

ANALYSIS OF THE IMPACT OF AGRICULTURAL EXTENSION POLICIES ON CONTACT-FARMERS IMPROVEMENT IN ABIA STATE, NIGERIA.

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Abstract

This study investigated the analysis of the impact of agricultural extension policies from 2001 to 2012 on Agricultural Development Programme contact-farmers' improvement in Abia State Nigeria. Specific objectives were to determine the socio-economic characteristics of the respondents, examine the awareness of the different agricultural extension policies on contact-farmers improvement, and determine the impact of agricultural extension policies on contact farmers infrastructural support facilities. Data were obtained using structured questionnaire and oral interview schedules. Descriptive and inferential statistics were used in the analysis. The descriptive statistics used were included percentages and frequency distribution while the inferential statistics were regression and correlation coefficient analyses. Results showed that middle aged (30-50) years of contact-farmers actively involved fully in farm activities, 56 percent of the respondents were married while 49 percent of the respondents knew about agricultural development projects. Based on the results, the following were recommended, that government as a matter of urgency should provide extension services that will help to teach farmers the adoption and diffusion of new agricultural innovations'. There is need for increased and stable funding for research activities. That proper coordination of agricultural policies should be encouraged.

Keywords: *agricultural extension policies, contact-farmers and improvement.*

Introduction

Agriculture was the mainstay of the Nigerian economy before the oil boom which began from the early seventies. Agriculture accounted for about 50 percent of the Gross Domestic Products (GDP) during the period 1961-1970 while the average annual growth rate was impressive at 4.5 percent (Obioma, 2012). Agricultural sector attracted less attention during the period of the oil boom in terms of funding and poor articulation of policies. (Ahmed, et al, 2004). Hence its performance deteriorated, as the contribution to GDP declined to 25.7 percent during 1971-80 while a negative growth rate was recorded. Although its share in GDP recovered over the years as a result of volatility in oil production price, and growth rate remained low till 2001 (CBN, 2011). This imply or resulted in unfavourable import and export imbalance.

The growth slowed down, output became increasingly, inadequate to meet rising demand for food and industrial raw materials. This ugly situation resulted in the country's import dependence, with rising import bills (CBN, 2011). The size of demand and supply gap increased and domestic food prices rose significantly to the economy thus, the inflation rate rose astronomically (CBN, 2011).

In order to cushion the effect of the dwindling performance of agriculture, in the country, government initiated numerous policies and programmes aimed at restoring the agricultural sector to its rightful position as the mainstay of the nation's economy. The sustainable agricultural growth and development was beset with fundamental constraint such as small scale nature of production system, low productivity, poor response to technology adoption strategies and poor return to investment. Agriculture is fundamental to the sustenance of life and indeed the bedrock of economic development, especially, in the provision of adequate food for human and industrial materials for industries and sustainable agricultural development is propelled by agricultural policies, (Afolabi, 1997). Agricultural policy is a statement of actions and a fundamental tool used in achieving agricultural development, (Iwuchukwu and Igbokwe 2012). Policy is defined as deliberate plan of action to guide decisions and achieves rational outcome. It consist of principles and rules governing the behavior of persons in an organization. (Iwuchukwu and Igbokwe, 2012).

Agricultural extension policy is the synthesis of the framework and action plans of government designed to achieve overall agricultural growth and improvement. The policy aims at the attainment of self-sustaining growth in the sub-sectors of agriculture and the structure transformation necessary for the overall socio-economic development of the country as well as the improvement in the quality of the Nigerian people (Afolabi, 2002).

The ADP- contact farmers who constitute the focus of this research could be defined as innovatory early adopters and opinion leaders in any farm community who are actively farmers. They are the first people (farmers) who know about new technologies and try them out for others to follow (Njoku, 2013). Despite different agricultural extension policies formulated, articulated and implemented by successive governments in Nigeria in general and Abia State in particular. Agricultural production still remains very low and unattractive. In spite of the laudable

agricultural policies there are inaccessibility of improved seeds, inadequate fertilizer, agro chemicals and insufficient fund to farmers. The rest are poor access to credit to farmers, inadequate research findings, even if available extension agents and farmers ratio is alarming. These have created unemployment, scarcity and inflation of agricultural products in the study area, there by making farming unattractive. It is because of these problems that prompted this study on the impact analysis of agricultural extension policies on contact-farmers improvement in Abia State, Nigeria.

The specific objectives were to:

Determine the socio-economic characteristics of the contact-farmers examine the awareness of the different agricultural extension policies on contact farmer-improvement. Determine the impact of agricultural extension policies on contact-farmers infrastructural support facilities in the study area. The study assumed that there is significant relationship between agricultural extension policy and contact farmers improvement in Abia State.

Materials and Methods

Study Area

The study was conducted in Abia State, in the South-East Agro-ecological zone of Nigeria. With a population of 2,833,999 persons. The state has a population density of 578 persons per square kilo meters (National population Commission, 2007). Abia State lies within longitude $7^{\circ}23'E$ and $8^{\circ}2'E$, and latitude $4^{\circ}47'N$ and $6^{\circ}12'N$. The state is located east of Imo State with which it shares common boundaries on its Western part. On the North and North East Anambra, Enugu and Ebonyi State bound it. Cross River and Akwa Ibom State bounds it on the East and South East while it shares its Southern borders with Rivers State where the Imo River demarcates the two states. The population is mainly rural with (62.25%) and only 37.75% urban population (NPC, 1998).

The state is located within the rainforest belt of Nigeria and the temperature ranges between $25^{\circ}C$ and $30^{\circ}C$. The rainy season is from April to October, with the moisture-laden south westerly wind. It has an annual average relative humidity of 75 percent and rise to 90 percent. The high temperature and humidity experienced in the state favours luxuriant plant growth which ideally should produce the climax vegetable of the tropical rainforest (Microsoft, 2012).

They are predominantly agrarian people with cassava, yam, cocoyam, maize, okro and melon as their major crops. Oil palm and rubber are the major cash crops produced in the state. The state is endowed with mineral resources like petroleum, Kaolin, limestone etc (Microsoft, 2012).

Abia State is made up of 17 Local Government Areas, and three agricultural zones namely; Aba,

Ohafia and Umuahia agricultural zones. The state consists of 38 extension blocks and 274 circles or cells, (Abia ADP, 2004). It is culturally rich with institutions like age grades, Ekpe society and community-based organizations which play active role in promoting socio-economic development of the area, (Abia ADP, 2004).

Sample Size and Data Collection

The study was conducted in the three agricultural zones of Abia State, namely; Ohafia, Aba and Umuahia agricultural zones of Abia State. A list of contact farmers were collected from Agricultural Development programme (ADP) which formed the sampling frame.

A multi stage purpose random sampling was employed in the selection of contact farmers. Three extension blocks were selected from each of the three agricultural zones making a total of nine (9) extension blocks out of the 9 extension blocks, three circle were randomly selected from each of the 9 extension blocks giving a total of 27 (twenty seven) extension circles. From each of the 27 (twenty seven) extension circles, four (4) contact-farmers were purposively selected making a grand total of 108 (one hundred and eight) contact-farmers which constitute the sample size.

This is because most of contact farmers are resident in the rural areas and for evenly spread in the agricultural zones of Abia State. Primary data were collected, using a structured questionnaire. The researcher employed the service of enumerators in the administration of the questionnaires.

Data were collected on socio-economic variables like; age, educational qualification, marital status, agricultural policies awareness, farming experiences, technology attribute, income and membership of organization extension contact, output among others. The data collected were achieved using descriptive statistics such as mean, frequency and percentages.

Objectives I and II were analyzed using descriptive statistics while the assumed study was achieved using regression and correlation analysis models.

The implicit model of the regression is as follows:

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

The explicit model expression as

$$Y = a_0 + a_1x_1 + a_2x_2 - - - a_nx_n$$

Where y = number of technology/policies formulated

f = is the functional relationship

x_1 = contact farmers age (years)

x_2 = contact farmers educational qualification (years)

x_3 = contact farmers farming expense (years)

x_4 = contact farmers income (₦)

x_5 = contact farmers output (Kg)

x_6 = contact farmers extension contact (numbers)

x_7 = contact farmers marital status (married 1, otherwise 0)

x_8 = contact farmers skill acquired (simple, complex)

x_9 = contact farmers policy awareness (yes, No)
 e_i = error term.

Results and Discussion

Socio-economic characteristics of ADP Contact-farmers in Abia State, Nigeria.

Result in Table 1 showed that selected socio-economic characteristics of contact-farmers in the study area, include; age, marital status, income, educational qualification, agricultural extension policies, extension contact, awareness of extension policies and group membership.

The table revealed that 48.14 percent of the respondents were aged between 40 and 60 years, energetic and physically vibrant group. Similarly, majority of the respondents (54.5 percent) were married. Education wise majority (48.14 percent) acquired secondary education.

This implies that the respondents were likely to be innovators and early majority adopters, therefore they are effective contact farmers. Hence, they are rich, exposed and can afford the risk. This is in support with, *Okoye, et'al* (2004) who asserted that education has the capacity to influence people to accept new technology and change their attitudes to the desired technology. Group membership recorded high as results showed that 76.37 percent belong to group organizations. Extension contact were high as 44.4 percent of the respondents attested in favour of availability of extension contact. This implies that contact farmers were effective. The table also revealed that income per annum of the contact famers were very low as majority 66.67 percent of the respondent earned below ₦50,000.00 which is below the recommended minimum international standard income.

Table 1: Distribution of Respondents According to Socio-Economic Characteristics of Respondents.

Variables	Frequency	Percentage
Age		
20-30	4	3.70
31-40	12	11.11
41-50	36	33.33
51-60	52	48.14
60 and above	4	3.70
Total	108	100.00
Marital Status		
Married	60	55.55
Divorced	10	9.25
Separated	20	18.52
Widowed	14	12.96
Single	4	3.70
Total	108	100.00
Educational level		
Primary	24	22.22
Secondary	52	48.14
Tertiary	28	25.93
None	4	3.70
Total	108	100.00
Group Membership		
Yes	76	70.37
No	32	29.63
Total	108	100.00
Extension Contact		
1-2	20	18.52
3-4	40	37.04
5-6	48	44.44
Total	108	100.00
Income level		
10,000-50,000.00	60	55.56
60,000-100,000.00	36	33.33
110,000-150,000.00	12	11.11
Total	108	100.00

Source, Field Survey Data, 2013,

Awareness of Agricultural extension policies by ADP contact-farmers in Abia State, Nigeria.

Agricultural extension policies aimed at improving the standard of living, income level and general well being of farmers. Table 2 policies shows that, the number of respondent who are aware of these extension policies such as post harvest technology policy, technology dissemination policy, technology transfer policy, input supply subsidy, agricultural credit scheme and agricultural transformation agenda. The rest were growth enhancement support, commodity value chain programme, root and tuber expansion policy, fertilizers input supply policy, import substitution policy and, commercialization policy. Table 2 indicates that majority 77.61 percent of respondents were aware of agricultural transformation agenda more than any other

agricultural extension policy. This implies that contact farmers were able to procure services such as farm inputs like fertilizers, improved varieties of seeds; extension services rural road construction and irrigation facilities in the study area. This is in line with the findings of (Nwoko and Mabanowaku, 1983), that most agricultural policy was disseminated by Agricultural transformation agenda programme.

This table also showed 16.90 percent awareness of post harvest technologies by contact farmers, as it was noticed that majority of agricultural extension policies were not known to the contact farmers, hence low awareness of these agricultural policies in the area. This would have accounted to the very low agricultural production by the farmers in Abia State.

Table 2: Distribution of Respondents According to Agricultural Extension Policies awareness by contact farmers, in Abia State, Nigeria.

Awareness of Agric Policies Variables	Frequency	Percentage
Post-harvest/technology	17	16.90
Technology disensation	4	3.06
Input subsidy	12	11.43
Agricultural credit scheme	4	3.80
Agricultural transformation Agenda	51	47.61
Growth Enhancement support	12	10.48
Commodity value chain programs	2	1.90
Root and Tubers Expansion	2	1.90
Free Fertilizers inputs supply	4	3.80
Total	108	100.86

Source, Field Survey Data, 2013.

Analysis of the impact of Agricultural extension policies on contact farmer's improvement in Abia State Nigeria.

The impact of agricultural extension policies on contact farmer's improvement were achieved using regression and correlation analysis models.

The regression model result revealed that determinants of agricultural extension policies adoption or acceptance. The factors such as age, gender, marital status, education and type of agricultural policies skill acquired and income level were subjected to multiple regressions using ordinary least square method and four functional forms were evaluated (Linear, exponential, semi long and cob-Douglas functional forms). Among four forms; the lead equation was selected based on the one with the highest R^2 , F- value, number of statistically significant explanatory variables and followed apriority and economic explanation hence linear functional form was therefore chosen as lead equation.

The value of R^2 is 0.518, signifies that 51.8 percent of the total variation in agricultural policy adopted was accounted for by the explanatory variables used in the model while the remaining 48.2 percent was

due to unexplained variable as captured by the error term of the model. The F-values of 2.850, which is significant at 1% implies that the model is best fit to explain the relationship between explanatory variables and dependent variables. Among the variables used in the model, four of them went statistically significant at 10 percent level of significance. The coefficient of gender (0.277) which is negatively significant at it level significance indicated that female contact farmers tends to adopt guided by less agricultural extension policies than their male counterparts. This implies that gender indirectly affected the adoption or use of agricultural extension policies in the study area. This is because females have less vigor and doggedness to engage in large farm size operation which would involve the use of these agricultural extension policies. The coefficient of age (0.262) is significant at 1 % level of significance.

This implies that as the contact farmer age increases/advanced, there is a reduction in his activities on farm operation because of lack of strength to partake in active farm activities, hence his/her interest awareness and adoption reduces significantly as he aged. Similarly, the coefficient of

educational level is (0.178***) and significant at 1% implies that an educated contact farmer would easily practice and adopt agricultural extension policies since she finds it easy and affordable to deceiver and practice any agricultural skill required from the agricultural extension policies adopted.

Furthermore the coefficient of income level (1.236***) is significant at 1%. This indicated that as

the income level of contact farmers increases, he would likely be aware and adopt new extension policies that would boost his income. This means that he has financial capacity to undertake new agricultural innovations. It is revealed from the result that gender, age, education level and income level of agricultural extension policies awareness and adoption by contact farmers in the study area.

Tables 3 Linear Regression Analysis of the impact of socio economic characteristics on the agricultural extension policies awareness and adoption by contact farmers in Abia State, Nigeria.

Variation	Coefficients	Standard Error	T-Value
Constant	3.301	1.636	2.018***
Gender	-1.346	0.482	-2.0791***
Age	-0.071	0.032	-2.237***
Marital Status	-0.071	0.398	-0.264**
Educational Status	-0.105	0.363	1.699*
Skill Acquisition level	0.067	0.178	0.372
Income level	3.128	0.235	13.311***
R ²	0.0518		
F-value	2.850		
N	108		

Significant at 1%, **= significant 5%, =significance at 10% Ans. = not significant.

Source: Field Survey Data, 2013.

Conclusion and Recommendations

Reasonable conclusion has been made from the result of the study, these include;

The research study confirmed that agricultural extension policies awareness and adoption have great impact on contact farmer's improvement. It has also confirmed that educational level, income level, age and marital status are essential ingredients of agricultural extension awareness policies, and adoption. Consequently improvement in agricultural productivity by farmers in the study area. Based on the findings, the following recommendations are made: that government as a matter of urgency should provide effective extension service that will teach contact-farmers the need of adoption and dissemination of the new extension policies to fellow farmers. As of now the farmer-extension agent ratio is exceedingly high, couple with the high illiterate level in rural areas, more extension personnel should be trained to retrain the contact farmers with the view to increase the number of contact farmers to help disseminate the lots and lots of research findings. Again after disseminated and adopted more awareness enlightenment campaign should be mounted with the view of increasing awareness of new agricultural policies based on benefit and uses of adoption of such policies.

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