo Idio(semi-urban)		
		F(N=8)	%	Mean	F (N=50)	%	Mean
1	Waste Disposal Method						
	Bush	23	28.4		29	56	
	Backyard	18	22.2		21	42	
	Gully site	8	9.9		7	14	
	Burning	19	23.5		21	42	
	Refuse Bin	63	77.8		23	46	
2	Mode of Land Acquisition						
	Inheritance	38	46.9		28	54	
	Direction Purchase	8	9.6		10	20	
	Gift	7	8.6		5	10	
3	Types of Houses occupied						
	Blocks of Flats	43	53		21	42	
	Bungalow	16	19.8		17	34	
	Tenement houses	14	17.3		8	16	
	Storey building	8	9.9		4	8	
4	Construction Materials(Roofing)						
	Corrugation Iron sheets	50	61.7		34	66	
	Aluminum roof	15	18.5		6	12	
	Asbestos	10	12.3		5	10	
	Concrete decking	4	4.9		2	4	
	Thatch roofs	2	2.6		4	8	

Source: Field Survey, 2017

Livelihood activities semi-urban and urban farm households in Uyo LGA

The study revealed that there were thirteen major occupation classes engaged in by the households in the two study locations (Table 4.1). In both study locations, farming engaged the highest proportion of households in the study (24.4%). This was followed by public/civil service (12.2%) and driving and medical services (10.7%). The smallest proportions of respondents were

involved in hospitality services (3.1%). The proportion of households involved in farming with more in the semi-urban (Ikot Oku Idio (30%) than in urban (Anua Offot) (20.9%) while nearly the same proportion of households were Public/civil servants in the semi-urban (12.2%) and urban locations (12.0%). This confirms findings by Afriyie *et al* (2013) that effects urban expansion comes with a number of challenges leading to transformation peri-urban livelihoods.

Table 4.1: Livelihood Activities semi-urban and urban farm households in Uyo LGA

Location	Anua Offot (urban)	Ikot Oku Idio (semi-urban)	Both locations
Livelihood activities	F (%)	F (%)	Total
Farming (Crop, Fisheries and Livestock)	17 (20.9)	15 (30.0)	32 (24.4)
Medical Services	12 (14.8)	2 (4.0)	14 (10.7)
Welding	3 (3.7)	2 (4.0)	5 (3.8)
Driving	6 (7.4)	8 (16.0)	14 (10.7)
Masonry	3 (3.7)	4 (8.0)	7 (5.3)
Public/Civil Service	10 (12.3)	6 (12.0)	16 (12.2)
Hair Dressing	4 (4.9)	3 (6.0)	7 (5.3)
Food Vendor	5 (6.2)	1 (2.0)	6 (4.6)
Drinking Spot	6 (7.4)	1 (2.0)	7 (5.3)
Hospitality Service	3 (3.7)	1 (2.0)	4 (3.1)
Trading/Marketing	5 (6.2)	3 (6.0)	8 (6.1)
Seamstress/Tailoring	4 (4.9)	2 (4.0)	6 (4.6)
Carpentry	3 (3.7)	2 (4.0)	5 (3.8)
Total	81 (100)	50 (100)	131(100)

Source: Field Survey, 2017

Results showed that the mean value for the urban households for paired t-test showed a higher mean value for the urban (Anua Offot = 6.32) compared to the semi-urban (Ikot Oku Idio=3.84) which indicated more livelihood activities among urban households compared to semi-urban ones. This was also followed by a corresponding higher deviation in the number of livelihood activities (SD=4.26) when compared to the semi-urban areas (SD=3.93) (using data from Table 4.1)

Livelihood activities differentials between urban and semi-urban areas of Uyo

The p-value ($p < 0.02 < 0.005$) confirms that the differences in livelihood differentials between the urban and semi-urban households was not due to chance i.e. there existed a significant difference. Furthermore the study showed that there was a greater variation in the number of livelihood activities between urban and semi-urban households (SS between = 540.731) than among households in urban or semi-urban households (SS within= 8.500) (Table 4.2). This implies that the differences was significantly different and goes to support more opportunities in urban than semi-urban as earlier indicated in the ANOVA result analysis in Table 4.2.

Table 4.2: ANOVA result on livelihood activities differentials between urban and semi-urban areas of Uyo

Location	Source of Variation	Sum of squares	Df	MS	F	p-value
Urban (Anua Offot) and Semi-urban (Ikot Oku Idio)	Between groups	540.731	8	67.591	31.808	0.002
	Within groups	8.500	4	2.125		
	Total	549.231	12			

Source: Data analysis result, 2017

Livelihood Diversification of semi-urban and urban farm households in Uyo LGA

Livelihood diversification is one of the major findings of this work. More urban farming households (50.2%) were engaged in at least two livelihood activities compared to the semi-urban households (46.8%) (Table 4.3). This was the different when the livelihoods were up to three

different types with more in Ikot Oku Idio (semi-urban) (36.5%) than Anua Offot (urban) (34%). This result is line with Abaas, Afriyie and Adomako (2013) who submitted that peri-urban dwellers are exposed to a wide range of livelihood options and choices including farm and non-farm based activities.

Table 4. 3: Livelihood Diversification of semi-urban and urban farm households in Uyo LGA

Number of Livelihood Activities	Anua Offot (urban) f(%)	Ikot Oku Idio (semi-urban) f(%)	Total f(%)
1 One	17 (6.9)	20 (11.8)	37 (8.9)
2 Two	124 (50.2)	71 (41.8)	195 (46.8)
3 Three	84 (34.0)	62 (36.5)	146 (35.0)
4 Four	21 (8.5)	14 (8.2)	35 (8.4)
5 Five	1 (0.4)	3 (1.8)	4 (0.9)
Total	247* (100)	170 *(100)	417* (100)
Mean	2.45	2.75	

Source: Field Survey and analysis (2017)

* Multiples responses

The highest number of livelihood activities (five) found to be more in the semi-urban (1.8%) than in the urban (0.4%) which agrees in part with Ayerakwa (2017) citing previous studies which concluded that opportunities may be different depending on the spatial location of the household and the type of resources at their disposal (Table 4.3). The mean number of livelihood activities engaged in by farm households

were higher in the semi-urban (mean = 2.75) than the number in the urban (mean=2.45).

Average income for key livelihood activities of semi-urban and urban farm households in Uyo LGA

The highest paying livelihood activities are the services providing ones with an overall average amount of sixty thousand naira (N60,000) followed by trading and marketing with the mean



income of twenty-seven thousand, six hundred and thirty-three naira(N27,633) and least being agriculture/livestock with a mean income of

twenty-three thousand six hundred and sixty-seven naira(N23,667) per month (Table 4.4).

Table 4. 4: Average Income for Key Livelihood Activities of semi-urban and urban farm households in Uyo LGA.

Key Livelihood Activity	Anua (urban)	Offot	Ikot Oku Idio	Average	Rank
Agriculture /Livestock	Amount (₦)		Amount (₦)	Amount (₦)	
Crop farming	15,000		12,000	13500	10
Agro-processing	47000		34000	40500	4
Poultry	20000		14000	17000	9
Average	27,333		20,000	23,667	
Trading/Marketing					
Sales of provision	37000		32500	34750	6
Sales of foodstuff	28100		22200	25150	7
Marketing of agro produce	25000		21000	23000	8
Average	30,033		25,233	27,633	
Service providing activities					
Driving	47000		31000	39000	5
Civil/Public Service	60000		71400	66700	2
Masonry	47000		40000	43500	3
Contract and Supplies	141000		117000	129000	1
Fashion Designing/Tailoring	29000		21000	25000	11
Average	54,000		56,000	60,000	

Source: Field Study (2017)

Although contract and supplies was the highest earning livelihood urban households earned an mean income of N24, 000 more than their semi-urban counterparts while the higher income civil/public servants were found in semi-urban(N71,400) than their urban counterparts(N60,000).Although the least income was derived from crop farming(N13,500),urban farmers earned more(N15,000) than those residing in the semi-urban areas of Uyo LGA (N12,000(Table 4.4).The mean income of households engaged in trading and marketing were higher among urban households(N30,000) than those in the semi-urban(N25,233)(Table 4.4). This result agrees with report by Gautam and Andersen (2016) who submitted that a uniform pattern of diversification in terms of number of activities for livelihoods but a highly varying degree of resultant well-being across household. According to these researchers (Gautam and Andersen, 2016) well-being (of which income is critical determinant) was not associated with diversification per se but rather on a household involvement in “high returns

sector” such as trading and salaried job. It is also in line with Arild, *et al* (2014) who opined that quantifying the relative and absolute contribution of environmental income was important for understanding the livelihoods of people as they are key determinants of inequality and has implications for welfare.

Pairwise livelihood options for urban and semi-urban households in Uyo LGA

Pairwise ranking analysis result (Table 4.5) showed that men in both locations preferred poultry production and agro-processing livelihoods (ranked 1st and 2nd) in addition to transportation services by households in the urban compared to mushroom farming and trading on cement by the semi-urban dwellers. Similarly, women in the urban and semi-urban areas of Uyo LGA were primarily involved in agro-processing and poultry production (ranked 1st and 2nd); while the urban women took to ICT related services (ranked 3rd), women in the semi-urban households added trading on provision as the 3rd most engaged income generating activity (Table 4.5).

Table 4.5: Pairwise Livelihood options Urban (Anua Offot) and Semi-urban (Ikot Oku Idio) Areas of Uyo LGA.

Gender	Pairwise options Urban (Anua Offot)	Livelihood Rank	Gender	Pairwise options Semi-urban (Ikot Oku Idio)	Livelihood Rank
MEN	Poultry	1 st	MEN	Poultry	1 st
	Agro-processing	2 nd		Agro-processing	2 nd
	Transport services	3 rd		Mush room production	3 rd
	Trading on cement	4 th		Trading on cement	3 rd
	Fish farming	5 th		Transport services	5 th
	Traditional shoe and bag making	5 th		Micro business	6 th
	Micro business	7 th		Hat making	6 th
	Motor and auto mechanic repairs	8 th		Traditional shoe and bag making	8 th
WOMEN	Agro-processing	1 st	WOMEN	Carpentry services	8 th
	Poultry	2 nd		Agro-processing	1 st
	ICT Services	3 rd		Poultry	2 nd
	Trading on provision	4 th		Trading on provision	3 rd
	Hat making	5 th		Soap and cream making	6 th
	Hair dressing	5 th		ICT Services	3 rd
	Micro business	7 th		Fish farming	7 th
	Swine production	7 th		Hair dressing	5 th
	Cake making	9 th		Hat making	7 th
	Soap and cream making	9 th		Micro business	10 th
	Trading on textile	11 th		Tailoring and fashion designing	7 th
YOUTH	Beautification services	11 th	YOUTH	Poultry	1 st
	Interior decoration	12 th		Agro-processing	1 st
	Agro-processing	1 st		ICT Services	1 st
	Poultry	2 nd		Web based services	4 th
	ICT Services	3 rd		Trading on cement	5 th
	Transport services	3 rd		Mushroom production	6 th
	Fish farming	5 th		Micro business	6 th
	Web based services	5 th		Trading on textile	8 th
	Swine production	7 th		Hat making	8 th
	Trading on cement	8 th		Traditional bag making	10 th
	Micro business	9 th		Cake making	11 th
	Trading on textile	10 th			
	Hat making	11 th			
	Traditional bag making	12 th			

Source: Field Study (2017)

The youths in both locations preferred agro-processing, poultry production (ranked 1st - 2nd), ICT services and transportation services which were mostly by the youths in the urban area (ranked 3rd). The implication here is that location plays a significant role in the choice of livelihood activities of household members while the youth's livelihood activities is partly influenced by the livelihoods of men and women in each area.

CONCLUSION

The study revealed that majority of households' heads, in their active ages, were engaged in agriculture and multiple livelihood activities in both urban and semi-urban areas of

Uyo. Larger household sizes in semi-urban than urban was correlated with more rich and average households in urban areas than in the semi-urban.

Cheaper energy sources and poor waste disposal methods were used by semi-urban households. Significant differences in socioeconomic status existed between the urban and semi-urban households with a higher proportion found among the urban dwellers. Significant livelihood differentials between urban and semi-urban households existed as well as a greater livelihood diversification among semi-urban households than their urban counterparts. There was however higher income from livelihood activities in the urban areas than the semi-urban.



Preferred livelihood mix showed that men and youths were involved in poultry production, transport business and trading on cement while youths were found to engage in traditional bag manufacture and Information Communication Technologies Services and the women were more comfortable with agro-processing, petty trading, soap making and hair dressing.

RECOMMENDATIONS

The study recommends that grassroot democracy must be consciously used as means to reduce the gaps in the socioeconomic status between the urban and semi-urban households. More livelihood opportunities in service-oriented sectors should be created for the semi-urban farming households to drive real even development. It is also recommended that farming households in urban and semi-urban locations should be assisted with extension services to build their capacities agro-entrepreneurship, agro-processing and Information Communication Technologies. Intervention to achieve even and overall development of the state should target the location-specific livelihoods of farming households to improve their socioeconomic status and accommodate the possible shocks occasioned by obvious livelihood dynamics.

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PASTURE PLAN FOR LIVESTOCK DEVELOPMENT AS A STRATEGY FOR CONFLICT RESOLUTION IN SUDANO-SAHELIAN ZONE OF NIGERIA

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ABSTRACT

This study was conducted in three Nigerian northern states of Borno, Jigawa and Sokoto to determine the status of pasture in the three States located in Sudano-Sahelian zone of Nigeria. Purposive sampling procedure was used to select the study area. This was due to the role it plays in livestock production in the country. Random sampling was used to select 210 respondents on whom questionnaire instrument was administered to collect the data for the study. The data collected was analyzed using descriptive statistics, mainly frequency distribution, means and percentages. The results showed that the mean age of the respondents was 41 years, 91% were male and had an average household of 27 persons and 53% reported pasture was in short supply and scarce. They were aware of the potentials of pasture plan to reduce conflicts between crop farmers and livestock herdsman in the zone. The study therefore, proposed pasture model to be implicated by famers to reduce the conflict and stabilize the zone for congenial human and livestock survival.

Keywords: Pasture, Fodder, Pasture degradation, Livestock, Sudano-Sahelian zone.

INTRODUCTION

Nigeria has a land area of about 923 769 km²; a north-south length of about 1,450 km and a west-east breadth of about 800 km. Its total land boundary is 4,047 km while the coastline is 853 km (FOS, 1989). The Federal Ministry of Environment of Nigeria estimated irrigated land at 9,570 km², arable land about 35%, pasture at 15%, forest reserve at 10%, settlements at 10% and the remaining 30% considered uncultivable (FMEN, 2001). Boomie (2008) corroborated the irrigated land at 9 570 km² with arable land at 33%; permanent crops at 3%; permanent pastures at 44%; forests and woodland at 12% and others at 8%. Pasture for livestock farming is mostly found in northern Nigeria where livestock farmers live. Sudano-Sahelian zone of Nigeria is found in the extreme north, stretching from Borno State in the northeast to Sokoto State in the northwest. The annual rainfall is low and the rainy season lasts between three to four months. The vegetation is not only sparse but the grasses are very short. This zone is characterized by plants such as *Cenchrus floridus*, and *Acacia raddiana*. The shrubs that are predominantly scattered in the zone are African myrrh (*Commiphora africana*) and *Leptadenia*

spartum. Occupation of the people in the zone is livestock herding, and grass provides the pasture available for grazing livestock. The zone of Nigeria is experiencing unprecedented environmental change due to human and livestock increase on one hand and reduced quality and quantity of land resources on the other (Onyewotu *et al.*, 2003; Foley *et al.*, 2003). The changes most have emanated from the way humans put their land in use, resulting to conflicts (Saleh, 2016). The approach by government to stem down conflicts is not based on pasture development which is the main cause and the conflicts continue at alarming rate. Growing human population over the years, coupled with climate change has brought dearth/scarcity of pasture and farmland in the zone. Consequently, conflicts between livestock and crop farmer over the resource control become rampant with resultant loss of life, property, the pasture land reduction, low productivity of land resource and poverty in general. The phenomenon calls for a deliberate pasture plan for sustainable peaceful co-existence in the zone. Different grasses and legumes are found in the different agro-ecological zones (Olubajo, 2014) and presented in Table 1.

Table 1: A summary of forage crops for different Vegetation Zones of Nigeria

Forage	Vegetation Zones*				
	SDS	DS/SGS	NGS	SS/ShS	M
Grasses					
Andropogon gayanus	X	X	X	X	
Andropogon tectorum	X	X			
Brachiaria decumbens	X	X	X		
Cenchrus ciliaris	X	X	X	X	
Chloris gayanus		X	X		
Cynodon dactylon	X	X	X		
Cynodon plectostachyus	X	X	X		
Digitaria decumbens	X	X	X	X	
Digitaria smutsil			X	X	
Hyparrhenia rufa	X	X	X		



Forage	Vegetation Zones*				
	SDS	DS/SGS	NGS	SS/ShS	M
Melinisimi nutiflora	X	X	X		
Panicum maximum	X	X	X		
P. maximum cv Gatton		X	X	X	
P. maximum var. trichoglume		X	X	X	
Pennisetum clandestinum					X
P. pedicellatum				X	
P. purpureum	X	X	X		
P. typhoides cv Maiwa			X	X	
Setaria anceps		X	X		
Sorghum alum			X	X	
Tripsacum laxum	X	X	X		X
Legumes					
Cajanus cajan	X	X	X	X	X
Centrosema pubescens	X	X	X		
Desmodium in tortum		X	X		X
D. scorpiurus		X	X		
Gliricidia sepium	X	X	X		
Lablab purpureus	X	X	X	X	
Leucaena leucocephala	X	X	X		
Macrotiliumatro purpureum		X	X	X	
Macrotyloma axillare			X	X	
M. uniflorum		X	X	X	
Neonotonia wightii		X	X		
Puerariaapha seoloides	X	X	X		
Stylosanthes guianensisc v Schofield	X	X	X	X	
S. guianensisc v Cook		X	X	X	
S. hamata cv Verano		X	X	X	
S. humilis		X	X	X	

*SDS – South of Derived savanna; NGS – Northern Guinea Savanna; DS – Derived Savanna; SGS – Southern Guinea savanna; SS – Sudan savanna, ShS – Sahel Savanna; M – Montane
Source: Onifade and Agishi (2008).

Therefore, to achieve sustainable pasture development in the zone the objectives of these study were: to understand socioeconomic characteristics of the farmers, describe pasture status in the area and propose pasture plan to resolve conflicts in the zone.

METHODOLOGY

This study was carried out in Borno, Jigawa and Sokoto States of Nigeria, located latitude 100N and 140N and longitude 40E and 140E. The sampling frame for the study comprises both crop and livestock farming households in five Local Government Areas (LGAs) each from Borno, Jigawa and Sokoto States. Primary and secondary data were used for this study. Multi-stage sampling technique was used for the study. The first stage involved the purposive sampling of the three Sudano-Sahelian states of Borno, Jigawa and Sokoto due to the presence of aridity and agroforestry practices, from where five local government areas were randomly selected from each state. Second, purposive sampling was used to select the states. Third, purposive was also used to select the local

government areas. Five local government areas were selected from Borno State, which are Kukawa, Damasak, Monguno, Benishiek and Ngala. The LGAs from Jigawa State included Kirikasama, Rigim, Kazaure, Babra and Roni. The Local Government areas selected from Sokoto State are Ilela, Sabon Birni, Isa, Kwari and Goronyo. In the fourth stage, random sampling technique was employed to select 10% of the respondents from each State, giving rise to 102 respondents from Borno State, 98 respondents from Jigawa State and 110 respondents from Sokoto State. Thus, a total of 310 respondents were randomly selected for the study. Descriptive statistics, mainly frequency distribution and percentage were used to analyse the data.

RESULTS AND DISCUSSION

Socioeconomic and demographic characteristics

Result in Table 2 shows that 91% were male and 9% were female, the mean age of the respondents was 41 years. Majority (93%) of them were married and had mean household size of 27 persons who were predominantly (79%) illiterates. Occupational structure revealed that 86.2% were

crop farmers and 5.2% practice animal husbandry. The study also revealed that majority (71.4%) of the respondents was Nigerians and 28.6% were foreign immigrants. This implies that the more the foreign immigrants are allowed to come into the

zone, the prone it is to conflict. The study revealed that 87% of the respondents owned their farmland with 23.3% of them had their farmlands ranging between 2 and 4 hectares.

Table 2: Distribution of Socioeconomic Characteristics of the Respondents (n=310)

Age (year)	Percent
20 – 24	4
25 – 29	5
30 – 34	6
35 – 39	20
40 – 44	27
45 – 50	9
50 – 54	13
55 – 59	9
60+	7
Household size (number of person)	%
1 – 5	15
6 – 10	35
11 – 15	16
16 – 20	17
21 – 25	8
26 – 30	7
31+	2
Level of education (years sent in schools)	%
Cannot read and write	40
Koranic education	39
Primary education	11
Secondary/TC education	2.8
Tertiary education	2
University education	3.3
Occupation (listing of primary occupation)	%
Arable farming	86.2
Herding	5.2
Civil service	8.6
Land ownership type (1=owned, 2=communal, 3=hire, 4=lease)	%
Owned	87
Communal	2
Hired	2
Lease	7
Owned and lease	2
Farmland (Hectare/Household)	%
2 – 4	23.3
5 – 7	64.3
8 – 10	8.6
11 – 13	2.4
14 – 16	1.0
17+	0.4
Total	100

Status of pasture in the area

Status of pasture was also investigated by the study (Table 5). The finding shows that 52.8% reported that pasture was inadequate all the seasons, 34.8% reported that pasture was only available during the rainy season and 12.4% could

not observe any change in the status of pasture. However, it is a known fact that livestock exploit natural pasture feeds (herbaceous and leguminous plant species). Also, pasture products (wood, grass) exploitation by humans affect plant groups in different ways.

**Table 3: Status of pasture in the study area of the Sudano-Sahelian zone (n=310)**

Status of pasture	Frequency	%
Not adequate all seasons	111	52.8
Available in rainy season only	73	34.8
No change of status observed	26	12.4
Total	210	100.0

Pasture development plan

Federal and State Government can realistically define pasture conflicts between livestock and arable farmers in the zone. It is in line of this thinking that a plan for Pasture Development Directorate is proposed for Sudano-Sahelian zone of Nigeria.

The following therefore are considered in formulating the plan:

- i. Operation of the proposed plan should be focused on peaceful living of the livestock and arable farmers. It should also be operated in an ecologically appropriate manner to avoid over conflicts in the zone.
- ii. Public education to create awareness about the danger of conflicts.
- iii. Access of improved fodder and crop seeds and other inputs must be carried out on continuous bases until full adoption of the technologies is attained.
- iv. Community participation in the programme plan and implementation (i.e. design, implementation and evaluation) in the zone.
- v. The plan is designed in a flexible manner to allow initiatives from individual farmer while the action is on.

Implementation of the plan

The plan aimed at using the already identified government institutions and none governmental organizations to modify the old practices of livestock grazing and crop production create conflict in the zone. The plan is organized in up and down ward action movement of information flow between departments down to farmer's level and visa-visa, i.e. planning and implementation are the responsibility of the three tiers of the government (Federal, State and Local) and Non-

governmental Organizations (NGOs), while the local communities give feed back to their local government chairman for onward action. The plan of action is as follows:

Level 1: This is highest level at which all governmental and non-governmental agencies involved in conflict resolution and development activities will come together to offer technical, financial, administration and any other advanced services leading to creation of pasture and crop land for farmers in their respective State. There shall be a Directorate of Pasture research, planning, monitoring and evaluation. The directorate is responsible for grazing reserve or ranch, whichever the State Governor approved to be implemented in the State.

Level 2: Here, all activities are done at local government level. At this level various departments shall be created by the Directorate to serve grass root development associations which will be responsible for peace campaign in the area. This committee formed for collective participation of livestock and crop farmers. The committee shall have direct access to the Directorate for day to day pasture development in the local government. The committee shall be responsible for creation of community pasture agency under it with various functional offices to carry out day to day activities solve problems that may result to conflicts.

Level 3: This is the implementation level. At this level, there shall be formed district and village pasture development associations through which sustainable pasture development will be achieved. Sustainable pasture development is possible if the various offices created under the community pasture agency are made functional to discharge their duties effectively by diversification of approaches to include entrepreneurial trainings planned for youth in order to divert their attention from conflicts in the zone.

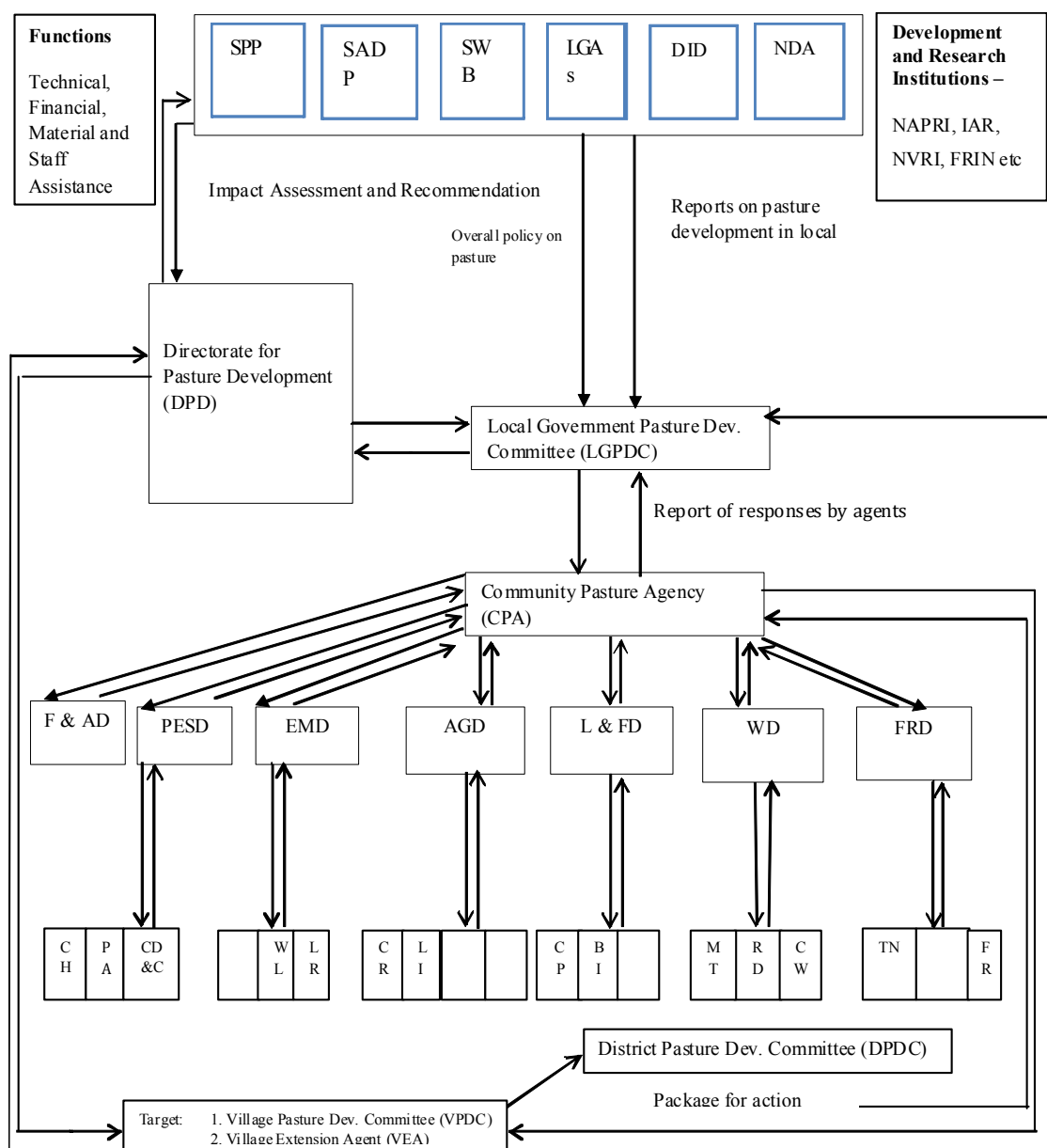


Fig. 1: Organizational Model for Pasture Development in Sudano-Sahelian Nigeria

Key

Level 1

SAP	=	State Pasture Development Project (to be created for pasture services)
SADP	=	State Agricultural Development Programme (crop and forestry services)
SWB	=	State Water Board
LGAs	=	Local Government Areas
NDA	=	National Orientation Agency
NGOs	=	None Governmental Organizations

Level 2

F and AD	=	Finance and Administration Department
PESD	=	Pasture Development Extension Services Department



EMD	=	Environmental Monitoring Department
AGD	=	Agricultural Department
LDD	=	Livestock Development Department
WD	=	Works Department
FRPD	=	Forestry Resource Protection Department

Level 3

CH	=	Community Health
PA	=	Public Awareness
CD and C	=	Community Development and Clubs Organization
WLI	=	Wood Lots Improvement
LRI	=	Land Resource Improvement
CrPI	=	Crop Production Improvement
LI	=	Livestock Improvement
CPI	=	Community Pasture Improvement
BI	=	Breed Improvement
CWI	=	Community Well Improvement
MII	=	Market Infrastructure Improvement
RI	=	Road Improvement
TNI	=	Tree Nursery Improvement
FRI	=	Forestry Reserve Improvement

Components of the plan

At the top of the plan are the existing and newly created government and non-governmental agencies. The reason for placing these agencies at the top is for pooling the synergy that exist between the them for technical, material and personal support of the newly created directorate.

Directorate for Pasture Development (DPD)

The Directorate shall be established in the State Governors' Office. It shall be responsible for planning pasture/grazing land based on type (grazing reserve or ranches.) as approve by the State government. It reports directly to the governor on the state pasture situation in the state. The DPD would be charged with the following responsibilities:

1. Plan and undertake a community research and extension in various dimensions of pasture in the State in liaison with identified Departments and Institutions.
2. Monitor the state of pasture development in the State.
3. Advice government and the Pasture Development Agencies on all policy guidelines for sustained pasture development in the state.
4. Monitor, evaluate and coordinate activities of Local Government Committee Pasture Agency (CPA) and report the same to the Federal and State Governments' development agencies.

At local government level, the model proposed the Establishment of Local Government Pasture Development Committee (LGPDC) which reports to the development institution concerned. The LGPDC uses general guidelines issued by the development institutions to formulate local government policies on pasture development for implementation by the Pasture and Agency for

Rural Communities (PARC). The membership to this committee should include:

- i. The local government chairman who should automatically be the chairman of the committee.
- ii. The head of agriculture in the local government shall be the secretary of the committee.
- iii. Leaders of development associations and clubs such as Women's Associations, 'Elders' Group, Farmer's Cooperative Society, etc.
- iv. Leadership of Miyetti Allah Cattle Breeders, hunters, blacksmith, etc,
- v. Forestry officer of the local government.
- vi. Agricultural officer of the local government.
- vii. Community development officer of the local government.
- viii. Local water board manager of local government (if any)
- ix. Area irrigation engineer (if any).
- x. National Orientation Agency Officer,

The next level at local government is the proposed Pasture Agency for Rural Communities (PARC). This is the implementing body for all the policies agreed upon and passed from local government Pasture Development Committee (PDC). The PARC is to be headed by a Director who is assisted by Departmental heads. The proposed departments are:

Finance and Administration; Social Services; Environmental Monitoring; Agriculture; Livestock; Works and Pasture Resources.

Responsibilities of PARC

Finance and administration department

The department is responsible for administrative and financial management of the

agency. It should liaise with the DPREMandE for financial assistance and should be responsible for receiving the money realized from sales of fodder seeds of the agency,

Extension services department

This department should be a link between the target population and the agency activities. The head of the department is capable to organize, educate and mobilize the rural communities into collective action on pasture and other relevant community development activities. The department should monitor the causes of inter communal conflicts between the farmers and herders with the means of finding a lasting solution.

Environmental monitoring department

The department is charged with the responsibility to collect meteorological, economic and social data at local government level and analyze them. The department also charged with the management of land resources and carry out occasional environmental impact assessment in the L.G.A. level and issues signals about possible conflict.

Agricultural department

This department works directly with DPREMandE for research in the introduction of new arable and fodder crop varieties.

Livestock department

This department should extend research findings at solving the problems of herders and general animal rearing in the area. The department should be charged with duties of identifying range lands and ways of maximizing their carrying capacities.

Since fishing is one of the most popular activities in the area, the department should also be charged with fisheries activities helping the farmers construct fish ponds and introduction of new fish species and formulation of cheap fish feeds. She should liaise with FRMP for financial and material assistance from both the state and federal governments.

Works department

The department is charged with maintenance of the PARC machinery and tools. It also works on technology aimed at improving the environment, production of fuel efficiency on local stores and solar energy harnessing those that are functional in the rural areas to reduce over utilization of fuel wood. It should also work on improvement of ox-drawn ploughs and cart using local materials, development of housing scheme using local materials, road development through self-help organization and portable water supply. This department should work directly with DPREMandE and jointly with extension services department.

Pasture resource department

The department shall work directly with DPREMandE and liaise with the National Animal

Production Research Institute (NAPRI) for genetic improvement of seeds of local fodder crops and diversify their potentials. The department is to establish community fodder seed production at strategic locations and over-see the maintenance of natural pasture reserves. Also, it should design and help to develop community and individual woodlots and extend the technology for harnessing fuel-wood on a sustained basis without much damage to the environment.

Structure and organisation of the model

These structures and organizations are government institutions and agencies for Rural Development, DPREMandE, LGAPDC, PARC and DPDC. The staff of the bodies is expected to be made up of government officials, the next two bodies are composed of members of the public who are to be organized in collective action (i.e. the target population). The two bodies are the village Pasture Development Committee (VPDC) and village Pasture Extension Agents (VPEA). They will have ten members from each village unit or units and the village extension agent. The village extension agent will be the secretary and the village extension agent reports to the APRC Social Services Department along with DPRMP extension agent.

At district level it also comprises ten elected members. The District Agroforestry Development Committee (DPDC) liaises with the VPDC. It is also linked with LGPDC through their respective chairmen acting as liaison officers. Both VAFDC and DAFDC provide input advice on policy needs before taking decisions.

Problems of operation, implementation and suggestion

The major operational problem of rural development model of this type is expected to include:

- i. Leadership particularly at the village and district levels;
- ii. Mistrust among members, especially of the leadership and
- iii. The adoption pace of the rural communities. Most problems associated with rural development are leadership, organizational framework and cultural conservatism (Kandawire, 1980).

From the organizational points of view, the model is structured to give a sound framework but the leadership roles may pose some problems especially at village and district levels. All interest groups should be well represented in leadership.

Finance

Recurrent costs should be paid by the LGA concerned while capital should be shared between Federal, State and Local Governments. The rural communities would be marking their contributions in kinds. Loans should be channelled



through the VPDC; it will also serve as guarantors for the loans.

CONCLUSION AND RECOMMENDATION

The model therefore aims to pool together the financial, material and human resources in the area for effective pasture development. These can be achieved by bringing all development agencies together and integrate their functions for effective development.

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ANALYSIS OF YOUTHS PARTICIPATION IN COMMUNITY DEVELOPMENT ACTIVITIES OF WEST AFRICA AGRICULTURAL PRODUCTIVITY PROGRAMME IN AKWA IBOM STATE, NIGERIA

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ABSTRACT

The study assessed youth participation in West African Agricultural Productivity Project in Akwa Ibom State. A multi- stage sampling procedure was adopted to select 82 respondents for the study. A structured questionnaire was used in collecting data for the study. Analysis of data was carried out using descriptive statistical tools such as frequency, percentages and means. Findings from the study showed that the major sources of information about WAAPP were from Faculty of Agriculture, University of Uyo (72.3%), friends (14.4%), and Akwa Ibom State Ministry of Agriculture (6.0%). The major activities participated by youths were identification of project needs (m=2.63) and group formations (m=2.64). Perceived effects of participation showed a positive effect of WAAPP-UNIUYO collaborative programme in the areas of teamwork (m= 2.67), access to inputs (m=2.82), self-confidence (m=2.61), high productivity (m=2.67), easy access to extension services (m=2.38), income generation (m=2.68) and decision making ability (m=2.52). On constraints to youths participation in WAAPP-UNIUYO activities, poor social value on agricultural based livelihood (m=2.81), poor income on agricultural based livelihood (m=2.72), cultural barriers (m=2.70), family issues (m=2.68), poor marketing structure (m=2.64), among others turned significant. It was recommended that WAAPP officials and its partners intensify efforts in the areas of timely input supply and social/marketing structure for better operation of WAAPP.

Keywords: Youths, participation, Community Development, West Africa Agricultural Productivity Programme

INTRODUCTION

Agriculture has been the mainstay of our Nigerian economy. It contributes about 40% of the Gross Domestic Product (GDP) and employs about 70% of the working population (Central Intelligence Agency-CIA, 2012). It provides environmental benefits such as conservation guaranteed sustainable management of renewable natural resources and preserved bio-diversity (Preslistore 2013). The discovery of oil in Nigeria at Oloibiri in 1958 which would have complemented agricultural practice did otherwise. The discovery of oil dwindled the progress of agriculture in Nigeria. The effect of this has not only been felt at the microeconomic level but also reflected in the macroeconomic level of the economy's welfare. This has also led to a decline in the youths' participation in agriculture. The decline in the number of youth participation in agriculture has made agriculture unattractive and non-lucrative (Muhammad-Lawal, Omotoesho and Palola, 2009).

Since 42 years ago when problems of rural Nigeria was first included in the third National Development Plan (1975-1980) as Rural Development Policy, there has been a plethora of concepts, models, methods and strategies put up by various governments in Nigeria for sustainable rural development. Such programmes and projects included Directorate for food , Road and Rural Infrastructures(DFRRI) , , National Directorate For Employment(NDE) Family Support(FS), River Basin and Rural Development Authority (RBRDA) and many others . Recently government programmes aimed at youth participation include West Africa Agricultural productivity Programme

and the Graduate Unemployment Youths Support Scheme (GUYSS) known as FADAMA GUYSS. Studies such as Etuk *et. al.* (2016) and Ekong and Ekong (2016) have shown that some of these programmes (National Directorate For Employment(NDE) and FADAMA) have a positive effect on rural youths in terms of high participation in community decisions, leadership, grassroots democracy etc.

West Africa Agricultural productivity programme is saddled with mandate of promoting youth's participation in agricultural activities through community driven approach and youths need -led approach with grassroots democracy (Akapaio, 2015). West Africa Agricultural Productivity Programme (WAAPP) was created by the economic community of West Africa States (ECOWAS) in 2010, in a bid to enhance agricultural productivity in the region.

WAAPP - Nigeria started in 2010 and collaborates with Agricultural Research Institutes, and tertiary institutions to make agriculture more productive and sustainable. WAAPP is a five-year programme initiated by ECOWAS and funded largely by the World Bank (West Africa Agricultural Productivity Programme (WAAPP) 2013). In Akwa Ibom State, WAAPP has engaged youths in agricultural enterprises in large-scale adoption of improved technologies, economic improvement of resources of poor farmers, the creation of job opportunities, enhancement and ensuring food scarcity, and operation of an Agricultural Research Outreach Centre (Akpabio,2015). The choice of sixteen (16) villages and six (6) secondary schools was adopted as



model enclaves. In all, aquaculture projects, poultry projects (polopin), and cassava-maize projects and entrepreneurship training programmes were covered. Marketing of the product was carried out and income generated from proceeds was deposited by various group coordinators at the University of Uyo Microfinance Bank. One of the major objectives of WAAPP is to enhance youth's participation in agriculture and community development; there is a dearth of information on the success of WAAPP. The study, therefore, seeks to analyse youth's participation in agriculture and community development activities of WAAPP in Akwa Ibom State.

The specific objectives were to:

- i. identify the sources of information about WAAPP-UNIUYO collaborative programme by the respondents
- ii. ascertain the level of youths participation in WAAPP-UNIUYO collaborative programme
- iii. assess the perceived effects of participating in WAAPP-UNIUYO collaborative programme among the respondents
- iv. ascertain the constraints faced by the respondents in participating in WAAPP activities

METHODOLOGY

The study was carried out in Akwa Ibom State. A multi stage sampling procedure was employed to sample the respondents for this study. In the first stage, a purposive sampling technique

was adopted to select 10 groups out of the 26 groups available to capture only the youth groups while other groups (adult men and women) were not captured. A total of 820 youths were identified in the 10 selected youth groups. Ten (10) percent of the 820 youths were selected by simple random procedure from the total group lists containing all the youths that participated in the programme. Thus a total of 82 respondents were used for the study.

Data for the study were obtained using a structured questionnaire. Data were analyzed using frequency distribution, percentages, and mean scores.

RESULTS AND DISCUSSION

Sources of Information about WAAPP by youths in Akwa Ibom State

Table 1 presents the distribution of respondents by the source(s) of information about WAAPP. It reveals that the respondents mostly get information about WAAPP from the Faculty of Agriculture, University of Uyo (72.3%). This could be owed to the fact that there is a direct collaboration between WAAPP and the University of Uyo (WAAPP-UNIUYO), and the extension officials from University of Uyo were engaged in enlightenment campaign on WAAPP activities. It further shows that WAAPP has the potential to bridge the gap of information dissemination to youths. Another source that followed the University of Uyo was from friends (14.4%). The next source that followed was the State Ministry of Agriculture (6.0%).

Table 1: Sources of Information on WAAPP Activities

Sources	Frequency	Percentage
Internet	1	1.2
UNIUYO	60	72.3
State Ministry of Agriculture	5	6.0
Print Media	1	1.2
Television	1	1.2
Radio	1	1.2
Friends	12	14.5
AKADEP	2	2.4

The level of Participation of Youths in WAAPP-UNIUYO Agricultural and Community Development Activities

It is evident from Table 2 that respondents participated at different levels in the WAAPP-UNIUYO Agricultural and Community Development Activities. The youths were highly participated in all the activities identified except in Project supervision. The major activities

participated by youths were identification of project needs ($m=2.63$), group formations ($m=2.64$), pro-vitamin A bio-fortified production ($m=2.34$) and decision making ($m=2.34$). These are indications that youths actively participated in WAAPP-UNIUYO collaborative Programme. Apparently, this gives the hope of sustainability of the programme if well implemented.

Table 2: Level of youths participation in WAAPP-UNIUYO collaborative programme

Participation variables	Mean (m)
Identification of project needs	2.63
Mobilization of resources	2.01
Choice of project	2.14
Implementation of projects	2.06
Project supervision	1.06
Decision making	2.34
Planning for implementation	2.16
Fish farming	2.03
Poultry production (broiler) using polopin	2.14
Cassava processing	2.29
Group formations	2.64
Community sensitization	2.14
Produce/product marketing	2.31
Input supply/delivery	2.01
AROC establishment	1.01
Value chain programmes	1.82
Pro-vitamin A bio-fortified production	2.34
Group banking transaction	2.27

Level of agricultural and community participation among youth participants of WAAPP-UNIUYO collaborative programme

Table 3 shows that 81.2% of the respondents have a high level of participation in agricultural and community development

programme. It is an indication that WAAPP-UNIUYO collaborative programme has facilitated youths' participation in agricultural and community development activities. This finding agrees with Lyocks *et al.* (2014) that shows high willingness of youths' participation in agricultural activities.

Table 3: Level of youth participation in WAAPP-UNIUYO programme

Participation index	Interpretation	Frequency and percentage participation
0.00 – 1.99	Low	16 (18.8)
2.00 – 3.00	High	69 (81.2)

Perceived effect of participation in WAAPP-UNIUYO collaborative programme among respondents

Results in Table 5 shows that the respondents' perceived effect of WAAPP-UNIUYO collaborative programme was positive in all the variables. The most positive effect were in the areas of improving initiatives in community development activities (m=2.82) improving teamwork (m=2.67), increasing access to inputs (m=2.83), improving self-confidence (m=2.61), increasing high productivity (m=2.67), enhancing easy access to extension services (m=), improving income generation (m=2.68) and enhancing decision-making ability (m=2.52). This is an indication that WAAPP-UNIUYO collaborative

programme in the study areas has been able to achieve one of the cardinal objectives of increasing youth participation in agricultural activities. This buttressed the view of Ekwere (2014) who stated that empirical records of WAAPP-UNIUYO collaborative programme have positively raised students' interest in an agricultural science course. The result also corroborates with the work of Sinkaye and Ajayi (2012) who posited that effective participation of farmers in development projects is largely influenced by the way an intervention programme is implemented by the actors. It is feasible in the study area that WAAPP-UNIUYO collaborative programme participated by the youths has a positive effect as perceived (as listed in Table 5) by the youths.

Table 5: Perceived effect of participation in WAAPP-UNIUYO collaborative programme among respondents

Perceived Effect Variables	Mean	Remark
Increases Self-confidence	2.61	Positive effect
Improves Leadership ability	2.67	Positive effect
Increases Decision-making ability	2.52	Positive effect
Improves Income generation	2.68	Positive effect
Enhances Teamwork	2.67	Positive effect
increases Access to inputs	2.83	Positive effect



Perceived Effect Variables	Mean	Remark
Improves Access to agricultural information	2.66	Positive effect
Aid in High productivity	2.67	Positive effect
Enhances Effective marketing	2.01	Positive effect
Improves Initiative in community development work	2.81	Positive effect
Raises Capacity building in entrepreneurship	2.17	Positive effect
Enhances Easy access to extension service	2.38	Positive effect
Mean	2.56	Positive effect

Mean of ≥ 2.0 - high effect and ≤ 1.99 - low effect

Analysis of constraint to youths participation in WAAPP-UNIUYO collaborative programme using factor analysis

As shown in Table 6, eight out of eighteen variables were perceived as constraints to youths' participation in WAAPP-UNIUYO Collaborative programme. lack of resource Centre (m=2.39), delay in implementation of project(m=2.50), inadequate infrastructural facilities to support farming and community development activities(m=2.41), poor marketing structure(m=2.64), delay in supply(m=2.53),

cultural barriers(m=2.70), family issues(m=2.68), poor social values on agricultural based livelihood(m=2.81), poor income from agricultural based livelihood(m=2.72) were the constraints to the youths participation in WAAPP-UNIUYO activities in Akwa ibom State. These findings agree with Nwaogwugwu and Obele (2017) which points out that poor social values on agricultural based livelihood and poor income from agricultural based livelihood were the major constraints to the youths participation in agricultural livelihood.

Table 6: Constraints to youth participation

Constraint Variables	Mean scores
1 Lack of resource centre	2.39
2 Non-functional project facilities	1.02
3 Non-involvement of youths in project identification	0.88
4 Non-involvement of youths in project implementation	1.23
5 Delay in implementation of projects	2.50
6 Inadequacy in supply of project inputs	1.51
7 Insufficient information from the donor agency	1.00
8 Poor communication and information sharing between WAAPP officials and youths	0.52
9 Inadequate infrastructural facilities to support farming and community development activities	2.41
10 Poor extension services	1.22
11 Poor marketing structure	2.64
12 Delay in input supply	2.53
13 Projects not centred on felt needs	1.14
14 Complexity of recommended technologies	1.40
15 Cultural barriers	2.70
16 Family issues	2.68
17 Poor social value on agricultural based livelihood	2.81
18 Poor income from agricultural based livelihood	2.72
Midpoint = 2.0	

CONCLUSION AND RECOMMENDATIONS

The study has provided empirical evidence on youth participation in WAPP – UNIUYO collaborative programme in Akwa Ibom State, Nigeria. WAAPP-UNIUYO collaborative programme has enhanced high youth participation in agricultural and community development activities in the study area. The programme has also acted as a complementary dissemination in the state. A negative perception of youths on the programme was on the issue of effective marketing and capacity building in entrepreneurship.

WAAPP-UNIUYO collaborative programme was effective in increasing participation of youths in agricultural and rural development activities in the study area.

The programme has significantly contributed to the individual empowerment through self-confidence, decision-making ability, leadership etc. The perceived effect of participating in WAAPP-UNIUYO by the respondents is positive. The most pressing constraints faced by the youths in their participation in WAAPP-UNIUYO were Poor social value on agricultural based livelihood

and Poor income from agricultural based livelihood. The WAAPP officials and its partners should intensify effort in the areas of timely supply of inputs to participants, since most of the agricultural activities are time bound.

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CONSTRAINTS ENCOUNTERED IN RICE PRODUCTION BY FARMERS IN OGUN STATE

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ABSTRACT

Rice production has not been able to meet the consumption demand of the rapidly growing population. Hence, this study examined the various constraints encountered by rice farmers in rice production in five LGAs in Ogun State, Southwest Nigeria. Data were obtained through structured questionnaire administered to 100 randomly selected rice farmers from the study area. Data were analysed using descriptive and inferential statistics. Majority of the respondents were within the age bracket of 46-55 years (56.0%), male (94.0%), married (92.0%) and Muslims (52.0%). Forty-six percent had between 4-6 persons in their household, 58.0% had farm size of more than 1 ha and 56.0% had formal education. Respondents accessed inputs such as seed (80.0%) and fertilizer (80.0%), herbicides (78.0%) from extension agents and agro-allied input dealers. There is restriction to fertilizer (100.0%) and herbicides (100.0%) accessibility, however, seeds (80.0%), labour (100.0%) and land (84.0%) were easily accessible. Majority market their rice on farm (88.0%) and to wholesalers (78.0%). Major production constraints were Quelea birds problem (98.0%), inadequate credit facilities (98.0%), high cost of inputs (96.0%), flood/water logging (80.0%) and pests/diseases (86.0%); processing constraints include high cost of processing equipment (98.0%), low quality of rice produced (98.0%) and breakdown of machine (96.0%); marketing constraints were poor road network (100.0%), poor trade policies (92.0%) and high transportation cost (84.0%); storage constraints include pest infestation (100.0%), poor storage facilities (96.0%) and high cost of storage chemicals (84.0%). It is therefore pertinent for both government and non-government organisations to help in formulating policies that will bring constraints to rice production to the barest minimum.

Keywords: Rice farmers, production constraints, inputs accessibility

INTRODUCTION

Rice is the most economically important food crop in many developing countries and has also become a major crop in many developed countries where its consumption has increased considerably (Ajala and Gana, 2015). It is one of the major cereals widely grown for food in Nigeria as it is grown in paddies or on upland fields, depending on the requirements of the particular variety, as there is limited mangrove cultivation. Philippines and Indonesia were the principal rice importers in the world until recently when Africa has become the highest importer of rice, with Nigeria being at the forefront (The Punch, 2016; Boris, 2004). As at December 2016, the Punch newspaper reported Nigeria as the second highest importer of rice in the world. High rate of rice importation in Nigeria has forced government to take several steps to redress the trend, including placing a total ban on the importation of rice as well as the recent government initiative on rice that is geared towards increasing domestic production. All these happen in the face of abundant potentials the country has in rice production and its capabilities to be self-sufficient in rice production. According to a report by Otung (2017), Nigeria has huge human resources, favourable climate and potential to undergo a steady transformation in terms of techniques and marketing of rice. With the expansion of the cultivated land area of rice, there has been a steady increase in rice production and consumption in Nigeria. Ahmad (2017) reported that local rice production in Nigeria has now reached 15 million metric tonnes annually as claimed by the Nigerian government. Stressing further that the development means the country will

now be saving about N300 billion it used to spend annually on importation of the commodity.

However, the current level of rice production in the country obviously cannot cater for the teeming population of the country. Also, it is important to note that extension activities to rice farmers in Nigeria has been geared towards improving the productivity of small-scale farmers who produce the bulk of the rice in the country (Akinbile *et al.*, 2006). Akinbile *et al.*, (2006) stated that farmers need to be assisted to have current knowledge of improved sources of information and have access to all inputs needed for effective production. Otherwise, rice farmers will suffer low and decreasing yields owing to increasing production costs and lack of required inputs. With the expansion of the land area under rice cultivation, there has been a steady increase in rice production in Nigeria. However, the increase in production has not been sufficient to meet the consumption demand of the rapidly growing population in Nigeria.

It is important to note that apart from the fact that production cannot meet up with demand in the country that necessitated importation, the yield realised per unit area of land is low, which thus serve as disincentive for farmers, making their profit margin thus low and leading to decrease in domestic rice production in the country. This is due to several constraints in the production chains experienced by farmers. Such constraints occur in production, processing, storage and marketing. Rice cannot be consumed in the form in which it is harvested except it passes through the production chain. The constraints facing farmers in the rice production chain are peculiar to each stage of

production. These constraints reduce rice output and when the output is also not well processed, the economic value of the products becomes reduced. Apart from the fact that constraints reduce significant increase in local productions, it also frustrates efforts to make the local variety qualitative and more attractive to Nigerians. Hence, this study was carried out to x-ray specific constraints associated with rice along the production chain which include production, processing, marketing and storage stages with the aim to proffer workable solutions to the constraints. Other specific objectives of this study include farmers' sources of inputs, input accessibility and marketing channels utilised.

Hypotheses of the study, stated in null form, are as given below;

- H₀₁ There is no significant relationship between selected personal characteristics of respondents and constraints encountered in rice production.
- H₀₂ There is no significant relationship between input accessibility and constraints encountered in rice production.

METHODOLOGY

Ogun State was created on 3rd February, 1976 with the state capital in Abeokuta. The state is situated in the tropics covering a land mass of 16,409.26 square kilometres and with an estimated population of over 4 million people. Ogun state falls largely within the rainforest and partly within southern guinea savannah zone of the tropics. Major agricultural produce in the state include cocoa, kolanut, orange, maize, rice, cassava, palm oil, melon and cowpea. The state comprises of 20 Local Government Areas.

The study was conducted in the major rice producing areas in the state. The population of the study include all rice farmers in Ogun state. Purposive sampling was used to select five Local Government Areas known for extensive rice cultivation in the state, namely: Obafemi Owode, Abeokuta North, Ifo, Ewekoro and Ikenne. Ten percent of rice producing communities was randomly selected in each of the selected LGAs. Three communities were selected from Obafemi Owode, while one community was selected each from the other 4 LGAs. Hence, the total number of community selected was 7. Simple random sampling was used to select 10% rice farmers from each community. Ten percent of 427 rice farmers in Obafemi Owode was selected and 10% of 156, 144, 137 and 129 rice farmers in each selected communities in Abeokuta North, Ifo, Ewekoro and Ikenne LGAs were respectively selected to give a total of 100 respondents sampled for this study. Data was collected with the aid of a well structured interview schedule and was analysed using descriptive and inferential statistics. Constraints

encountered along rice value chain (production, processing, marketing and storage stages) was determined using a 4 point scale of very severe, severe, mild and not a constraint with scores of 3, 2, 1 and 0 assigned respectively. The mean of each constraint item was computed and used to rank the constraints in order of severity. Respondents' scores on constraints were also added and the mean was computed. Based on the mean, respondents were categorised as either experiencing low (< mean) or high (\geq mean) level of constraint along the rice value chain. Descriptive statistics used include frequency, percentage, chart and mean, while hypotheses stated for the study were tested using inferential statistics which are chi-square and Pearson Product Moment Correlation.

RESULTS AND DISCUSSION

Personal characteristics of respondents

Table 1 indicates that only 2.0% of the respondents were below 41 years of age. Majority of the respondents were above 50 years of age (66.0%), while 32.0% were between the age category of 41-50 years. The age distribution implies most of the respondents are no longer in their active age. It can be inferred from this findings that the percentage of youths involve in rice production is low in the study area. This might be because most youths have left for urban areas or engaged in other economic activities besides rice production. It was discovered that 85.8% of the farmers were males with only 14.2% were female. This is in line with a similar study carried out in Ekiti State among rice farmers by Osanyinlusi, and Adenegan (2016) where majority of rice farmers were found to be males and this suggests that male farmers dominate rice farming probably due to its nature of intense and time-consuming activities or because women are more engaged in non-farm activities and domestic chores than their male counterparts. Also, it is noteworthy that crop processing activities were mostly done by women. A large proportion of the respondents were married (92.0%). This is expected as majority of the farmers are adults and marriage is a norm in traditional societies where study area is located. The result on marital status corroborates the findings of Alarima *et al.* (2011) where most rice farmers in Nigeria were found to be married. More than half (56.0%) of the respondents had formal education but this is only at the primary (22.0%) and secondary school (34.0%) levels, implying that at least more than half of the respondents can read and write. This result is consistent with study conducted among *Ofada* rice farmers in Ogun state by Sangotegbe *et al* (2013) where 32.5% and 21.3% rice farmers were found to be primary and secondary school holders, respectively. However, 44.0% had no formal education. This result of this study corroborates the findings of Banji (2005) that



most rice farmers had no formal education while it disagrees with what obtained among rice farmers in Ekiti State as Osanyinlusi and Adenegan (2016) found that 91.2% had formal education. Majority of the rice farmers were Muslims (52.0%), 46.0% were Christians, while 2.0% were traditionalists. This result aligns with findings by Sangotegbe *et al* (2013) who found that rice farmers in Ogun state predominantly practice Christianity and Islam with few being traditionalists.

Respondents with household size of between 4 and 6 persons were 46.0%, 44.0% had household size of between 7 and 9 persons, while

10.0% had between 10-12 persons in their household. This implies that more than half of the respondents had a fairly large household which might be advantageous in terms of family labour. More than half of the respondents (58.0%) had farm size of more than 1 hectare, 36.0% had up to 1 hectare of land, while only 6.0% had less than 1 hectare of land. This implies that at least majority of the respondents cultivate more than one hectare of land for rice. This contradicts the findings of Alarima *et al.* (2011) who reported very few rice farmers cultivating more than one hectare of land.

Table 1: Distribution of respondents based on their personal characteristics

Variable	Frequency	Percentage
Age		
< 41	2	2.0
41-45	6	6.0
46-50	26	26.0
51-55	30	30.0
56-60	28	28.0
>60	8	8.0
Sex		
Female	6	14.2
Male	94	85.8
Marital status		
Single	8	8.0
Married	92	92.0
Divorced	0.0	0.0
Widowed	0.0	0.0
Educational status		
No Formal Education	44	44.0
Primary education	22	22.0
Secondary education	34	34.0
Tertiary	0.0	0.0
Religion		
Christianity	46	46.0
Islam	52	52.0
Traditional	2	2.0
Household size		
4 – 6	46	46.0
7 – 9	44	44.0
10 – 12	10	10.0
Farm size		
< 1 ha	6	6.0
1 ha	36	36.0
> 1 ha	58	58.0

Sources of inputs and information on inputs

Table 2 reveals that the farmers procured their seeds, fertilizer and herbicides mainly from two sources which are extension agents and agro-allied input dealers. All the farmers got seeds, fertilizers and herbicides from extension agents, while majority also get the same set of inputs (seed - 80.0%, fertilizer - 82.0% and herbicides - 78.0%) from agro-allied input dealers. The sources of credit largely explored by rice farmers in the study

area were friends (64.0%), relatives (60.0%) and personal savings (88.0%). It was found that very few of the respondents patronised money lenders (12.0%). Furthermore, result shows that all the rice farmers used hired labour in their farm enterprise, while majority (94.0%) also utilised family labour. It can be deduced from this result that only 6.0% of the respondents used hired labour exclusively. Hence, it can be asserted that the sources of labour

largely utilized by rice farmers in the study area are

a combination of family and hired labour.

Table 2: Percentage distribution of respondents based on sources of inputs

SN	Sources	Inputs				
		Seed	Fertilizer	Herbicide	Credit	Labour
1	Extension agents	100.0	100.0	100.0	0.0	0.0
2	Agro-allied input dealers	80.0	82.0	78.0	0.0	0.0
3	Friends	0.0	0.0	0.0	64.0	0.0
4	Relatives	0.0	0.0	0.0	60.0	0.0
5	Personal savings	0.0	0.0	0.0	88.0	0.0
6	Money lender	0.0	0.0	0.0	12.0	0.0
7	Bank	0.0	0.0	0.0	0.0	0.0
8	Family	0.0	0.0	0.0	0.0	94
9	Hired labour	0.0	0.0	0.0	0.0	100.0

Degree of access to inputs

Majority of the respondents indicated that they easily had access to seeds (80.0%). However, all the respondents indicated that access to fertilizers and herbicides as being restricted. Access to inputs such as labour (100.0%), land (84.0%)

and machine (68.0%) was found to be easy for most of the rice farmers in the study area. Notwithstanding, 22.0% of the rice farmers indicated restriction to machine, while 10.0% had easy access to machine.

Table 3: Percentage distribution of respondents based on the degree of access to inputs

S/N	Source	Very easy	Easy	Restricted
1	Seed	20.0	80.0	20.0
2	Fertilizer	0.0	0.0	100.0
3	Herbicides	0.0	0.0	100.0
4	Labour	0.0	100.0	0.0
5	Land		84.0	16.0
6	Machine	10.0	68.0	22.0

Marketing channels used

The various marketing channels utilized by rice farmers and the frequency at which they use each channel to market their produce is presented in Table 4. Findings from this study reveal that majority of the respondents always sold their rice on farm, while none of them ever sold their rice via farmers' marketing cooperative. The categories of

buyers that patronized rice farmers on regular basis in the study area were wholesalers (78.0%) and consumers (76.0%). It was found that majority of the rice farmers (94.0%) sometimes sell to retailers but not on a regular basis. This is believed to increase their profit margin as the nearer one gets to the final consumer the greater the profit one enjoys.

Table 4: Percentage distribution of respondents based on marketing channels used

S/N	Marketing channels	Always	Sometimes	Never
1	On farm	88.0	6.0	6.0
2	Neighbouring markets	10.0	88.0	2.0
3	Farmers' marketing cooperative	0.0	0.0	100.0
4	Wholesalers	78.0	2.0	20.0
5	Retailers	0.0	94.0	6.0
6	Consumers	76.0	12.0	12.0

Constraints encountered in rice production production constraints

Table 4 presents the various production constraints rice farmers encountered and their corresponding degree of severity. Constraints such as old age of farmers (90.0%), problem of Quelea birds (88.0%), high rate of interest (84.0%) and flood/water logging (74.0%) were found to be very severe among the respondents, while inaccessibility to land (86.0%), lack of credit facilities (84.0%),

low soil fertility (84.0%), high cost of inputs (96.0%), use of crude technology (80.0%) and lack of fertilizer (76.0%) were considered as severe production constraints militating against rice enterprise in the study area. This result aligns with report by Sanusi (2014) that high cost of productive inputs such as seeds, fertilizers and other agrochemicals; climatic factors such as flood, soil salinity and erosion, drought and global warming; weeds, pests and diseases problems; and improper



handling/management of soil and water resource are part of the many challenges of rice farming in Nigeria.

Generally, problem of Quelea birds, high rate of interest and old age of farmers ranked 1st, 2nd and 3rd respectively as the most serious production constraints militating against rice production while lack of water (15th) and soil erosion (14th) ranked least among production constraints assessed in this study. Findings from this study reveal the fact that constraint associated with age buttresses the earlier statistics recorded in

the socioeconomic characteristics of the rice farmers where majority were found to be more than 50 years. Thus, majority of the farmers lack the strength and vigour to carry out basic farm operations. The rural-urban drift might be the major reason for this development. Among rice farmers in Ekiti State, Osanyinlusi and Adenegan (2016) report pest (birds and grass cutter) infestations and inadequate funds (in form of credit access) as being foremost constraints limiting rice production in the area.

Table 4: Percentage distribution of respondents based on production constraints encountered in rice production

S/N	Constraints	Not constraint	a	Mild	Severe	Very severe	Mean	Rank
1	Lack of credit facilities	0.0		2.0	84.0	14.0	2.12	7 th
2	Lack of improved varieties	2.0		50.0	48.0	0.0	1.46	12 th
3	Lack of technical services	4.0		60.0	36.0	0.0	1.32	13 th
4	Inaccessibility to land	0.0		14.0	86.0	0.0	1.86	11 th
5	Lack of labour	2.0		62.0	24.0	12.0	1.46	12 th
6	Lack of fertilizer	0.0		10.0	76.0	14.0	2.04	9 th
7	Pest and diseases	0.0		14.0	42.0	44.0	2.30	5 th
8	use of crude technology	0.0		2.0	80.0	18.0	2.16	6 th
9	Problem of Quelea birds	0.0		2.0	10.0	88.0	2.86	1 st
10	Flood/water logging	8.0		12.0	6.0	74.0	2.46	4 th
11	Lack of water	96.0		2.0	2.0	0.0	0.06	15 th
12	High cost of inputs	4.0		0.0	80.0	16.0	2.08	8 th
13	High rate of interest	0.0		0.0	16.0	84.0	2.84	2 nd
14	Low soil fertility	4.0		8.0	84.0	4.0	1.96	10 th
15	Soil erosion	76.0		10.0	8.0	6.0	0.44	14 th
16	Old age of farmers	6.0		2.0	2.0	90.0	2.76	3 rd

Processing constraints

The result in Table 5 presents the processing constraints associated with rice production in the study area. Complexity of processing equipment (77.0%) and use of crude technology (74.0%) were found to be mild constraints among the respondents, while high cost of processing equipment (89.0%) and inefficient processing technique (69.0%) were considered as severe constraints. However, the major constraint to rice processing efforts in the study area was the problem of machine repair as it ranked first among

processing constraints assessed in this study with a mean value of 2.82. This constraint was closely followed by high cost of processing equipment (\bar{X} =2.05) and low quality of rice produced (\bar{X} =2.05) which ranked second among the processing constraints. This result agrees with Sangotegebe *et al.* (2013) who reports that rice farmers are severely constrained due to lack of processing facilities which could have helped in adding value to rice produced thereby improving consumers' acceptability and farmers' income.

Table 5: Percentage distribution of respondents based on processing constraints encountered in rice production

S/N	Constraints	Not constraint	a	Mild	Severe	Very severe	Mean	Rank
1	Inefficient processing technique	0.0		21.0	69.0	10.0	1.89	3 rd
2	High cost of processing equipment	2.0		0.0	89.0	9.0	2.05	2 nd
3	Problem of machine repair	4.0		0.0	6.0	90.0	2.82	1 st
4	Complexity of processing equipment	12.0		77.0	11.0	0.0	0.99	5 th
5	Problem of damaged grains	10.0		9.0	69.0	2.0	1.53	4 th
6	Use of crude technology	25.0		74.0	1.0	0.0	0.76	6 th

S/N	Constraints	Not constraint	a	Mild	Severe	Very severe	Mean	Rank
7	Low quality of rice produced	0.0		2.0	90.0	8.0	2.06	2 nd

Marketing constraints

The various marketing constraints encountered by the respondents and the corresponding degree of severity are shown in Table 6. It was found that marketing of rice is severely constrained by transportation challenges such as bad roads ($\bar{X}=2.30$), poor transportation system ($\bar{X}=2.16$) and poor road network ($\bar{X}=1.98$) which ranked 1st, 2nd and 3rd respectively among the constraints militating against marketing of rice among respondents. Thus, transportation challenges can result into hike in the prices of rice produced. This result is in agreement with Alarima *et al.*, (2011) who found that majority of the rice

farmers sampled are constrained by poor road networks coupled with farm topography. According to ATAI (2011), improved transportation is also associated with diffusion of technology, better use of inputs and better prices for farmers. Inefficient market system (90.0%) and lack of market (96.0%) were not regarded as constraints to rice marketing in the study area. This indicates that there is available market for rice produced in the study area and this will also serve as an incentive for farmers to increase production if other constraints militating against rice production in the study area can be brought to the barest minimum.

Table 6: Percentage distribution of respondents based on marketing constraints encountered in rice production

S/N	Constraints	Not constraint	a	Mild	Severe	Very severe	Mean	Rank
1	Poor transportation system	0.0		0.0	84	16	2.16	2 nd
2	Bad roads	0.0		0.0	70	30	2.30	1 st
3	Poor road network	2		2	92	4	1.98	3 rd
4	High cost of transportation	16		0.0	60	24	1.92	4 th
5	Lack of market	96		2	2	0.0	0.06	9 th
6	Inefficient market system	90		2	8	0.0	0.18	8 th
7	Poor trade policies	2		6	92	0.0	1.90	5 th
8	Poor marketing channels	6		80	14	0.0	1.08	7 th
9	Poor packaging	2		26	72	0.0	1.70	6 th

Storage constraints

The various constraints militating against rice storage in the study area is presented in Table 7. It was found that problem of pests ($\bar{X}=2.88$) and lack of storage chemicals ($\bar{X}=2.80$) were very severe constraints as they ranked 1st and 2nd, respectively among constraints associated with storage of rice in the study area. It was found that majority of the respondents (92.0%) had space to store rice produced as space for rice storage was not considered as a constraint in the study area.

However, the state of storage facility was considered poor by majority (96.0%) of the respondents. High cost of chemicals for rice storage was discovered to be a severe constraint (84.0%) to rice storage efforts among the respondents. Findings from this study show that efforts to ensure availability of rice particularly during the off season become hampered when storage of rice is made impossible owing to array of storage constraints militating against rice production.

Table 7: Percentage distribution of respondents based on storage constraints encountered in rice production

S/N	Constraints	Not constraint	a	Mild	Severe	Very severe	Mean	Rank
1	Poor storage facility	0.0		4	94	2	1.98	3 rd
2	Problem of pests e.g. weevils, rodents	0.0		0.0	12	88	2.88	1 st
3	Lack of storage chemicals	2		0.0	14	84	2.80	2 nd
4	High cost of storage chemicals	6		10	82	2	1.78	4 th
5	Lack of space	92		2	6	0.0	0.14	5 th

Level of constraint encountered by respondents

The level of constraints encountered by respondents along rice production chain is

presented in Figure 1. Result shows that the level of constraint is high across the production chains. The highest level of constraint encountered by

respondents along the chain was storage constraints (84.8%) and this was closely followed by production constraints (82.6%). It was found that respondents who were within the low category of marketing constraints (34.8%) were more compare

to other production chains (production - 17.4%, Processing - 23.5%, Storage - 15.2%). Generally, the level of constraints encountered by respondents was found to be high among 77.2% of rice farmers in the study area.

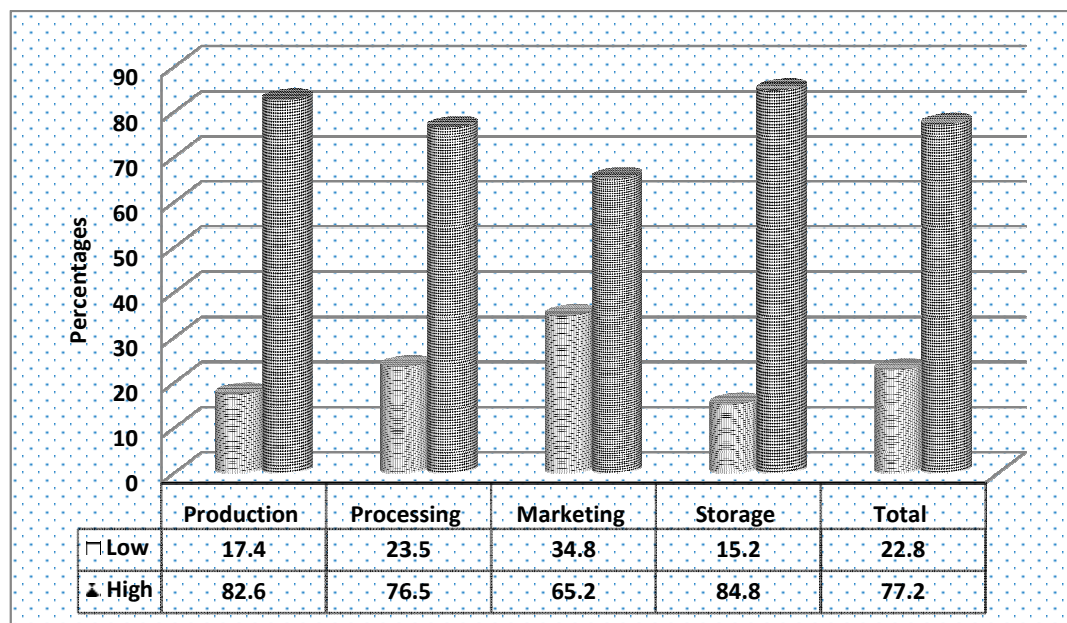


Figure 1: Percentage distribution of level of constraints encountered by rice farmers

Hypotheses testing

Results of test of relationship between respondents' selected personal characteristics and constraint to rice production are shown in Table 8. It was discovered that a significant relationship existed between educational level ($\chi^2 = -0.746$; $p < 0.05$), farm size ($r = 0.385$; $p < 0.05$) and constraint to rice production. This indicates that education inversely influences constraints encountered by respondents. This implies that those who tend to be more educated experienced lesser constraints compare to those who are not educated. Hence, education of rice farmers is paramount if

constraint to rice production is to be combated. The positive relationship between farm size and constraints suggest that those with large farm size among the respondents are more constrained in their enterprises compare with those with small hectares of farm land. However, there was no significant relationship between age, sex, marital status, religion, household size and constraint to rice production. This implies that the aforementioned variables did not significantly determine constraint to rice production among respondents.

Table 8: Test of relationship between respondents' personal characteristics and constraints to rice production

Variables	χ^2 Value	r-value	df	p-value	decision
Age	-	0.054	-	0.421	Not Significant
Sex	4.492	-	1	0.106	Not Significant
Marital status	1.810	-	2	0.913	Not Significant
Educational level	-0.746	-	4	0.002	Significant
Religion	5.896	-	3	0.207	Not Significant
Household size	-	0.102	-	0.072	Not Significant
Farm size	-	0.385	-	0.025	Significant

* Significant at $P < 0.05$; NS = Not significant; S = significant

Table 8 presents the test of relationship between access to input and constraints to rice production. There was negative significant relationship between access to input and constraints

to rice production ($r = -0.674$, $p < 0.01$). This suggests an inverse relationship between input accessibility and constraints to rice production which implies that access to input significantly

determines rice production. Thus, the more respondents had access to inputs, the lesser the

constraint they encountered in their rice enterprises.

Table 8: Test of relationship between access to input and constraints to rice production

Variables	r-value	p value	Decision
Input accessibility	-0.674	0.000	Significant

CONCLUSION AND RECOMMENDATION

The study concludes that most of the rice farmers are no longer in their productive and active ages. Old age of farmers will not favour mass production of rice that can feed a teeming population of a nation like Nigeria. There is easy access of rice farmers to land and labour, however inputs such as fertilizers and herbicides that can boost production were not readily available. Farmers primarily relied on their own savings for rice production and this might not encourage expansion of land cultivated for rice. This study had revealed array of challenges encountered by rice farmers along the production chain that might limit the commercial value of rice as crop. These challenges include problem of Quelea birds, problem of machine repair, bad roads, lack of storage chemicals and problem of pests such as weevils and rodents. Thus, given the huge tastes and preferences which the Nigerian population has shown in favour of rice as a commodity, it is pertinent to encourage youth in rice farming so that production would be increased and the quest for rice importation overcome. Financial capability of rice farmers need to be enhanced as they mainly rely on personal savings and money gotten from friends and relatives. Inputs such as fertilizers and herbicides should be subsidized by the government and made available to farmers in sufficient quantity so that farmers can be motivated to continue and increase production. Methods and effective insecticides/pesticides that can combat problems of Quelea birds, weevils and rodents should be developed and made available to farmers by government and relevant non-governmental organisations.

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ASSESSMENT OF SERVICES RENDERED BY NON GOVERNMENTAL ORGANISATIONS IN ENHANCING FARMERS' PRODUCTION IN EBONYI STATE

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ABSTRACT

In order that agriculture may continue to play its leading role as the bedrock for every nation's economy, there is the need for support and sustenance from relevant organisations. Hence, this study examined services rendered by non-governmental organisations involved in agricultural related activities in Ebonyi State. Three NGOs were purposively selected because of their involvement in agricultural related activities. The studied NGOs were Omemma Palm Produce Union (OPPU), Ngodo Women Association (NWA) and Better Life for Rice Association (BLRA). A sample of 120 beneficiaries of the NGOs services were randomly selected for this study. Data were analysed using descriptive statistics. Result shows that 59.2% of the beneficiaries were within the age bracket of 41-50 years, 73.3% were females, 83.3% were married and beneficiaries were 100% Christians. More than half of the beneficiaries (57.5%) had formal education with 32.5% having primary education. It was found that the three organisations provide credit facilities for beneficiaries. Also, OPPU provide services such as Oil palm fruits processing and training/technical knowledge; NWA provide services such as cassava processing and access to fertilizer while BLRA provide services which include rice processing, fertilizer, improved seeds and rice seedlings provision. The provision of credit facilities by NGOs was on occasional basis as indicated by beneficiaries. Improved seeds were occasionally provided by NWA (100.0%) and BLRA (100.0%). Almost all beneficiaries (93.6%) of OPPU enjoyed provision of technical knowledge. Level of output of OPPU beneficiaries (79.0%) was perceived to increase more than those of NWA (66.7%) and BLRA (45.5%) beneficiaries. Majority of the beneficiaries are constrained by poor market prices of produce (100.0%), high cost of labour (100.0%) and inadequate credit facilities (98.3%). Constraints were high for NWA and BLRA beneficiaries than OPPU beneficiaries. NGOs should endeavor to provide adequate resources needed by beneficiaries for actualisation and sustainability of program objectives. There is the need for NGOs to collaborate with international agencies interested in agricultural related services in order to overcome financial associated constraints.

Keywords: Non-governmental organisations, production level, beneficiaries, services

INTRODUCTION

The rural people are the most deprived and neglected in that they have least access to essential services such as health, education, housing and other services (Laah, Adefila and Yusuf, 2014). The rural areas are the seat of agricultural production and for agriculture to play this vital foundational role in the growth and development of a nation's economy, agriculture as a necessity has to grow and develop. This growth and development is achieved through making available adequate information on improved practices to the rural farmers and enable them acquire knowledge and appropriate skills required for improvement in agricultural production. The farmers according to Akinbile *et al.* (2006) should be assisted by extension organisations to have current knowledge of improved sources of information and have access to all inputs needed for effective production.

Agricultural extension creates the opportunities for rural development, which is *sine qua non* to the development of agriculture. According to Non Governmental Organisation Management School (2017) in Switzerland, participatory development is the most important approach towards enabling communities to help themselves and sustain efforts in development work. In this regard, agricultural extension assists the rural people to identify and execute viable

projects through self-help efforts for the actualization of their agricultural and welfare goals. In the achievement of the desired targets or objectives in agriculture, in terms of adequate food production and provision of substantial support for the local industries, the practice of agriculture must not be left in the hands of the very few. It requires and demands that all hands must be on deck and ample efforts exercised by all the relevant groups and sectors, among which are related NGOs.

Non-governmental organisations (NGOs) have positive characteristics which make their impact more readily felt and their activities result-oriented. They emphasize self-reliance and underline popular participation in their activities. Mansuri and Rao (2004) viewed rural development as the participation of the people in a mutual learning experience involving them, their local external change agents and outside resources. Since NGOs operate outside the government bureaucracy, they are more flexible in their programmes and have the advantage of working directly with grassroot groups. The NGOs usually focus on the poorest segments of the society which in many instances do not benefit from government services coupled with the fact that most times, beneficiaries' communities are located in remote areas. The overall objective of NGO intervention is to enable these disadvantaged groups to share more fully in identifying and

developing programmes to meet their own basic needs. Also, communities are no longer seen as recipients of development programmes; rather, they have become critical stakeholders that have an important role to play in the management of programmes and projects in their areas (NGO Management School, 2017). Such participation ensures that these programmes are compatible with local conditions, culture and possibilities. The ultimate measure of the success or failure of any NGO assistance is not necessarily the material aspects of a particular project, but the extent to which the beneficiaries have moved from dependency to self-reliance.

Thus, the aim of NGOs' intervention is local community action. For Non-Governmental Organizations (NGOs) to bring about development to the communities they work with, it is imperative that they effectively employ participatory methodologies for their beneficiaries to take initiative and action in planning for the development of their communities Tsiga, Hofisi and Mago (2017). The NGOs tend to have accurate knowledge and understanding of local needs and capabilities. With and through their local counterparts, they are usually able to locate individuals within communities who have the requisite skills to undertake projects as well as find materials if they are available. To attain their objectives, they take risks much more readily than do the government officials and the agencies. Their objective is to demonstrate a project or technique which can then be replicated on a large scale, either by the local government or by official donor agencies, with or without the assistance of the NGOs. The NGOs have been noted for their cost effectiveness that is, providing the same or better services for lower administrative and operational cost. Their ideology is mainly based on the idea of learning together, rather than the mere transfer of knowledge or any other traditional form of technical support from above.

Non-governmental organisations involved in agriculture attempt to support and sustain the practice of agriculture in order to contribute their quota in attaining the ultimate goal in agriculture. These NGOs involved in agriculture extend to members/participants or beneficiaries such things as credit facilities, improved practices, dissemination of information, enable knowledge acquisition and skills in the use and adoption of improved practices. Their effectiveness in these efforts is to potentially equip participants/beneficiaries, improve their practices and sustenance and this will no doubt contribute substantially to the growth and development of agriculture in the local government areas in particular and the nation as a whole. Despite the efforts of public and non-governmental agricultural organisations, farmers are not better off as they still

have low income and cannot meet up with demand for food as there is a huge volume of food importation. To compound the problem, there is dwindling efforts of various agricultural organisations as it concerns their activities and support to farmers/beneficiaries in their agricultural production due to limited resources. In spite of the giant stride by public agricultural extension organisations and the worthwhile efforts of the NGOs involved in agriculture as they influence the practice of agriculture, there is still much to be done. The NGOs involved in agriculture therefore in their efforts are playing a complementary roles with public agricultural organisations. It is in the efforts at discovering the extent to which these NGOs are involved in agriculture and effectiveness in rendering their services/assistance to participants/beneficiaries in their agricultural production that this study was designed. Hence, specific objectives of this were to determine types of services rendered by NGOs, extent to which beneficiaries derived benefit from each NGO's services, level of production and constraints encountered by beneficiaries of NGOs' services in their enterprises.

METHODOLOGY

Ebonyi State is a State in South-east Nigeria created in 1996. It is made up of 13 Local Government Areas and lies within longitude 7°3' N and 5°4' E with a land mass approximated at 5,932 square kilometres. The State shares a border with Benue State to the North, Enugu State to the west, Imo and Abia States to the south and Cross River State to the east. The people of Ebonyi State are predominantly farmers and traders. Food crops produced include yam, cassava, cocoyam, potatoes, rice, maize, and various types of vegetables. Tree crops produced are oil palm, mango, oranges, coconut etc. Livestock kept include goat, sheep, cow, horses and poultry birds.

The population of the study is beneficiaries of services of registered non-governmental organisations. Three NGOs out of the 101 NGOs registered in the state were purposively selected because of their involvement in agriculture and agricultural related activities in the state. These NGOs are Omemma Palm Produce Union (OPPU), Ngodo Women Association (NWA), Better Life Rice Association (BLRA) with 200, 50 and 50 beneficiaries, respectively. Forty percent of the beneficiaries were proportionally and randomly selected to give a total of 120 respondents for this study. Primary data was obtained through the use of structured interview schedule Data collected was analyzed using frequencies, percentages, means and Pearson Product Moment Correlation. Respondents' level of production was determined by asking respondents to indicate whether they experience



increase in their level of production as a result of NGOs services with a dichotomy response of yes or no with scores of 1 and 0 assigned respectively. Thereafter, respondents were asked to indicate whether the increase experienced was low or high.

RESULTS AND DISCUSSION

Personal characteristics of respondents

The result in Table 1 shows that 59.2% of the respondents were within the age bracket of 41-50 years. The age distribution as shown in Table 1 reveals that selected NGOs have more of older ones (above 40 years: OPPU - 71.3%, NWA - 70.0%, BLRA - 90.0%) as beneficiaries of their activities and services rendered. This may have implication for policy formulation with regards to participation in agricultural related activities and labour supply. The adults may not be less risk averse and as such may not be fully involved in agricultural activities that may concern adoption of new practices more readily than the younger people. It is necessary that the NGOs encourage the young able-bodied persons to participate in their activities and projects. The result of this study negates finding by Laah, Adefila and Yusuf (2014) who found that most respondents involved in community participation in Plateau state are 21 to 30 and 31 to 40 years which simply explains the full involvement of the active age group in community participation.

The percentage distribution of respondents by sex shows that substantial proportion of the respondents were females which indicates that the activities carried out or services rendered by the NGOs tends to favour more women (73.3%) than men (26.7%). As reflected in Table 1, 83.0% of the respondents were married. Marital status determines how decisive an individual is positioned to demonstrate or show a mark of social obligation and may sometime indicate a complementary source of labour input. By customs and from traditional point of view, a married person in areas covered by this study is highly respected and considered worthy that married applicants are probably more favoured during quest for participation than the unmarried. It was found that Christianity (100.0%) was widely practiced by respondents in the study area. This shows the predominant of Christians in the study area.

Respondents who had no formal education were 40.8%, 1.7% had adult education, 32.5% had primary education, 17.5% had secondary education and 7.5% had tertiary education. It is evident from this result that majority of the beneficiaries have the ability to read and write. It was found that OPPU had more of beneficiaries with no formal education, primary and secondary education compare to the other studied NGOs. Very few of the respondents (7.5%) had tertiary education.

Table 1: Distribution of respondents based on their personal characteristics

	OPPU		NWA		BLRA		TOTAL	
Age	Freq	%	Freq	%	Freq	%	Freq	%
21-30	5	6.3	2	10.0	-	-	7	5.8
31-40	18	22.5	4	20.0	2	10.0	24	20.0
41-50	45	56.3	12	60.0	14	70.0	71	59.2
> 50	12	15.0	2	10.0	4	20.0	18	15.0
Sex								
Male	18	22.5	6	30.0	8	40.0	32	26.7
Female	62	77.5	14	70.0	12	60.0	88	73.3
Marital status								
Single	5	6.3	-	-	2	10.0	7	5.83
Married	68	85.0	17	85.0	15	75.0	100	83.3
Divorced	-	-	-	-	3	15.0	3	2.5
Widowed	7	8.8	3	15.0	-	-	10	8.3
Religion								
Christianity	80	100.0	20	100.0	20	100.0	120	100.0
Educational attainment								
No formal education	37	46.25	5	25.0	7	35.0	49	40.8
Adult literacy	-	-	2	10.0	-	-	2	1.7
Primary	28	35.0	7	35.0	4	20.0	39	32.5
Secondary	12	15.0	4	20.0	5	25.0	21	17.5
Tertiary	3	3.75	2	10.0	4	20.0	9	7.5

Omemma Palm Produce Union (OPPU), Ngodo Women Association (NWA), Better Life Rice Association (BLRA)

Types of services carried out by NGOs

It was found in Table 2 that the three selected NGOs for this study provided credit facilities for beneficiaries (100.0%). In addition to provision of credit facilities, OPPU provided services such as Oil palm fruits processing (100.0%) and training/technical knowledge (100.0%); NWA rendered services such as cassava processing (100.0%), access to fertilizer (100.0%)

and improved seeds (100.0%), while BLRA provide services which include rice processing (100.0%), improved seeds (100.0%) and rice seedlings provision (100.0%). This shows that NGOs are assisting the rural farmers where they are situated in their agriculture and agricultural related activities by extending these assistance and services to them.

Table 2: Frequency distribution of activities undertaken by each NGO

Activities/services undertaken by each NGO	OPPU		NWA		BLRA		TOTAL	
	Freq	%	Freq	%	Freq	%	Freq	%
Provision of credit facilities	80	100.0	20	100.0	20	100.0	120	100.0
Processing of oil palm fruits	80	100.0	0.0	0.0	0.0	0.0	80	100.0
Processing of rice	0.0	0.0	0.0	0.0	20	100.0	20	100.0
Processing of cassava	0.0	0.0	20	100.0			20	100.0
Raising of oil palm seedlings	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Provision of fertilizer	0.0	0.0	20	100.0	0.0	0.0	20	100.0
Provision of improved seeds	0.0	0.0	20	100.0	20	100.0	40	100.0
Raising of rice seedlings	0.0	0.0	0.0	0.0	20	100.0	20	100.0
Provision of agro-chemicals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rearing of poultry birds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hatching of day old chicks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Provision of training and technical knowledge	80	100.0	0.0	0.0	0.0	0.0	80	100.0
Provision of vaccines	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Extent to which beneficiaries derived benefit from each NGO's services

The provision of credit facilities by NGOs was on occasional basis for all OPPU beneficiaries and majority of NWA (85.0%) and BLRA (80.0%) beneficiaries. Very few NWA (15.0%) and BLRA (20.0%) beneficiaries indicated that they always had access to credit facilities. Improved seeds were occasionally provided by NWA (100.0%) and BLRA (100.0%). Majority of the beneficiaries (93.6%) of OPPU enjoyed provision of technical knowledge; however access to information on

improved seeds (96.3%) was on occasional basis. Majority of NWA beneficiaries (95.0%) occasionally had access to fertilizer. Also, access to improved seeds was on occasional basis for all NWA and BLRA beneficiaries. Services such as processing of cassava were always rendered by NWA and BLRA to all their beneficiaries. Beneficiaries of BLRA all enjoyed rice processing services. It can be inferred that occasional provision of credit facilities may not be adequate to the level desired by the beneficiaries and this can limit the expansion of beneficiaries' enterprises.

Table 3: Percentage distribution of the extent to which beneficiaries benefit from each NGO's services

Services undertaken by each NGO	OPPU			NWA			BLRA		
	A	O	R	A	O	R	A	O	R
Provision of credit facilities	0.0	100.0	0.0	15.0	85.0	0.0	20.0	80.0	0.0
Processing of oil palm fruits	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Provision of fertilizer	0.0	0.0	0.0	5.0	95.0	0.0	0.0	0.0	0.0
Provision of improved seeds	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0
Provision of information on improved seeds	3.7	96.3		25.0	75.0		10.0	90.0	0.0
Provision of technical knowledge	93.6	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Processing of rice	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0
Processing of cassava	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0

A = Always, O = Occasionally, R = Rarely

Level of production

Beneficiaries of OPPU were into processing of oil palm produce, while NWA and

BLRA beneficiaries engage in crop production. It was found that all beneficiaries indicated that NGOs services bring about increase in their level



of production. Majority of OPPU beneficiaries (75.2%) indicated that they experienced high level of output compared to NWA (50.0%) and BLRA (23.4%) beneficiaries. Increase in the level of OPPU beneficiaries' output might be as a result of technical support services provided for

beneficiaries on oil palm processing, while low level of production experienced by NWA and BLRA beneficiaries might be due to associated production constraints particularly with regard to inputs.

Table 4: Level of production of beneficiaries

Level of production	OPPU		NWA		BLRA	
	Freq	%	Freq	%	Freq	%
Increase in production						
Yes	80	100.0	20	100.0	20	100.0
No	-	-	-	-	-	-
Level of increase						
Low	20	24.8	10	50.0	15	76.6
High	60	75.2	10	50.0	5	23.4

Constraints encountered by beneficiaries of NGOs' services in their enterprises

The result in Table 5 reveals that all the beneficiaries were constrained by poor market prices of produce (100.0%) and high cost of labour (100.0%). Other constraints experienced by majority of the respondents were inadequate credit

facilities (98.3%), inadequate improved seeds (87.5) and inadequate fertilizer (90.0%). Poor market price will not provide incentive for beneficiaries to increase production. Also, it can be inferred that inadequate improved seeds and fertilizer contributed to low level of production experienced by NWA and BLRA beneficiaries.

Table 5: Constraints encountered by beneficiaries of NGOs' services

Constraints	OPPU		NWA		BLRA		TOTAL	
	Serious	Not serious	Serious	Not serious	Serious	Not serious	Serious	Not serious
Inadequate credit facilities	97.5	2.5	100.0	0.0	100.0	0.0	98.3	1.7
Inadequate improved seeds	0.0	0.0	90.0	10.0	85.0	15.0	87.5	12.5
Inadequate fertilizer	0.0	0.0	80.0	20.0	100.0	0.0	90.0	10.0
High cost of labour	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0
Poor market price	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0

CONCLUSION AND RECOMMENDATIONS

The study concluded that beneficiaries of NGOs services were in their active and productive years. Hence, they will be able to ensure continuity of services rendered by the NGOs and also help in actualization of intervention objectives as program implementation needs able bodied men. However, not all beneficiaries were formally educated and those who were formally educated had low educational qualification. Omemma Palm Produce Union (OPPU) beneficiaries regularly enjoyed technical assistance during oil palm processing, while access to fertilizer and improved seeds by Ngodo Women Association (NWA) and Better Life Rice Association (BLRA) beneficiaries was sparing. Thus, OPPU beneficiaries experienced more increase in their level of production compared to NWA and BLRA beneficiaries. Considerable increase in level of production is hinged on availability and accessibility to various inputs needed by beneficiaries for production. Beneficiaries were constrained by array of challenges such as poor market prices of produce, high cost of labour, inadequate credit facilities and

inadequate improved seeds/fertilizer. Objectives of NGOs become impaired when needed resources by beneficiaries are not available. Thus, it was recommended that NGOs should endeavor to provide adequate resources needed by beneficiaries for actualisation and sustainability of program objectives. There is the need for NGOs to collaborate with international agencies interested in agricultural related services in order to overcome financial and other associated constraints of beneficiaries.

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IMPLICATIONS OF EZESHIP TUSSE ON COMMUNITY DEVELOPMENT: EMPIRICAL EVIDENCE OF IMO STATE, NIGERIA

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ABSTRACT

The study analysed implications of Ezeship tussle on community development in Imo State, Nigeria. Multistage purposive sampling was adopted in choosing 120 respondents. Structured interview schedule was used to solicit for the information from the respondents. Data obtained were analysed using descriptive statistics which involved the use of percentage, preference ranking, means, standard deviations and hypothesis was tested using the Duncan's multiple range test (DMRT). The result of the analysis indicates respondents' perceived personal characteristics that influence choice of ezeship. It was found that *Ezeship* tussle have both negative and positive effects on community development whereas the major coping strategies to reducing effects of ezeship tussle on community development were accommodation, cooperation and compromise. Result further indicates that the sources of Ezeship tussle that affect community development were identified among them were family ancestry, issues of hereditary and rotatory, superiority right syndrome and caste system. Result shows that family reputation ranks first while physical appearance was least considered. Result further shows the mean of the major sources of ezeship tussle were: family ancestry (2.9), injustice (2.8) and creation of new autonomous communities (2.8). Recommendations include a public enlightenment programme on the negative consequences of Ezeship tussle on community development. The results of the study calls for policies aimed at good cooperation and friendly relationship which should enhance community development.

Keywords: Implications, Ezeship, Tussle, Community development

INTRODUCTION

History has it that the Igbo's love living in small village republics, where every adult male was deemed as important as everyone else. This is because they believe in personal freedom and very strong resentment for autocratic rule (Ndoh, 1997). The *Igbo* society was acephalus and did not have any single figure one could point at as their ruler (Okereke, 1997). The consequences have been distrust, rivalry and lack of cooperation that have characterized the relationship between the component villages in the community. After the Nigerian civil war, the position of the traditional ruler otherwise known as the Eze in *Igbo* society has become very clear and significant. Power and prestige have been attached to it. Ezeship or kingship simply refers to the traditional ruler of the community. The Eze and his cabinet wield a lot of influence on community development. However, some communities are bedevilled with Ezeship tussle by local power seekers. The activities slow down the pace of community projects / development or cause outright abandonment of self-help efforts before they began even half way into the implementation (Onumadu, 2013).

Oxford Learned Dictionary 6th Edition defines tussle as a short struggle, fight, argument especially in order to get something. Tussle is synonymous with conflict. The word conflict was derived from the Latin word *confligere* meaning to tussle, clash engage or struggle over perceived incompatible goals or values. Conflict refers to physical confrontation, clash, controversy, hostility, tension disagreement, struggle, tussle among individuals and group in a society. Conflict or tussle simply described as some form of friction,

disagreement or discord arising within a group when the belief or action of one or more members of the group are either resisted by or unacceptable to one or more members of another group. Conflict is a natural occurrence in every day inter-relationships. Tussle or conflict is a dispute between two groups that is characterized by overt expression of hostility and intentional inference in the goal attainment of the opposition groups (Anyanwu, 1999).

Mgbada (2010) defines tussle as a form of social interaction in which the actors seek to obtain specific reward by eliminating or weakening other contenders. Adedoyin (2015) defines tussle as a struggle over values and claims to secure status, power and resources which aim at eliminating their rivals. Community conflict arises where there is difference of opinion between group leaders in situation where one group tend to manoeuvre the other. Conflict between personalities may result in group quarrel and thus division of the community into several factions trying to obtain command and power over the others. Conflict is an essential component of human occurring when parties involved compete, struggle over certain goals, values and interest (Adedoyin, 2015). Conflict is a purposeful struggle between the collective actors who use social power to remove opponents in order to gain status, position, prestige, resources and push their values over other social groups. Conflict is an agent of change through which social values of welfare, security justice, and opportunities are easily achieved. Communities involved in Ezeship tussles experience stress, anger, bitterness, frustration and anxiety. Conflicts seem to be unusual phenomenon with only negative

consequences. But this is not true because if managed properly conflict has both good and bad consequences.

Tussle is inevitable in any human relationship although some people believe that doing good in organizations or communities are the absolute removal of conflict. Indeed this view lack realism because some kinds of conflict are necessary to give the community challenges and encourage positive change (Akanwa, 2003). The major causes of tussle indeed are injustice, poor information management, resources, cultural difference, values perception and psychological needs. Furthermore, Ezeship tussle is a social conflict over the values, power and claims to secure status, power and superiority in which the aims of the opponents are to neutralize, injure or eliminate their rivals (Agbaraevo and Obinna, 2010).

Ezeship and chieftaincy tussles have torn apart different communities. There is hardly any community that accepts the status quo. It is no longer a gainsaying that most conspicuous causes of social conflict in communities of Igbo land in recent time are the traditional rulership, chieftaincy title, land and boundary disputes and the outcast (Osu) syndrome. The major sources of the Ezeship tussle include the issue of whether the office of the Eze should be hereditary or rotatory and the balkanization of communities into new kingdoms otherwise referred to as autonomous communities which gives recognition to the position of Ezeship in the new communities to succession (Onumadu, 2013). Adedoyin (2015) sees development as the creation of conditions for the realization of human personality which implies realization on poverty unemployment and inequality social justice and human satisfaction. Community development is all about the improvement of man and his environment. Development is an impression, a progress and a study which becomes a global concern. At the societal group level development implies an increasing capacity to regulate both internal and external relationship. Development is an attack to the foremost ills of the society that includes starvation, diseases, illiteracy, injustice joblessness and inequality (Mohammed, 2011). Development means providing sufficient and affordable basic needs for the present generation without threatening the prospects of subsequent generations (Mohammed and Babara, 2011). Community development is a collective activity. Man cannot live in isolation and he must interact with fellow human beings in order to achieve fuller and more satisfying life (Akubailo, 2008). Mgbada, (2010) explains that community development projects call for holistic approach to development for greater *esprit-de-corps* and cooperation among community members to ensure team building and unity of purpose, more focused use of their critical

or special knowledge in working together for the achievement of development objectives activity.

This term *esprit de corp* is known in Igbo cosmology and community development efforts as "*Igwebuike*" (Unity is strength) as opposed to "*Ike otuonye*" (one man's strength). Community development refers to the movement designed to promote better living for the whole community with the active participation and on the initiative of the community (Ekong, 2010). United Nations (1956) defines community development as the process by which the efforts of the people themselves are united with those of the government agencies to improve the economic, social and cultural conditions of communities to integrate these communities into life of the nation and to enable them to contribute fully to national progress. Community development is a self-help effort of the people in identifying their immediate needs and improve their level of living, applying their initiatives and using their own resources with or without the help of external agencies (Nwosu, 2013).

Theoretical bases of this study anchors on conflict theory that states that society is an arena of tussle and power struggle where cooperation is not assumed and individuals act on their own interest. The proponents of this theory define conflict as a fact of life in any society where social changes is a basic feature and tussles are the driving force behind desirable changes. The neo-classical conflict theorists were of the opinion that tussles are due to scarcity of resources, wealth, power, superiority, prestige and power are always limited in supply so that gains for one group are often losses for others (Olakunle, 2015). Conflict are products of social change because they cause obstacle to change. Generally speaking, there is hardly any society that accepts the status quo. Communities are bedeviled by the wave of Ezeship tussle which are in midst of those social process that had to cause people to move slightly further apart (Ukaegbu and Agunwamba, 1995).

Community development is the conscious and deliberate efforts aimed at helping communities recognize their need and to assume increasing responsibility for solving their problems (Ekong, 2010). It is a set of shared attitude values, goals, and practices that characterized an institution, organization or group. Eidelson and Eidelson (2008) explained that beliefs play important role in triggering conflicts between groups. This beliefs domains include superiority injustice vulnerability distrust and helplessness. Ezeship tussle consequences on community development could be negative or positive. Community development cannot work effectively of the Ezeship stool is not accepted by the whole community (Mgbada, 2010). The ugly consequences of Ezeship tussle on the traditional



value system because of its wide discrimination in form of *Osu*, *Di Ala*, *Ohu* and or stereotype syndrome. Ezeship tussle negatively affects the core value, loss of lives and properties. Studies indicate that the sources of Ezeship tussle include, seniority right minority right, discrimination /social exclusion, political exclusion, stereotyping, perception, born to rule syndrome, cultural beliefs, corruption and character of individual contestants.

Despite the constitutional provision and efforts by government, religious organizations, peace building organizations, in sensitizing mediatory and sanctioning communities and individuals. In spite of the constitutional provisions to protect the citizens in times and areas of conflict, rural communities, and local power seekers still engage in Ezeship tussle because such protections are not premised on robust and potent policies. Implications of these upheavals on the lives and properties of citizens are huge. Community development programmes and projects have operated in a world assumed to be characterized by social harmony. Efforts are hardly made to follow implementation with search for possible social feasibility to community development programme success. The literature on community development is characterized by a plethora of impact studies, critiques and perception for activity improvement, (Ukaegbu and Agunwamba, 1995). Little or no attention is paid on the possible effects on social relationship within the target population. Social relationship is an important pre-requisite to the realization of the greater community development policies and actions.

It is in this regard that this study examine the implications of Ezeship tussle on Community development; a case of Imo State, Nigeria. The specific objectives of the study, examine, personal characteristics of the acceptable ezeship contestant, - determine effect of ezeship tussle on community development, ascertain coping strategies to reducing ezeship tussle and ascertain sources of ezeship tussle in the study area.

METHODOLOGY

The study was carried out Imo state. The state is located between latitude 5°45'N and longitude 6°35'E of the Greenwich Meridian. The state has a population of 2,934,899 persons, with a total area of 5,530km² and population density of 710 persons per square kilometre and the state population is predominantly rural (NPC, 2007). It is bounded in the east by Abia State, Northwest by Rivers state. A total of 120 respondents were chosen using multi stage purpose sampling technique. In the first stage, three local government areas were purposively selected from the 27 LGAs in Imo State. They were, Obowo, Aboh Mbaise and Ideato South

In the second stage two communities were purposively selected from each LGAs giving a total of six communities. In the third stage two villages were randomly selected from each of the communities while ten respondents were randomly selected from each village. The sampling frame was the list of troubled tussling communities from each local government area, community, village selected was obtained from the Imo state peace and conflict resolution bureau. The analytical tools used in this study include descriptive statistics, such as frequency distribution, means, percentage, standard deviation and Duncan multiple range test.

Objective (i) was captured with descriptive statistics such as frequency counts, percentage and mean scores objective; while (ii) was analyzed using Duncan multiple range test. Objective (iii) the coping strategies by respondents in the study area was realized using a-10 item statements was used to solicit information from respondents. A-4 point likert type scale of strongly agree 4, agree 3, strongly disagree 2, and agree 1. Thus. $4 + 3 + 2 + 10/4 = 2.50$. Based on the mid score, decision rule, any mean score greater than or equal than 2.50 implied use of stated strategy and mean score less than 2.50 denote, non use strategy by respondents. The implication of Ezeship tussle on community development was analyzed using descriptive statistics' which involved the use of percentage and tested using the Duncan's multiple range test (DMRT) which involved the comparison of the largest score with the smallest using the Shortest Significant Difference (SSD) for their relative position to each other at 5% level of probability (Ogbunike *et al* 2003).

RESULTS AND DISCUSSION

Personal characteristics acceptable for ezeship choice in the study area

A total of 13 preferred personal characteristics acceptable for an Ezeship stool were considered as indicated in Table 1. These include, age, educational level, marital status, religion character/integrity, social network, wealth, occupation family reputation/ancestry, personality intelligent quotient, physical appealing personality. A total of 90 respondents (75.8%) indicates that family reputation/ancestry. This shows that family reputation is the most common preferred personal characteristics acceptable for Ezeship stool in the area. The respondents showed knowledge of the advantages of family ancestry. They indicated that family reputation/background suits their social status and political influence in their social system, in spite of this finding, reports in the literature shows that family reputation is not rated so high by leadership scholars/theorists as sustainable determinants for effective leadership in rural society (Ekong, 2010). Age ranked next to family ancestry/reputation. A total of 90 respondents

(75.6%) favoured age/adult as personal characteristics acceptable for Ezeship stool/position. According to the respondents age not only add prestige value and difference accorded to Ezeship but also provides political/leadership influence in the society's value system character/integrity is the third most important personal characteristics acceptable for the choice of Ezeship stool in the area. What constituted character/integrity as used by the respondents is the reputation people have of a person, particularly whether the person can be trusted or relied on. The respondents preferred these personal characteristics because a man of good character and integrity is pivotal to effective leadership that ensures enhanced community development and inspires innovative ideas.

This is followed by education. A total of 73 respondents which represent 60.8 percent saw education as an essential ingredient for any

community development because community development cannot work effectively if the "eze" is not accepted by the whole community (Mgbada, 2010). This is in line with Ekong (2010) who asserts that education creates a personality which therefore with contact outside would estimates, that ideas and experiences by other culture, and sift the relevant ones to be adopted for the modification of his own environment. This equally agreed with the observations of Agbaraev and Obinne (2010) that education makes people change orientation hence the educated person/leader believes that change is a vehicle for improvement in human conditions, whereas the uneducated is averse to change. The perceived personal characteristics acceptable for the choice of Ezeship stool are presented according to their importance/preference in the table with family ancestry or reputation and age mostly preferred.

Table 1: Distribution of respondents according to perceived personal characteristics acceptable for ezeship in Imo State, Nigeria

Personal characteristics	Frequency	Percentage	Preference ranking
Age (Adult)	90	75.0	2
Educational level	73	60.8	4
Marital status (married)	70	58.3	5
Religion	50	41.7	7
Character (Integrity)	85	70.8	3
Social network (sound)	55	45.8	6
Wealth (Moderate)	50	41.7	7
Appealing personality	70	58.3	5
Occupation (skillful)	25	20.8	9
Family ancestry	91	75.8	1
Personality	31	25.8	8
Intelligent quotient	22	18.3	10
Physical appearance	15	12.5	11

Source: Field Survey, 2017

Table 2 shows perceived effects of Ezeship tussle on community development in the study area. The data in table shows the responses of respondents on the effect of ezeship tussle on community development. A total of nine item statements were identified in Imo State as indicated in table. These include disruption of social unity, creation of inter group tension, disruption of normal channel of cooperation, solution to nagging issues, increased solidarity, destroy socio-political system, destroy economic productivity enhance positive change and enhance social values improve welfare security and justice. Result revealed that average of 12.8% of the respondents strongly agreed with the item statements while 3.6% agreed, 1.0% strongly disagreed while 0.8% disagreed with the issues. The effects of Ezeship tussle on

community development therefore takes the following order. Increased solidarity (79.2%), enhance positive change (75.0%), creation of intergroup tension, and destroy socio-political system (75.0%). This was followed by disruption of social unity (70.9%) articulate social security, welfare and justice (66.7%) and disruption of normal channel of cooperation (66.7%) and solution to nagging issues (62.5%).

These effects are geared towards positive and negative consequences of Ezeship tussle on community development. These findings are in line with the findings of Olakunle (2015) and Adedoyin (2015), to the effect that conflicts is necessary for any society/community that want to progress. Although the respondents showed different reaction to item statements.

**Table 2: Distribution of the respondents according to responses to the effect of ezeship tussle in Imo State, Nigeria**

Statement	Strongly Agree	Agree	Strongly Disagree	Disagree	Total
Disruption of social unity	85 (70.8)	30 (25.0)	2 (1.77)	3(2.5)	120 (100)
Enhance innovation tension	90 (75.0)	20 (16.7)	60 (5.0)	493.3)	120 (100)
Disruption of normal channels of cooperation	80 (66.7)	25 (20.8)	8 (6.7)	7(5.8)	120 (100)
Solution to nagging issues	75 (62.5)	30 (25.0)	10 (8.3)	5(4.2)	120 (100)
Increased solidarity	95 (79.2)	15 (12.5)	5 (4.2)	5(4.2)	120 (100)
Destroy socio-political system	90 (75.0)	25 (20.8)	3 (2.5)	2(1.7)	120 (100)
Destroy economical productivity	85 (70.8)	25 (20.8)	15 (12.5)	10(8.3)	120 (100)
Articulate social values welfare, security justice	80 (66.7)	25 (20.8)	7 (5.8)	8(6.7)	120 (100)
Mean scores (%)	12.8	3.6	1.0	0.8	120 (100)

Source: Field Survey, (2017)

Data in Table 3, reveals that respondents reported using coping strategies such as social inclusion with mean rating of 2.38, negotiation (2.57), accommodating (2.85) conciliation (3.17), compromising (3.15), and tolerance (3.04), alternative to dispute resolution (2.38), cooperation (3.04), litigation (2.99) and government action (3.09). This result is in consonance with the finding of Mgbada (2010), Akubailo (2008) where they found that coping strategies were adopted by stakeholders in communities bedeviled with ezeship and chieftaincy tussle in Southeast, Nigeria. The implication of this finding is that

government action was most preferred as coping strategy to reducing effect of ezeship tussle followed by cooperation, conciliation compromising, tolerance (3.04) litigation (2.99), accommodating (2.85) and negotiation (2.57) while alternative dispute resolution and social inclusion were neglected. The reason could be due to inequality pattern of leadership where family ancestry and social value system prevalent in Igbo society of Nigeria. This supports the assertion of Okereke (1997) that every male child in Igbo land assumes a kingship position and believed to be a republic of its own.

Table 3: Coping strategies to reducing effects of ezeship tussle in Imo state Nigeria

Coping strategies	Strongly agree	Agree	Disagree	Strongly Disagree	Total score	Mean	Decision
Social inclusion	24(96)	22(66)	50(100)	24(24)	286	2.38	Not accepted
Negotiation	48(192)	41(123)	17(51)	14(14)	308	2.57	Accepted
Accommodating	36(144)	37(111)	20(60)	27(27)	342	2.85	Accepted
Conciliation	50(250)	41(123)	14(42)	15(15)	380	3.17	Accepted
Compromising	52(208)	44(132)	15(30)	9(9)	379	3.15	Accepted
Tolerance	49(196)	40(120)	15(36)	13(13)	365	3.04	Accepted
ADR	24(96)	27(66)	50(100)	24(24)	286	2.38	Not accepted
Litigation	53(212)	35(105)	20(40)	12(12)	359	2.99	Accepted
Cooperation	50(200)	40(120)	20(40)	10(10)	370	3.08	Accepted
Government action	51(204)	39(117)	20(40)	10(10)	371	3.07	Accepted

Source: Field Survey, 2017

Sources of ezeship tussle

The distribution of respondents according to sources of ezeship tussle in Imo State are presented in table 4. The table shows that ten possible sources were investigated in the study. The table reveals that seven (7) sources were considered to be serious sources while three (3) were considered to be not serious sources of ezeship tussle. Data in table 4 reveals that respondents reported using sources of ezeship tussle that affect community development such as family ancestry with mean rating of (2.9), injustice (2.8), secession/creation of new community(2.8),

superiority/seniority right (2.7) poor information management (2.7), caste system/social value/perception syndrome (2.7) and hereditary/rotating syndrome (2.6).The table further reveals a grand mean of 2.2.The study showed that respondents perceived sources of ezeship tussle was high on (7) seven investigated sources because the individual mean source was above the grand mean. The result showed that the standard deviations were closely packed and small. This implies that the data had high degree of uniformity and reliability of the result. This finding agreed with that of Onuh and Igwemma (2007)

which explained that the smaller the standard deviation, the higher the degree of reliability of their estimates. The findings also agreed with Ekong (2010), Olakunle (2015) and Adeoyin

(2015) they asserted the sources of conflicts to ezeship tussle include; family reputation and caste system.

Table 4: Distribution of the Respondents According to Sources of Ezeship Tussle in Imo State, Nigeria

Sources of Tussle	Not Frequent		Serious		Serious		X	Std. Deviation
Majority group syndrome	104	(86.6)	14	(11.7)	2	(1.7)	1.2	0.403
Serenity right and superiority syndrome	10	(8.2)	21	(17.5)	89	(74.4)	2.7	0.6198
Secession/New creation	25	(3.9)	9	(7.8)	106	(88.3)	2.8	0.4583
Social Political Exclusion	11	(8.8)	15	(13.1)	94	(78.1)	2.7	0.6253
Poor information management	98	(81.7)	17	(14.4)	5	(3.9)	1.2	0.4345
Hereditary/Rotatory syndrome	14	(11.9)	23	(19.2)	83	(68.9)	2.6	0.6957
Injustice	8	(6.4)	15	(13.1)	98	(81.4)	2.8	0.5619
Family ancestry	4	(3.3)	8	(6.9)	108	(89.9)	2.9	0.4293
Difference in opinion	96	(80.0)	21	(17.5)	3	(2.5)	1.2	0.4737
Caste system	7	(6.1)	16	(13.3)	97	(80.6)	2.7	0.6354

Source: Field data, 2017

CONCLUSION AND RECOMMENDATIONS

This study analyzed the implications of Ezeship tussle on community development in Imo State, Nigeria. Results indicated that personal characteristics that affects the choice of an eze. Include age(75.0%)family reputation(75.8%)and integrity(70.8%).Result showed that average of 12.8% of the respondents strongly agree that the 10-item statements are the effect of Ezeship tussle on community development. The study concludes that the implications of ezeship tussle on community development could be positive or negative depending on the way it is managed. The study recommends that a public enlightenment programme, seminars and workshops on the consequences of conflict on community progress. The study also calls for policy formulation and implementation aimed at good coexistence because peace is second to none in community development.

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UTILISATION OF PRIMARY HEALTH CARE SERVICES AMONG RURAL DWELLERS IN OYO STATE

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ABSTRACT

Primary health care centres were established to facilitate health service delivery in local communities. The practices of alternative health services among other factors, especially in the rural areas, affect patronage of health care centres. The extent to which the health care services are used among rural dwellers needed to be determined. The study was conducted in Oyo state Nigeria. Simple random sampling technique was used to select 147 respondents. Primary data for the study were collected using questionnaires to elicit information on respondents' socioeconomic characteristics, ailments prevalent in the study area, level of awareness, sources of information, perceived effectiveness, constraints and level of utilisation of Primary Health care (PHC) services. Data were analysed using descriptive statistics such as frequency count, percentages, and mean. Pearson Product Moment Correlation was used to establish the relationships between variables in the stated hypotheses. Most (65.3%) of the respondents were between the ages of 35 and 54 years, 61.2% of the respondents were male. A poor economic status of most rural household with a mean of 1.13 was the greatest constraint faced by respondents in utilising PHC services in the study area and utilisation of PHC services among respondents (53.7%). There was a significant relationship between the age ($r = -0.337$, $p=0.000$), years of formal education ($r=0.566$, $p=0.000$), household size ($r = 0.515$, $p=0.000$), ailments ($r=0.326$, $p=0.000$) and constraints encountered ($r=-0.0575$, $p=0.000$) towards the utilisation of PHC services in the study area. As poor economic status of the rural household is the major problems identified by the respondents as challenges to the utilisation of PHC services it is recommended that all three tiers of government should contribute to the funding of PHC to subsidise the services in order to ensure continual usage of the health care services.

Keywords: Utilisation, PHC services, respondents

INTRODUCTION

Sound health is a fundamental requirement for living a socially and economically productive life. Primary health care (PHC) as conceptualized by the Alma Ata declaration of 1978 is a grass-root approach towards universal and equitable health care for all (Litsios, 2002). The strategy is meant to address the main health problems in the community providing preventive, curative and rehabilitative services (Alenoghena, Aigbiremolen, Abejegah and Eboime, 2014). It is the first level of contact of individuals, families and communities with the national health system, bringing health care as close as possible to where people live and work, and constitutes the first element of the continuing health care process (Olise, 2007).

Access to health care services is a multidimensional process involving the quality of care, geographical accessibility, availability of the right type of care for those in need, financial accessibility and acceptability of services (Peters, Garg, Bloom, Walker, Brieger and Rahman, 2008). The utilisation of health care services is related to the availability, quality and cost of services, as well as social-economic structure, and personal characteristics of the users (Chakraborty, Islam, Chowdhury, Bari and Akhter, 2003).

Many of Nigeria's farm families usually have close contacts with plants, wild and domesticated animals, and agricultural chemicals such as inorganic fertilisers and pesticides. Thus, several farm activities do pre-dispose farmers to disease, infection and illnesses. The adverse effects

of illness/diseases on agriculture and rural development are manifest primarily in loss of labour supply, farm income and assets. Farmers' health has significant effects on agricultural productivity.

Ulimwengu (2009) indicated that healthy farmers were found to produce more per unit of inputs, earn more income and supply more labour than farmers affected by sickness. Production inefficiency increases significantly with the number of days lost to sickness. Ajani and Ugwu (2008) also found that one percent improvement in a farmers' health condition led to a 31 percent increase in efficiency. They also reported that farmers spent as much as 13 percent of their total household expenditure on treatment of malaria alone.

The state of the Nigerian health system is dysfunctional and grossly under-funded with a per capita expenditure of US\$ 9.44 (World Bank, 2010). As a result, Nigeria still has one of the worst health indices in the world and sadly accounts for ten percent of the world's maternal deaths. Many low income countries, Nigeria inclusive, have not been able to meet the basic health care needs of their people, especially those in the rural areas. There has been a growing recognition of the challenge of rural people's health issues and the need for it to be addressed (Hamid, Sadique, Ahmed and Molla, 2005).

In Nigeria, the Federal Government coordinates that affairs of University Teaching Hospitals, the States manages the various General Hospitals while the Local Government Authorities



focus on Primary Health Centres (Dispensaries). (Gupta, Gauri and Khemani, 2004) explained that the rural populations in Nigeria are seriously underserved even as it caters for less than 20% of potential patients. Most Primary health care facilities are in a state of disrepair with equipment and infrastructure being either absent or obsolete and referral system almost non-existent. There are shortages of Physicians, Nurses and trained health personnel in most rural communities and where the services are available, difficulties associated with transportation, communication, illiteracy, nature of illnesses; family decision, traditional conservation, deep rooted traditional beliefs, customs and poverty tend to drive farm families towards traditional health care services in most rural communities in Nigeria (Okpara and Ellah, 2007; Etuk, Olatunji and Ekong, 2013 and Omotosho, 2010).

It is against this background that this research sought to know how rural households in Oyo State are utilising primary health care services available to them and the following research objectives were addressed:

1. describe the socioeconomic characteristics of the respondents,
2. identify the constraints faced by respondents in accessing these services.
3. determine the level of utilisation of respondents to primary health care services in the study area.

Hypotheses of the study, stated in null form, are as stated below;

- H₀₁ There is no significant relationship between the socioeconomic characteristics of the respondents and the level of utilisation of PHC
- H₀₂ There is no significant relationship between the constraints faced by the respondents and the level of utilisation of PHC.

METHODOLOGY

The study area was Oyo state. It was formed in 1976 from Western state, and included Osun state, which was split off in 1991. Oyo state is homogenous, mainly inhabited by the Yoruba ethnic group who are primarily agrarian but have a predilection for living in high-density urban centres. The indigenes mainly comprise the Oyos, the OkeOguns, the Ibadans and the Ibarapas, all belonging to the Yoruba family and indigenous city in Africa, south of Sahara. Oyo state consists of 33 local government areas.

Oyo state covers approximately an area of 28, 454 square kilometres and is ranked 14th by size. The climate is equatorial, notably with dry and wet seasons with relatively high humidity. The dry season lasts from November to March while the wet season starts from April and ends in October. Average daily temperature ranges

between 25°C (77°F) and 35°C (95°F), almost throughout the year.

Multi-stage sampling procedure was used in selecting the respondents for this study. In the first stage, ten percent (10%) that is, three out of thirty three (33) local government was purposively selected based on their rurality, and they were Orire local government, Ibarapa east local government and Olorunsogo local government. In the second stage, thirty percent (30%) i.e. three (3) of the ten (10) wards from Orire and Olorunsogo local government LGAs was selected using simple random sampling, while ten percent (10%) i.e. one out of the ten wards in Ibarapa local government was selected to give a total of seven (7) wards. The third stage was the random selection of three (3) communities from each of the wards, giving a total of twenty-one (21) communities. The final stage was the random selection of seven (7) households from each of the selected communities. A total of 147 respondents were used for the study.

Data were analysed using both descriptive and inferential statistics. Descriptive statistics such as frequencies, percentage distribution and mean were used to achieve the highlighted objectives while PPMC was used to test the hypotheses.

RESULTS AND DISCUSSION

Socioeconomic characteristics

Age - The result on age on Table 1 reveals that most (65.3%) of the respondents were between the ages of 35 and 54 years, 8.8% were between the ages of 25 and 34 years, while 25.9% were between 55 and 74 years. The mean age of 46.6±10.4 years implies that majority of the respondents were young and would therefore be able to access and make use of PHC services in the study environment.

Sex Table 1 also shows that majority (61.2%) of the respondents were male, while 38.8% were female. This implies that although PHC services are been utilized by both sexes, most of the male in the study area make more use of the services. This supports the findings of Adesiji, Dada and Komolafe (2012) who reported in their study of problems faced by rural people in accessing health care facilities in Akure north and Akure south local government areas of Ondo State that there are more males making use of PHC than the females.

Education - Educational level on Table 1 reveals that majority (63.9%) of the respondents had between 4 and 7 years of education, 29.3% had 12 and 16 years, 5.4% had 0 and 3 years, while 1.4% of them had between 8 and 11 years of education. This implies that since most of the respondents had basic primary education, this will help them know about services rendered by PHC and would have informed their health care choices. This is in tandem with Odetola (2015), who

reported that majority of respondents have their choice of health institution influenced by their level of education.

Household size - Table 1 also shows that majority (61.2%) of the respondents had between 5 and 8 members in their household. Also, 19.1% of them had between 1 and 4 members, 18.4% had 9 and 12 members while 1.4% had between 1 and 4

members in their household. Mean of 6.6 persons of household size suggests a large household which implies that most of the respondents had more than two members in their households which could make them use PHC services on a daily basis. This substantiates the findings of Olajide (2013) that the household size of respondents in the study area was between 2 and 4 persons.

Table 1: Distribution of the respondents by socioeconomic characteristics

Variables	Percentage	Mean
Age		
25-34	8.8	46.4
35-44	38.1	
45-54	27.2	
55-64	21.1	
65-74	4.8	
S.D=10.4		
Sex		
Male	61.2	
Female	38.8	
Education level		
0-3	5.4	
04-07.	63.9	
08-11.	1.4	7.6
12-16.	29.3	
S.D=3.5		
Household size		
01-04.	19	
05-08.	61.2	
09-12.	18.4	6.6
13-16	1.4	
S.D=2.3		

Source: Field survey, 2016

Constraints faced by respondents in the use of PHC services

Result on Table 2 shows that poor economic status of most rural households with the highest mean (1.13) which is ranked 1st was the major constraint faced by the respondents followed by inadequate health personnel which was ranked 2nd based on the mean (1.03) and the least constraints faced by the respondents was absence of standardised measurement of drugs which possess the least mean (0.24) and was ranked 13th.

This means that most rural households are far away from PHC centres which could hinder respondents from making use of PHC services. Also, the absence or inadequate health personnel may discourage respondents from making use of PHC services in the study area. This supports the work of Abdulraheem *et al* (2012) which shows one of the hindrances to the development of health especially in Nigeria has to do with insufficient number of medical personnel as well as their uneven distribution.

Table 2: Distribution of respondents based on constraints faced in the use of PHC services

Constraints	Severe	Mild	Not	Mean	Rank
Poor economic status of most rural households	30.6	51.7	17.7	1.13	1 st
Inadequate health personnel	25.9	51.7	22.4	1.03	2 nd
Inadequate drugs and vaccines in health centres	30.6	41.5	27.9	1.02	3 rd
Inadequate health care centres	28.6	44.2	27.2	1.01	4 th
High cost in accessing PHC	21.1	53.7	25.2	0.95	5 th
Distance to health centres	19	51.7	29.3	0.9	6 th
Insufficient information about health issues	10.2	61.2	28.6	0.82	7 th
Lack of awareness of services provided	12.9	48.3	38.8	0.74	8 th
Wastage of ample time in assessing treatment	7.5	53.7	38.8	0.69	9 th
Preference for medical herbs	11.6	32.7	55.8	0.56	10 th



Constraints	Severe	Mild	Not	Mean	Rank
Quality of services provided by health personnel in health centres	7.5	22.4	70.1	0.37	11 th
Lack of belief in health personnel	6.1	14.3	79.6	0.27	12 th
Absence of standardised measurement of drugs	85	6.1	8.8	0.24	13 th

Source: Field survey, 2016

Respondents' utilisation of PHC services

Result on Table 3 shows that majority of the respondents always utilised the following PHC services: Immunisation against infectious diseases (89.8%), maternal and child health care services (70.1%), supply of safe water and basic sanitation

(66.7%), treatment of diseases (62.6%), prevention of diseases (57.1%), while majority of the respondents rarely utilised normal delivery services (47.6%). This implies that respondents have faith in PHC services and trust it to keep them safe from preventing diseases/ailments and also, curing it.

Table 3: Distribution of respondents based on utilisation of PHC services

Level of utilisation	Always	Rarely	Not at all	Mean	Rank
Immunisation against infectious diseases	89.8	9.5	0.7	1.89	1st
Maternal and child health care services	70.1	27.2	2.7	1.67	2nd
Treatment of diseases	62.6	34.7	2.7	1.6	3rd
Prevention of diseases	57.1	40.8	2	1.55	4th
Provision of essential drugs	49.7	49	1.4	1.48	5th
Supply of safe water and basic sanitation	19.7	66.7	13.6	1.06	6th
Normal delivery service	18.4	47.6	34	0.84	7th
Family planning counselling	14.9	42.2	42.9	0.72	8th
Health education	8.2	46.9	44.9	0.63	9th
Routine check-up, vital signs and general health	6.8	45.6	47.6	0.59	10th
Blood pressure check (BP)	4.8	40.8	54.4	0.5	11th
Nutrition education	5.4	36.7	57.8	0.48	12th
Blood test	2	32	66	0.36	13th
Urine test	0.7	23.8	75.5	0.25	14th

Source: Field survey, 2016

Furthermore, result on Table 4 shows that majority (53.7%) of the respondents had high utilisation of the PHC services, while 46.3% had low utilisation. This implies that respondents in the

study area would continue to utilise the PHC services as they could be benefiting more from the services rendered.

Table 4: Distribution of respondents based on level of utilisation of PHC

Level of utilisation	Frequency	Percentage	Mean	SD
Low (0-13)	68	46.3	13.6	5.6
High (14-27)	79	53.7		
Total	147	100		

Minimum=0, Maximum=27

Source: Field survey, 2016

Hypothesis 1: Relationship between selected socioeconomic characteristics of the respondents and utilisation of PHC services

Table 5 also shows that there was a significant relationship between age ($r=-0.337$,

$p=0.000$), educational level ($r=0.566$, $p=0.000$), household size ($r=-0.515$, $p=0.000$) and utilisation of PHC services. This implies that age, educational level and household size had a significant influence on the utilisation of PHC services in the study area.

Table 5: Results of Pearson distribution of selected socioeconomic characteristics of the respondents and utilisation of PHC services

Variables	r value	p value	Decision
Age	-0.337	0.000	S
Education	0.566	0.000	S
Household size	-0.515	0.000	S

Hypothesis 2: Relationship between constraints and level of utilisation of PHC

Result on Table 6 shows that there exists a significant relationship between constraints ($r=-0.0575$, $p=0.000$) and level of utilisation of PHC services. This implies that constraints faced by the

respondents influence their utilisation of the PHC services. The lesser the constraints they face, the more they utilise the services. This supports the work of Aide *et al.* (2014), where it was reported that respondents experience difficulties in accessing PHC services.

Table 6: Result of correlation distribution between constraints and level of utilisation of PHC services

Variables	r value	p value	Decision
Constraints	-0.575	0.000	S

Source: Field survey, 2016

CONCLUSION AND RECOMMENDATION

The study revealed that poor economic status of the rural household was the major problem identified by the respondents as the challenge to the utilization of PHC services. There is high level of utilization of PHC by respondents in the study area. Based on the findings of this study, the following recommendations are made towards the utilization of primary health care services:

- There should be an establishment of public health centres by Government at all tiers in the core rural areas. This will increase the proximity and accessibility of rural people to public health facilities.
- Governments at all tiers should ensure equitable accessibility to health care delivery across the rural areas by deploying more medical staff to the rural areas.
- Rural development policies should promote the creation of enabling environment to enhance participation in modern health care delivery.

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