International Journal of Innovative Research and Advanced Studies (IJIRAS)
Volume 6 Issue 11, November 2019

ISSN: 2394-4404

Analysis Of The Effect Of Ill-Health On Farm Household Income In Kogi State, Nigeria

METIBOBA, S.

Sociology Department, Kogi State University, Anyigba, Nigeria

Opaluwa H.I

Agricultural Economics and Extension, Kogi State University, Anyigba, Nigeria

Abstract: ***The study assessed the effect of ill-health on farm households' income in Kogi State, Nigeria. A multistage sampling technique was used to select a total of 360 farm households from the four agricultural zones as delineated by Kogi Agricultural Development Project for the study. Primary data obtained through questionnaire administration were analysed using descriptive and inferential statistical tools. The findings of the study shows, the prevalent ill-health condition among farm households in the State were cold and catarrh (99.4%), headache/back pain (96.9%), malaria (87.2%), typhoid (80.8%), and stomach upset (80.6%) Others are High blood pressure (55.8%) and diabetes (54.7%), while cancer (0%), cholera (1.1%), tuberculosis (8.1%), and eye/ear defects (8.6%) were least prevalent illness among farmers in the State. The average farming days lost to ill-health per household in a farming season is 7.4±2.9 days, with 16 days and 1 day as maximum and minimum respectively. Estimates of the Ordinary Least Square (OLS) regression model showed that 65.6% of variables included in the model explained the changes recorded in farm households' income. The coefficient of treatment cost (β = -0.405) was negatively signed and significant at 1% level of significance; which is an indication that an increase in the amount spent on ill-health will decrease the income of farm households. The major constraints faced by farm households in accessing healthcare services include: long distance to quality healthcare centres (84.4%), lack of drugs in government hospitals (80.3%), high cost of consultation/medication/treatment (67.8%), and inadequate healthcare facilities (53.1%). The study concluded that the income of farm households was negatively affected by the amount spent on treatment of ill-health among household members. The study recommended that quality health care services should be provided in farming communities at subsidized rate in order to facilitate good medical care to the farmers so as to boast productivity and household income. Also, government should invest more in education and training in rural areas to equip farmers with the knowledge and skill to secure good livelihoods and increase income. Finally, considering the effect of farm size on income, land should be made available for agricultural production.***

Keywords: ill-health, Farm Household, Income, Kogi State, Nigeria

I. INTRODUCTION

Agriculture is the predominant economic activity in most countries in Africa with more than half of their populations engaged directly or indirectly (Osei-Akoto, Adamba and Osei, 2013). In Nigeria about 70 percent of the working population is employed in the agricultural sector which resides mostly in the rural areas. The agricultural sector accounts for 70% of non-oil export in the country (Olayemi, 2008). The sector provides food to help meet farm households` nutrient and energy needs; and medicinal plants for treating ailments. It provides income to households, which makes them resilient to health shocks. Agriculture continues to be one of the most important drivers of poverty reduction and bedrock for economic growth, especially for the billions of people living in rural areas. Rural areas have continued to receive attention from successive governments in Nigeria owing to their strategic importance as the agricultural base of the nation (Aminu, 2013). The rural areas which are major source of agricultural products are prone to a lot of infrastructural and welfare challenges. One of these challenges is their susceptibility to health hazards. Rural communities are often

more prone to ill health such as malaria, guinea worm infection, HIV/AIDS.

According to Asenso-Okyere *et al*.(2010), directly, ill-health affects physical strength and work days/hours available for farm work. Since agricultural productivity is dependent on physical strength and stamina, and therefore good health, it is probable that health shocks directly affects worker's productivity. Indirectly, ill-health involving high medical expenditures tends to deprive farming households of resources to invest in the adoption of improved practices and adoption of new technology. Furthermore, poor health reduces farmer's ability to innovate, experiment, and operationalize changes in agricultural systems (Asenso-Okyere *et al*.2010). Thus, poor health status directly affects the productive capability of the households. This in turn translates into income loss and eventually poverty through the lost time due to sickness and the time lost having to care for sick household members. Also the money that would have help them in obtaining farm inputs, improved implements or hire tractors and labourers is used for treatment which lead to low productivity (Fanello and Baker, 2010). For instance, Iheke and Ukaegbu (2015), Egbetokun, Omonona and Oluyole (2014) reported that the effects of ill health on farm households include three broad impacts: absenteeism from work due to morbidity (and eventual death); diversion of family time to caring for the sick; and the loss of savings and assets in the course of dealing with diseases and its consequences. Also, serious health conditions resulting in catastrophic expenditures may also result in depletion of productive assets such as sale of draught animals and sale of cultivable land (Slater and Wiggins, 2005). The consequence of these actions include reduction of farm sizes, cultivation of less-intensive crops, and reduction in livestock numbers resulting in poor livelihoods.

According to Olayemi, (2008), health problems, apart from negatively affecting the state of welfare of affected households, affects agriculture and economic development negatively through the reduction of available labour hours for economic activities, premature loss of young human resources and high cost of disease treatment which adds to the economic burden of rural households. Studies that have measured the direct effect of ill health on agricultural production have mostly dwelt on the impact of one or two selected diseases on a single crop, and relied on incidence of the disease in an area without taking into cognizance the hours or days of agricultural activities lost due to health problem (Audibert and Etard, 2000). Also, the health of rural households is not only an issue of social welfare, but also a key factor in economic development. A productive agricultural sector therefore depends on a healthy agricultural workforce (Kwadwo *et al.*, 2011).

Findings from previous studies failed to adopt a holistic approach to the problem of farmers' health status and productivity in rural communities. Despite the number of studies focusing on the links between health status and economic outcomes, very few focus on the contribution of improvements in health to rural agricultural income. Thus this study seeks to fill this gap by looking at the effects of health on farmers' income. For Kogi State in particular, knowing the effect of ill health on farm household income is especially important, because for some years, the State has based government economic reforms around creating an environment for economic agents to exploit by using their endowment of capabilities – health is obviously a major component of this. This study therefore seeks to analyze the effect of ill-health on farm household income in Kogi State, Nigeria. The objectives of the study are to:

- ✓ describe the socioeconomic characteristics of the respondents;
- ✓ estimate the number of farming days lost to ill-health by the respondents;
- ✓ analyze the effect of ill-health on farm household income.

II. RESEARCH METHODOLOGY

THE STUDY AREA

The study area is Kogi State, Nigeria. Geographically, Kogi State is located between latitude $6^0$30'N and $8^0$5'N and longitude $5^0$51'E and $8^0$00'E. The State is bounded with nine (9) States and FCT: Federal Capital Territory (FCT) to the North, Nasarawa State to the north east, Benue State to the east, Enugu State to the south east, Anambra State to the south, Edo State to the south west, Ondo and Ekiti States to the west, Kwara State to the North West and Niger State to the North. Kogi State has a total population of about 4,205,546 people in 2014 (using the state projected growth rate) (NPC, 2007) and land area of about 30,354,74 square kilometers. The State has 2,774,700 hectares of land (NBS, 2011) but only about 0.5 Million hectares are under cultivation.

SOURCES OF DATA

Primary data was used for this study. The data were collected through the use of structured questionnaire. The distribution and collection of the questionnaire was done by the researchers with the help of research assistants from the twelve selected Local Government Areas (LGAs). The questionnaire was validated by two experts in the field of Social Sciences. All the corrections made were incorporated into the final copy of the questionnaire. Reliability test was carried out on a pilot study using test-retest method.

SAMPLING PROCEDURE AND DATA COLLECTION

A three staged random sampling technique was used to select the sample for this study. In stage one, three LGAs were randomly selected from each of the four ADP Agricultural zones. This gives a total of twelve LGAs for the study. In stage two, three communities were randomly selected from each LGAs to give a total of 36 communities for the sample. The third stage involved a random selection of 10 farmers from each of the 36 communities to give a total of 360 respondents for the study.

METHOD OF DATA ANALYSIS AND MODEL SPECIFICATION

Data collected were analysed using both descriptive and inferential techniques. Descriptive statistical was used to

achieve research objectives 1 and 2. Ordinary Least Square (OLS) multiple regression analysis was used to achieve research objective 3.

MODEL SPECIFICATION: ORDINARY LEAST SQUARE (OLS) MULTIPLE REGRESSION ANALYSIS

Ordinary Least Square (OLS) multiple regression analysis was used to determine the effect of ill-health on farm household income. The OLS model adopted in the study is as specified below:

$Y_i = f(X_s)$

Where Y = dependent variables and X_s are the independent variables.

The explicit form of the model is presented in the equation below:

$$Yi = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6 + \beta 7X7 + ei$$

Y_i = Naira value of farm outputs (₦)

The independent variables (X_s) include:

X_1 = Days lost to ill- health (days)

X_2 = Days lost to care (days)

X_3 = Distance to public health centre (Kilometers)

X_4 = Treatment cost (₦)

X_5 = Education (years)

X_6 = Farming experience (years)

X_7 = Farm size (hectares)

e= error term

III. RESULTS AND DISCUSSION

This section presents the results on data analysis and discussion. Results were presented and discussed in line with the stated research objectives of the study.

SOCIOECONOMIC AND FARMING/INSTITUTIONAL CHARACTERISTICS

The Socioeconomic Characteristics of the farmers in Kogi State was presented in Table 1a.

n = 360

Socioeconomic Variables	Frequency	Percentage	Mean
A. Sex			
Male	304	84.4	
Female	56	15.6	
B. Age (years)			
20 – 40	115	31.9	
41 – 60	180	50.0	47.7±13.5
61 – 80	65	18.1	
C. Marital Status			
Single	35	9.7	
Married	270	75.0	
Divorced	16	4.4	
Widowed	15	4.2	
Widower	23	6.4	
Separated	1	0.3	
D. Household Size (numbers)	109	30.3	
1 – 5	210	58.3	7.2±2.9
6 – 10	38	10.6	
11 – 15	3	0.8	
16 – 20			
E. Educational Qualification	43	11.9	
No formal education	89	24.7	
Primary education	156	43.3	
Secondary education	72	20.0	
Tertiary education			
F. Secondary Occupation	52	14.4	
None	83	23.1	
Food processing	97	26.9	
Civil service	100	27.8	
Trading	28	7.8	
Artisanship			

Source: Authors' Computation from Field Survey, 2018

Table 1a: Socioeconomic Characteristics of Farmers in Kogi State

The involvement of more males (84.4%) in farming activities could be attributed to the tedious nature of the various activities involved in agricultural production. The higher percentage of males could be associated with their easy access to land for agricultural purpose than their female counterpart. This finding is consistent with the findings by Ibitoye *et al.,* (2015). The age of the respondents as presented in Table 1a shows a mean age of 47.7±13.5 years standard deviation. This indicates that most of the farmers in the study area are still in their active and economically productive age which is necessary for various activities in agricultural production. Similar findings on the age of farmers have been reported by the Economic and Social Research Foundation (ESRF) (2010). The involvement of more married respondents in farming activities as indicated in table 1a could mean a conflict of interest between catering for several family responsibility and agricultural production. The mean household size of farming households in the area was 7±3 members. In as much as large household size means more expenditure on basic amenities, it could be beneficial to agricultural production as more hands will be available for various production practices. The result in Table 1a further indicated that most (88.1%) of farmers in the area attained different level of educational qualifications while the remaining 11.9% had no formal education.

Farming/Institutional Variables	Frequency	Percentage	Mean
Farm size (hectares)			
1 – 4	144	40.0	5.1±2.8
4.1 – 8	176	48.9	
8.1 – 12	40	11.1	
Farming Experience			
(years)	170	47.2	10.6±3.9
1 – 15	124	34.4	
16 – 30	38	10.6	
31 – 45	28	7.8	
46 – 60			
Access to Extension			
Services	239	66.4	
Yes	121	33.6	
No			

Access to Credit		
Facilities	69	19.2
Yes	291	80.8
No		
Access to Storage		
Facilities	100	27.8
Yes	260	72.2
No		
Land Ownership		
Status	332	92.2
Inheritance	5	1.4
Lease	14	3.9
Purchase	9	2.5
Gift		

Source: Field Survey, 2018

Table 1b: Farming/Institutional Characteristics of Farmers in Kogi State

The mean farm size in the study area was 5.1±2.8 hectares as presented on table 1b, this implies that most of the farmers in the study area still operate on a small scale, for both consumption and marketing. The mean farming experience was 10.6±3.9 years standard deviation. Experience in agricultural activities is very important as it may influence awareness and subsequent adoption of agricultural technologies. This position agrees with Idrisa *et al.,* (2012) who reported that experience depicts a good signal for adoption since experience helps to convince the farmer of the importance of innovation. The findings recorded that, 66.4% of the respondents claimed they had access to extension services in the last farming season. The extension contact provides information that farmers obtain on their production activities as well as the importance of innovations through counseling and demonstrations by extension agents on a regular basis. It is believed that respondents who are not frequently visited by extension agents have lower possibilities of adoption than those frequently visited (Bamire *et al*., 2002). Table 1b further shows that 80.8% of the farmers had no access to credit facilities while only 19.2% had access to such facilities. By implication, access to credit facilities is still a major constraint among rural farmers in Nigeria. Credit accessibility is important for improvement of quality and quantity of farm products so that it can increase farmer's income and also to avoid rural migration. This finding agrees with Tefera (2004) who reported that lack of access to capital and credit in rural areas is one of the major factors which hinder the development of agriculture. The result presented in Table 1b further shows that majority (72.2%) of the respondents do not have access to storage faculties while the remaining 27.8% had storage facilities. Access to storage facilities could enhance value addition along the agricultural commodity value chain. Farmers will be encouraged to process and store their farm produce when storage facilities are easily accessible. The major form of land ownership among farmers in the State as reported in Table 1b is inheritance (92.2%). This finding is not surprising as this is the usual practice among most farmers in Sub-Saharan Africa where farming households inherit their farm lands. Similar position was reported by Mugure (2013) among rural farmers in Kenya.

Days	Frequency	Percentage
None	27	7.5
1 – 5	58	16.1
6 – 10	243	67.5
11 – 15	28	7.8
16 – 20	4	1.1
Total	360	100
Mean	7.4±2.9	
Maximum	16	
Minimum	1	

Source: Field Survey, 2018

Table 2: Number of Farming Days Lost to Ill-Health

The number of farming day(s) lost to ill health consisted of the number of day(s) in which a member of a household was sick including days spent receiving treatment and the day(s) spent recovering from the illness in the case of a member involved with farm work, and days in which such a member of the household lost on account of the ill health of another household member (Onuche *et al.* 2014). Information in Table 2 reveals that most (67.5%) of the households lost between six to ten farming days on account of illness of a family member. The summary of this variable shows that the least number of days lost to illness was one, the highest number of days lost to illness was 16 and the mean number of days lost to illness was 7.4±2.9 standard deviation. Earlier survey indicated that farmers lost an average of 22 days of farm labour to malaria illness in a year (Ajani and Ashagidigbi, 2008). In Oyo State of Nigeria, the estimated average number of workdays lost per malaria episode by productive adults in agrarian households was 16 days for an average of 4 bouts per year which is about 64 days per year (Alaba and Alaba, 2009).

IV. EFFECT OF ILL-HEALTH ON FARM HOUSEHOLD INCOME

Estimates of the Ordinary Least Square on the effect of ill-health on farm household in the study area Table 3.

Variables	Coefficient	Std. Error	T-value	Sig.
Days lost to ill-health	-0.022	0.099	-0.223	0.824
Days lost to care	-0.071	0.077	-0.916	0.361
Distance to public health centre	0.033	0.061	0.538	0.592
Treatment cost	-0.405	0.072	-5.631	0.000
Education	0.186	0.079	2.356	0.020
Farming experience	0.280	0.077	3.633	0.000
Farm size	0.233	0.048	4.898	0.000
Constant	6.721	0.937	7.176	0.000
R^2	0.656			
F-value	25.740			0.000

Source: Field Survey, 2018

Table 3: OLS Estimates on the Effect of Ill-health on Farm Household Income

The result indicated an R^2 value of 0.656 which implies that the independent variables in the regression model explain

65.6% of contribution to the dependent variable (farm income). The remaining 34.4% could be attributed to the error term (other factors/variables not captured in this model). The results showed treatment cost (β = -0.405), education (β = 0.186), farming experience (β = -40.697), and farm size (β = 0.280) as significant variables that influence farm income. The results showed positive (direct) relationships between these variables and farm income, except for treatment cost which shows an inverse relationship.

The coefficient of treatment cost was negatively signed and significant at 1%. The inverse relationship implies that farmers' income would decrease with every naira increase in cost of treatment. This means less money will be available for households to invest in farming. In other words, cost of treating an ill-health condition among farming households tends to be an economic burden which widely reduce the efficiencies of the farmers. This finding agrees with Asenso-Okyere *et al*. (2009) who observed that the cost of treatment and prevention could lead households to reduce farm area, planting of less labour intensive crops, changing cropping pattern, adoption of labour-scarce innovations that may be less productive. Asante and Asenso-Okyere (2003) further observed that expenditure on malaria, like any other treatment costs would reduce funds to hire casual labourers and to buy inputs like fertilizers and improved seeds. The coefficient of education was positively signed and significant at 5%. The direct relationship between education and farm income implies that, an increase in the number of years spent schooling will increase farm household income. The result conforms to the works of Ibekwe *et al.,* (2010) who also find a positive relationship between farmers' educational attainment and their farm income.

The result further shows that farming experience was positive and significant at 1 percent level of significance. This means that most experienced farmers know cropping practices to employ for optimum yield to ensure increased income. This translates to the fact that limited farming experience may result into low food production and farm income. This finding is in agreement with Ahmed *et al.,*(2015). Most experienced farmers know cropping practices to employ for optimum yield to ensure increased income.

V. CONCLUSION

The study was on the effect of ill-health on farm households' income in Kogi State, Nigeria. The result of the study shows farm households lost an average of 7 farming days in a farming season. The income of farm households was negatively affected by the amount spent on treatment of ill-health among household members. The study recommended that quality health care services should be provided in farming communities at subsidized rate in order to facilitate good medical care to the farmers which is expected to boast productivity and household income. Also, government should invest more in education and training in rural areas to equip farmers with the knowledge and skill to secure good livelihoods and increase income. Finally, considering the effect of farm size on income; government should supply inputs to farmers and make credit facilities available for agricultural production.

ACKNOWLEDGEMENT

We want to appreciate TETFUND for funding this research work and Kogi State University for providing conducive environment for this work.

REFERENCES

[1] Adebisi G.L, Oyebode L.A, And Olubode T. (2015). Assessment Of Rural Dwellers Access To Primary Healthcare Services In Oyo State, Nigeria. Research & Reviews: Journal Of Agriculture And Allied Sciences. Http://Www.Rroij.Com/Open-Access/Assessment-Of-Rural-Dwellers-Access-To-Primary-Healthcare-Servicesin-Oyo-State-Nigeria-.Php?Aid=86197

[2] Agwu, A. E. And Anyanwu, A. C. (1996). Sociocultural And Environmental Constraints In Implementing The NALDA Programme In South Eastern Nigeria: A Case Study Of Abia And Enugu States, Journal Of Agriculture, Technology And Education, 1(2), 68-72.

[3] Ahmed, F. F., Mohammed, M. And Abah P.O. (2015). An Analysis of Socio-Economic Characteristics and Food Security Situation among Semi-Urban Households: A Case Study of Biu And Bama Local Government Areas in Borno State, Nigeria. Developing Country Studies 5(6), 201

[4] Ajani, O.I.Y and W.M. Ashagidigbi. (2008). Effect of Malaria on Rural Households' Farm income in Oyo State, Nigeria. African Journal of Biomedical Research 11 (2008): 259 – 265.

[5] Alaba, A. and O. Alaba. (2009). Malaria in Rural Nigeria: Implications For The Millennium Development Goal. African Development Review 21 (1): 73-85

[6] Asenso-Okyere K, Aragon C, Thangata P, Andam K, Mekonnen DA (2010). HIV And AIDS and Farm Labour Productivity: A Review of Recent Evidence in Afri. J. Dev. Agric. Econ. 2(12): 406-415.

[7] Audibert M And J F Etard (2000). Impact of Schistosomiasis on Rice Output and Farm Inputs in Mali J. Of Afr. Econ. 1998; 7 (2):185-207.

[8] Bamire, A.S., Fabiyi, Y.L. And Manyong, V.M (2002). Adoption Pattern of Fertilizer Technology among Farmers in the Ecological Zones of South-Western Nigeria: A Tobit Analysis. Austr. J. Agric. Res. 53:901-910.

[9] Egbetokun, OA, Omonona, B.T. And Oluyole, K.A. (2014). Economic Analysis of Sickness and Labour Productivity among Cocoa Farmers in Obafemi/Owode Local Government Area, Ogun State. Journal of Biology, Agriculture And Healthcare 2014; 4 (20)

[10] Economic and Social Research Foundation. (2010). Strengthening micro-enterprises in Developing countries: The case of small-scale vegetable farmers in Arusha. Dar es Salaam, Tanzania

[11] Ibekwe, U.C., Eze, C.C., Onyemauwa, C.S., Henri-Ukoha, A., Korie, O.C. and Nwaiwu, I.U. (2010),

Determinants of Farm and Off–Farm Income among Farm Households in Southeast Nigeria, Academia ARENA, 2(2), 1 – 4.

[12] Ibitoye, S.J., Shaibu, M.U. and Omole, B. (2015) Analysis of Resource Use Efficiency in Tomato (Solanum Lycopersicum) Production in Kogi State, Asian Journal of Agricultural Extension, Economics & Sociology 6(4): 220-229

[13] Idrisa, Y.L., Gwary, M.M. and Ibrahim, A. (2008). Determinants of Adoption of Cassava Farming Technologies in Mubi North Local Government Area of Adamawa State, Nigeria. An International Journal of Agricultural Research. 2 (1): 26-36.

[14] Iheke, O. R. And Ukaegbu, H. I.(2015). Effect of Poor Health and Farmers' Socioeconomic Variables on Total Factor Productivity of Arable Crop Farm Households in Abia State, Nigeria.

[15] Kwadwo, A. S., Catherine, C., Paul, T. and Kwaw, S. A. (2011): Two-Way Links Between Health and Farm Labor. IFPRI Food Policy Report, Interactions Between Health and Farm–Labor Productivity (Washington, DC: International Food Policy Research Institute. Pp. 121-128

[16] Mafimisebi, T. E., & Oguntade, A. E. (2010). Preparation and Use of Plant Medicines For Farmers' Health in Southwest Nigeria: Socio-Cultural, Magico-Religious And Economic Aspects Journal of Ethno Biology and Ethno Medicine, 6 (1):1746-4269.

[17] Modibo. K., Nthoiwa, G. P., & Tsalaesele, N. (2010). An Evaluation of Factors That Hinder Subsistence Farmers From Diverting To Profitable Farming in Botswana: A Lesson For Extension Officers. In W. H. Kimaro, L. Mukandiwa, & E. Z. J. Mario (Eds.), In Towards Improving Agricultural Extension Service Delivery In The SADC Region (Proceedings Of The Workshop on Information Sharing Among Extension Players In The SADC Region, 26-28 July 2010, Dar Es Salaam, Tanzania (Pp. 12–14).

[18] Mohammad, B.T.; Achem, B.A.; And Abdulquadri, A.F. (2014). Factors Influencing Adoption of Agricultural Processing Technologies Developed By National Centre For Agricultural Mechanization (NCAM) in Ifelodun Local Government Area, Ilorin Kwara State. International Journal of Science and Research (IJSR).3(4) 413-417.

[19] Mugure, A. Oino, P.G. and Sorre, B.M. (2013). Land Ownership and Its Impact on Adoption of Agroforestry Practices among Rural Households in Kenya: A Case of Busia County. International Journal of Innovation and Applied Studies 4(3): 552-559

[20] National Population Commission (NPC) (2007). Population figure. Federal Republic of Nigeria retrieved from http://www.npc.gov

[21] Nwakwasi, R.N., Nwachukwu, I., Ifenkwe, G.E. and Agwu, E.A. (2017). Rural Household Attitude towards Traditional Methods of Malaria Treatment in South-East, Nigeria. Journal of Agricultural Extension, 21(1): 27 – 38

[22] Moses, D.J. (2017). Effect of Ill Health on Technical Efficiency of Grain Farmers in Gombe State, Nigeria. International Journal of Innovative Food, Nutrition &Sustainable Agriculture 5(4):7-14

[23] Oluyole, K.A., Oni, O.A., Omonona, B.T. And Adenegan, K.Q. (2009). Food Security Among Cocoa Farming Households Of Ondo State, Nigeria. ARPN Journal of Agriculture And Biological Science. 4(5):7-14.

[24] Olayemi, J. K. (2008). Government Seven Point Agenda: Implication For Agricultural Development. In Ingwa, S. Et Al Eds: Economic and Policy Series (NAAE). 2008; 1: 2-15.

[25] Onuche, U., Oplauwa, H.I. and Edoka, M.H. (2014). Ill Health and Agricultural Production: Evidence from Kogi State of Nigeria. African Journal of Food, Agriculture, Nutrition and Development. 14(1): 8488-8503.

[26] Tefera, D., 2004. Determinants of Smallholder Farmers' Demand For Non-Formal Credit: The Case Of Farta Woreda. M.Sc. Thesis, Agricultural Economics, Alemaya University, Ethiopia.

[27] National Bureau of Statistics (2011). Annual Abstracts of Statistics. National Bureau Of Statistics Publications, Abuja, Nigeria. 2011.

[28] Aminu, F.O. Ayinde, I.A.1. and Ambali, O.I. (2013). Effect Of Ill Health on Technical Efficiency of Dry Season Vegetable Farmers in Ojo Local Government Area of Lagos State Nigeria. World Journal of Agricultural Research, 1(6), 108-113

[29] Fanello, B. T. And Barkar L. F. Transmission of Serum Hepatitis. Journal of the American Medical Association. 2010, 276 (10).

[30] Slater R, Wiggins S (2005). Responding to HIV/AIDS on Agriculture and Related Activities. Natural Resource Perspectives (98). ODI, London.

[31] Osei-Akoto I, Adamba C and Osei R. D. (2013). The Effect of Health Shocks on Agricultural Productivity: Evidence from Ghana, International Journal of Agricultural Policy and Research 1 (3), Pp. 067-079