

FOOD SECURITY AMONG FARMING HOUSEHOLDS IN ILORIN SOUTH LOCAL GOVERNMENT AREA

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ABSTRACT

This study therefore, focused on food security among farming households in Ilorin South Local Government Area, Kwara State, Nigeria. Multistage sampling technique was used for this study. In the first stage, ADP zone C was purposively selected. The second stage was the random selection of one Local Government Area from the ADP zone. The third stage was random selection of three villages in the Local Government Area. The fourth stage was the random sampling of fifty (50) respondents in each of the villages. A total number of 150 questionnaire were administered to 150 household heads, out of which 149 respondents were successfully interviewed. Data collected were analyzed using descriptive statistics and logit regression. Data were analyzed to determine the relationship between independent variables (age of household head, years of schooling of household head, household size, weight loss and farm size) and the dependent variable (food security status). The mean age of the household heads was 54 years. This shows that majority of the respondent were still within their productive age. The mean years of schooling was 5 years. This was an indication that an average household head in the study was primary school drop-out. About 78% of the respondents indicated that poor weather condition is the cause of food insecurity. Household with large farm size has propensity to be more food secured than their counterparts with small farm size. Therefore government should encourage farmers to graduate from subsistence agriculture to large scale commercial agriculture.

Keywords: *Food security, poor weather condition and weight loss.*

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Introduction

The significance of food to human survival cannot be over emphasized. Human being need food for sustenance of life, prevention of sickness, energizing of the body for its normal day to day activity and for the maintenance of good frame of mind (Helen, 2002). It is a widely accepted fact that food is a basic necessity of life. Its importance at the household level is obvious since it is a basic means of sustenance. Adequate intake of quality food is a key requirement for healthy and productive life (Helen, 2002). A country can be said to be enjoying food security when people's fear of not having enough to eat is removed and the most vulnerable group, namely women and children, in the marginal areas have access to adequate quality of food they want.(World Bank, 1986). Food security exist when all people at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preference for an active and healthy life. It is also the ability of a household to secure either from its own production or through purchases, adequate food for meeting the dietary needs of all its members (Maziya-Dixon *et al.*, 2004).

Found that many countries experience food insecurity with food supplies being inadequate to maintain their citizens' per capita consumption. They also found that sub-Sahara Africa was the most vulnerable region. The average amount of food available per person per day in the region was 1,300 calories compared to the world wide average of 2,700 calories (FAO, 2004).

The objectives are to;

- Examine the socio-economic characteristics of the respondents in the study area.
- Identify the food security strategy of farming households in the study area.

- Analyze causes of food insecurity among the respondent household in the study area.
- Estimate the factors affecting the farming household's food security status in the study area.

Hypothesis testing:

H_0 : There is no significant relationship between the socio economic characteristic of the respondent and the food security.

Methodology

This study was carried out in Ilorin South Local Government Area of Kwara State, Nigeria. Ilorin South Local Government Area has land size area of 177,607 square kilometer. It has a total population of 209,251, which is made up of 103,606 males and 105,645 females (National Population Census 2006). Kwara State lies within the north central geopolitical zone of Nigeria. It has a land area of about 34,467,536 square kilometres. According to the 2006 National Population Census figure, Kwara State has a total population of 2,365,353. This is made up of 1,193,783 males and 1,171,570 females. Majority of the people are involved in small scale farming. The State is bounded in the North by Niger State, in the South by Osun and Ondo States, in the East by Kogi State and in the West by Oyo State. Kwara State shares an international boundary with the Republic of Benin (Taiwo, 2005). Kwara State is located between latitudes $7^{\circ}45'N$ and $9^{\circ}30'N$ and longitudes $2^{\circ}30'E$ and $6^{\circ}35'E$. The topography is mainly plain lands to slight gentle rolling. The annual rainfall ranges between 1000mm and 1500mm. Average temperature ranges between 30 and $35^{\circ}C$ (KWADP, 1996).

Population comprises of all household heads in the rural areas of Ilorin South Local Government Area, Kwara State. Multistage sampling techniques were used for sampling of respondents. The first stage involved purposive sampling of ADP(Agricultural Development Programme) zone C out of the four zones in the State: which comprises of ADP Zones; A, B, C, and D's. The second stage was purposive sampling of one (1) Local Government Area from the Zone. The third stage was random selection of three villages in the Local Government Area. The fourth stage was the random sampling of fifty (50) respondents in each of the villages. A total number of 150

questionnaire were administered to 150 household heads, out of which 149 respondents were successfully interviewed.

The tools and procedure that were employed elucidated the objectives of the study: this includes the following.

Descriptive statistics:

They are the mean, percentages and frequency distribution. These were used as tools to describe the socioeconomic, food security activities and causes of food security information of the individual household.

Food security index:

Household were classified into food secure and food insecure status using food security index.

It is given by;

$$F_i = \frac{\text{per capita food expenditure of the } i\text{th}}{2/3 \text{ mean per capita food expenditure of all households}}$$

Where,

F_i = Food security index

$F_i \geq 1$ = Food secure i th household

$F_i \leq 1$ = Food insecure i th household

Logit regression model:

The isolation of the determinants of poverty will be done using Logistic regression model. The logit regression model, a dichotomous regression model is based on cumulative logistic distribution function. The model is specified as follows:

$$A_t = E \left(Y_t = \frac{1}{X_t} \right) = \frac{1}{1 + e^{-(\alpha + \beta X_t)}}$$

$$A_t = \frac{1}{1 - e^{-B_t}}$$

Where $B_t = \beta_1 X_1 + \beta_2 X_2 \dots \dots \dots \beta_n X_n$, where A_t is the cumulative logistic distribution function.

In order to obtain the value of B_t the likelihood of obtaining or observing the sample need to be formed by introducing dichotomous response variables (Y_t) such that

$Y_t = 1$ if household is poor and 0 if otherwise

X_t = independent variables; $t = 1, 2, 3, \dots, 8$; α_t and β_t

The hypothesized independent variables used are:

X_1 = Age

X_2 = Years spent in school

X_3 = Household head income (₦)

X_4 = Household size

X_5 = Weight loss

X_6 = Farm size

Results and Discussion

In Table 1, 65.77% of the household heads in the study area were below 51 years old, while the older household heads accounted for 34.33% of the respondents. The mean age of the household heads was 54 years. This shows that most of the respondent were still within their productive age. The mean years of schooling was 5 years. This was an indication that an average household head in the study was primary school drop-out. This is because the number of years for the completion of primary school in Nigeria is 6 years. The largest segment (34.69%) of the respondents earn between ₦30001- ₦70000. The mean of the household income was ₦82,362.64. This shows that most of the respondents were average income earners. The mean household size was 7. This was an indication that the respondents had large family members.

Table 1: Socio –economic characteristics of respondents and their household

Socio Characteristics	Economic	Frequency	Percentage
Age (years)			
≤ 40		18	12.08
41 – 50		80	53.69
51 – 60		21	14.10
61 – 70		14	9.39
≥71		16	10.74
Mean = 54 years			
Educational status			
No Formal Education		55	36.91
Primary		54	36.24
Secondary		32	21.48
Adult education		8	5.37
Mean = 5 years			
Household monthly income (₹)			
≤ 30000		37	25.17
30001 – 70000		52	34.69
70001 – 110000		27	18.37

110001 – 150000	19	12.24
>150000	14	9.53

Mean = 82,362.64

Household size

1 – 3	19	20.82
4 – 6	32	28.23
7 – 9	82	42.55
≥10	16	8.40

Mean = 7, Maximum = 23

Field survey, 2013.

In Table 2, most (78.92%) of respondents engage in hunting and fishing as food security strategy. This shows that the household heads were innovative in finding solution to the problem of food insecurity. Household heads engage in crop rotation (3.4%) in order to improve soil fertility. This is to increase crop output. House heads practiced irrigation farming (17.69%) as food security strategy in the dry season when food is scarce due erratic or lack of rainfall.

Table 2: Food security strategy

Characteristics	Frequency	Percentage
Crop rotation	6	3.40
Irrigation farming	27	17.69
Hunting and Fishing	116	78.92

Field survey, 2013.

In Table 3, about 78% of the respondents indicated that poor weather condition is the cause of food insecurity. Aina and Omonona (2012) agreed that, agricultural production is associated with high risk due to the problems of natural disaster (such as poor weather condition) which are beyond the control of the farmers. The household heads that were food insecure due to lack of credit facilities were 20.81%. Credit facilities are necessary tool for commercialization and large scale agriculture which could cob the problem of food insecurity both at the micro and macro-economic level. Moreover, 2% of the respondents had problem of poor access to extension services.

Table 3: Causes of food insecurity

Characteristics	Frequency	Percentage
Lack of credit	31	20.81
Poor weather condition	115	77.18
Poor access to extension services	3	2.01

Field survey, 2013.

The result from Table 4 shows that the coefficients of weight loss and household size were negative and significant at 10 percent level. Moreover, the coefficients of years spent in school was negative but not statistically significant. The household are food secured may not loose body weight due to inadequate (nutritious) food. Household with large family size has the propensity to be less food secured.

The coefficients of farm size and household income were positive. Thus, household with large farm size has propensity to be more food secured than their counterparts with small farm size. Moreover, the rich household has the propensity to be more food secured than the poor ones.

Table 4: Factors influencing food security

Variable	Coefficient
INTERCEPT	-3.505***
Age	0.021
Years spent school	-0.209
Household income	0.104
Household size	-0.144*
Weight loss	-1.583*
Land size	0.140
Pseudo R ²	0.142
Probability of X ²	0.037
N	149

*** 1% level of significance, ** 5% level of significance, * 10% level of significance

Source: Field survey, 2013.

The hypothesis testing of this study was stated in the null form. The hypothesis stated that, There is no significant relationship between the socio economic characteristic of the respondent and the food security. In Table 4, the coefficients of household size and weight loss were significant at 10 percent level. Therefore, the hypothesis was rejected.

Conclusions and Recommendations

The mean years of schooling of 5 years for household heads indicate that an average household head in the study was a primary school drop-out. Government should adequately increase annual budgetary allocations to educational sector in order to make basic education (i.e primary up to junior secondary school) compulsory and education at all levels should be made free. House heads practiced irrigation farming as food security strategy. The ministry of water resources should make both land irrigation water affordable the poor farming household. This is to ensure food security for poor farming household even in the time of food scarcity and in the dry season. Poor weather condition is the major cause of food insecurity. Therefore, government and non-governmental organizations should come to the aid of farmers as buffer to economic losses due to unstable weather condition and natural disaster. Household with large farm size has propensity to be more food secured than their counterparts with small farm size. Therefore government should encourage farmers to graduate from subsistence agriculture to large scale commercial agriculture. This will ensure food security and nation's food sufficiency.

References

Aina, O. S. and Omonona, B. T., 2012, Nigeria Agricultural Insurance Scheme (NAIS): Prospect, Achievement and Problems Global Advanced Research Journal of Agricultural Science Vol. 1(5) pp. 097-103, July, 2012. Available online <http://garj.org/garjas/index.htm>. Copyright © 2012 Global Advanced Research Journals

FAO (2004). The State of Food insecurity in the World. "When people live with hunger and fear of starvation, food and AgricOrganisation of the United Nation Rome, Italy.

Kwara State Agricultural Development Project (KWADP) 1996. *Agronomic Survey Report*, KWADP, Ilorin.

Maziya-Dixon, B, Akinyele, E. B. S. Oguntona S. and Mohammed R. A. and Omotesho 2004, Resources allocation in food crop production and farming household food security in Kwara State, *Agro Search*, 6: 15-21.

National Population Census (2006). National Population Commission Census Figure, Abuja, Federal Government of Nigeria.

Taiwo, S. (2005). Rapid Assessment of The Impact of Liberalization and Foreign Private Investment in Agriculture for Food Security and Food Sovereignty in Nigeria: A Case Study of Kwara State Report of a research conducted as part of the “right to food as human right” project, Trade and Sustainable Development Series No. 2, Development Information Network and Heinrich Boll Foundation.

World Bank (1986): Poverty and Hunger; Issues and option for Food Security in developing countries.

