

Determinants of National Food Security in Nigeria

Oke, M.A

Department of Economics, Ajayi Crowther University, Oyo, Oyo State

Abstract

Food is a basic necessity of life and it is required for both human and economic development. Considering the massive movement of labour and other productive resources away from the agricultural sector as a result of the oil boom in the early 1970 which, constituted a lot of problems to the food security situation in Nigeria, this study examines the determinants of national food security in Nigeria. The study found out that the various problems encountered by the food sector in the economy include; policy ineffectiveness, high cost of production, high exchange rate, increasing population e.t.c. These factors cause inflationary pressures on food prices and they are the reasons why food security in Nigeria has worsened in the country over the years. However, this study recommends that food security situation in Nigeria can be greatly improved upon if the cost of production in agriculture can be reduced and if the exchange rate prevailing in our country can be lowered. The study also suggests that food production should be in line with the rapid population growth in order to save the country from the high rate of poverty.

Keywords: Food, Insecurity, Determinants, National and Security

1. INTRODUCTION

When food security issues were first highlighted in the seventies, the question was whether a nation or a region could command enough food to meet the aggregate requirements of its people. Special attention was paid to fluctuations in aggregate food supply, and food security interventions were primarily concerned with providing effective buffer mechanisms against such fluctuations. In this context, food security measures came to be identified with macro-level instruments such as national and international storage of food and balance-of-payments support for countries facing temporary food shortages (see Valdes 1981).

In the 1960s, Nigeria featured prominently among the world's leading producers and exporters of many tropical agricultural products from which substantial foreign exchange were earned and utilized for executing key development projects hence, playing a crucial role in our economic development as a nation. It provided employment to millions of Nigerians and over 75 per cent of the labour force mostly from rural areas. In the golden agricultural years, contribution from this sector accounted for about 70 per cent of the Gross Domestic Product (GDP). This was the period when we were not only virtually self sufficient in the production of food crops to feed ourselves but also provided raw materials for industries and major cash crops for export. Indeed agriculture provided the main stimulus to our national economic growth despite the small farm holding and private production systems. These contributions of agriculture to our nation overshadowed all other economic sectors in the early 1960s.

The problem of food inadequacy was first observed during the civil war (1967-1970) (Eyo, 1996) when agriculture was neglected and food imports as well as other items were deliberately curtailed to conserve foreign exchange. This problem eased after the civil war but resurfaced in 1974 as windfalls (gains) from crude oil export resulted in further neglect of the agricultural sector. The period of 1974 to the early 1980s witnessed massive movement of labour and other productive resources away from the agricultural sector to other sectors where returns were higher. This period consequently witnessed massive importation of food as the value of imported food items rose from N154.8M in 1974 to N298.8M, N441.7M, N780.7M, N1,027.6M, and N1,254.3M in 1975, 1976, 1977, 1978, and 1979 respectively (CBN, 2004). Similarly, agricultural contribution to GDP declined from about 60-70 per cent annually in the 60s to between 30 and 40 per cent annually in 1970-2004. This was due partly to the phenomenal growth of the mining and manufacturing sectors during the period and partly to the persistent neglect of the agricultural sector itself in terms of the relative share of resources devoted to the sector (Abayomi, 1997).

Food security is a constituent part of the broader concept of nutrition security. A household can be said to be nutritionally secure if it is able to ensure a healthy life for all its members at all times. Nutritional security thus requires that household members have access not only to food, but also to other requirements for a healthy life, such as health care, a hygienic environment and knowledge of personal hygiene. Food security is a necessary but insufficient condition for ensuring nutrition security.

The decline in the production of some of Nigeria's leading agricultural export commodities was most worrisome. For instance, Nigeria that was ranked as the world's leading producer and exporter of palm oil in the 1960s had become a net importer of this commodity in the mid 1970s. Similarly, Nigeria's cocoa production which ranked a peak of 305,000 tones in 1970 fell drastically to 160,000 tons in 1985 (CBN, 2004). The sharp down-turn in the gross value terms of trade in agriculture was equally serious. The ratio of agricultural exports to

food imports which stood at 143 per cent in 1970-1975 suffered significant deterioration and reached the lowest trough at 38 per cent by 1976-1982.

Today, Food security ranks the top most among development problems facing Nigeria. The level of food insecurity has continued to rise steadily since the 1986 to about 41% in 2004 (Sanusi, et al 2006). According to Barrett (2002), the Lack of food excludes people to practice what other people are doing every time. However, large amount of food production in the world does not ensure any country's food security. Moreover, huge production of food at national level does not guarantee for the household food security. This may be due to unfair distribution of resources, variation in production functions, and motives for productivity. That is why even if the production increases through time; food insecurity, malnutrition and hunger remain the main agenda and much more serious problems in the world (Akunne and Bakporhe, 2013)

2.0 LITERATURE REVIEW

2.1: The Concept of Food Security

The concepts and definitions of food security and insecurity have been discussed for a long period of time. There is much literature on the concepts and definitions of food security. Since its inception it is defined in different ways by international organizations and researchers. According to Siamwalla and Valdes (1984), food security is the ability of countries, regions or households to meet target levels of food consumption on a yearly basis. As endorsed on the international conference on nutrition in 1992, food security is a state of affairs where all people at all times have access to safe and nutritious food to maintain a healthy and active life (Gurkan, 1995). Similarly, according to the committee on world food security, it connotes physical and economic access to adequate food for all household members, without undue risk of losing the access.

According to the World Food Conference of 1974 food security was defined as: 'availability at all times of adequate world food supplies of basic foodstuffs...to sustain a steady expansion of food consumption...and to offset fluctuations in production and prices' (United Nations 1974).

The implication is that adequacy at the national level does not necessarily ensure adequacy at the household or individual level. As a result food security had advanced from emphasizing the supply side through the individual and household level (demand side) for improved access to food in the 1980s (FAO, 1983). In the 1990s, improved access was redefined by taking into account livelihood and subjective considerations. It emphasizes a broader framework of individual behavior in the face of uncertainty, irreversibility, and binding constraints on choice (Osmanis 2001; Maxwell, 1996).

According to FAO (1996), the most widely used definition of food security is the one forwarded by World Food Summit in 1996 and broadly set as „Food security exists when all people at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life'. Based on this definition it can+ be seen that it integrates stability, access to food, availability of nutritionally adequate food and the biological utilization of food.

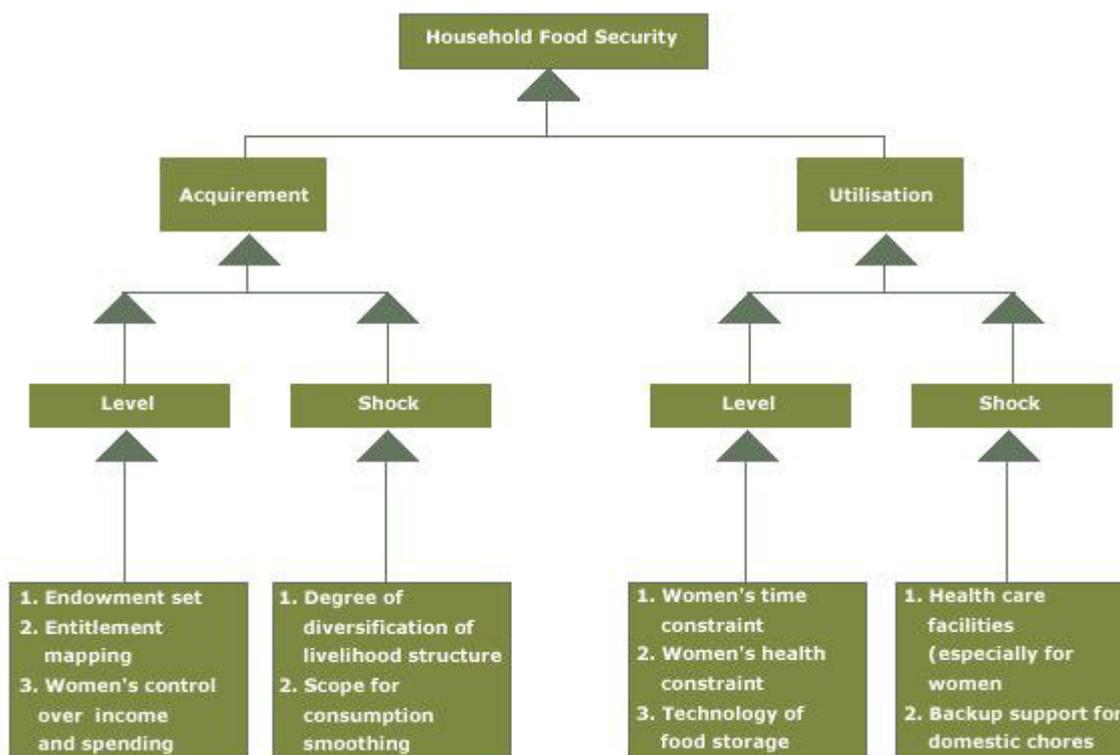
2.2 Concept of Food Insecurity

There is other concept of food security that is worth mentioning here; that is the issue of food insecurity. It is believed that people who frequently do not have enough to eat according to accepted cultural norms created a crisis. For this reason, the phrase „Food Insecurity' was used to describe the instability of national or regional food supplies over time. It was then expanded to include lack of secure provisions at the household and individual level. Food insecurity concern may be due to either inadequate physical availability of food supplies, poor access among the population, or inadequate utilization of food (Habicht et. al. 2004)

According to Maxwell and Smith (1996), the concept of food insecurity has evolved, developed, multiplied and diversified since the world food conference of 1974. The main focus has shifted from global and national to household and individual food insecurity and from food availability to food accessibility and the security of access. Food security is defined as access by all people, at all times to sufficient food for an active and healthy life and includes at a minimum the ready availability of nutritionally adequate and safe foods, and an assured ability to acquire acceptable foods in socially acceptable ways (FAO, 1997; Sarah, 2003). Access to adequate food is a necessary but not a sufficient condition for a healthy life. A number of other factors, such as the health and sanitation environment and household or public capacity to care for vulnerable members of the society, also come into play (von Braun et al, 1992).

Hoddinot cited in Seid (2007) noted that there are close to 200 definitions and 450 indicators of food security.

Figure 1 Flow Chart of the Determinants of Household Food Security



Source: Valdes 1987

A fundamental element in this category is the household's asset base. A household with several assets can more effectively maintain its consumption level by disposing of some of these assets. Its ability to do so increases according to the proportion of assets held in liquid form. Thus, the value and liquidity of assets are important determinants of a household's ability to cope with shocks to acquirement.

The nature of the credit market is an equally important factor. In theory, a perfect credit market would minimize the effect of an income shock by allowing the household to achieve whatever degree of consumption-smoothing it desires. But credit markets, particularly rural credit markets, are far from perfect. While in most rural societies the existence of informal moneylenders and a reciprocal system of mutual help among friends, relatives and neighbours provide some scope for consumption-smoothing, access to these mechanisms vary enormously.

At the macro level, the important determinants of consumption-smoothing include the operation of buffer stocks and the public food grain distribution system. If the shock to acquirement is the result of higher prices and the reduced availability of food on the market, then the operation of a **food buffer stock** would ensure consumption-smoothing by infusing a greater supply into the market and lowering prices. A well-functioning public distribution system, especially one that provides free or subsidized food, would also contribute to consumption-smoothing under most shock situations.

3.1 Model Specification

The model the researcher intends to use is deduced partially from Sharma's composite food security indices (Food price inflation). Due to the fact that all the variables used by Sharma were not available, the researcher would deduce some of the variables that serve as determinants of food availability which also impacts on food prices or composite price index. In the researcher's model, food security would be measured or captured by index of food price inflation which would be represented by composite food price index. The food price inflation would serve as the dependent variable because the study aims at finding out the critical determinants of food security.

Hence, in this model, the above would serve as the determinants of food security. The dependent variable expressed as a function of the explanatory variables form the equation:

$$FPI = F(AGDP, PCI, FM, FX, POP \dots) \dots \dots \dots \text{Equation 1}$$

Where:

FPI: Food Price Inflation (food security)

AGDP: Agricultural Gross Domestic Product

PCI: Per Capita Income
 FM: Food Import
 FX: Food Export
 POP: Population

Using OLS by assuming a linear relationship between these variables, Equation 1 could be rewritten as:

$$FPI = \alpha_0 + \alpha_1 AGDP + \alpha_2 PCI + \alpha_3 FM + \alpha_4 FX + \alpha_5 POP + U \dots \dots \dots \text{Equation 2}$$

On apriori:

$$FPI = F^1 AGDP < 0, F^1 PCI > 0, F^1 FM < 0, F^1 FX > 0, F^1 POP > 0$$

$$\text{i.e. } \alpha_1 < 0 \quad \alpha_2 > 0 \quad \alpha_3 < 0 \quad \alpha_4 > 0 \quad \alpha_5 > 0$$

$\alpha_1 < 0$: This implies that there is an inverse relationship or negative relationship between AGDP and FPI.

Meaning that as AGDP increases, FPI reduces. $\alpha_2 > 0$: This implies that there is a positive relationship between

PCI and FPI. $\alpha_3 < 0$: This shows that there is an inverse or negative relationship between FM and FPI. In that as

the value of food import rises, food prices decrease. $\alpha_4 > 0$: There is a positive relationship between FX and FPI.

$\alpha_5 > 0$: There is a positive relationship between POP and FPI

Following Equation 2, α_0 is the Intercept while $\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5$ are Slope co-efficient and U is the Error term or stochastic variable.

3.2: Sources of Data

The data used in this study covers the period of 1970-2004. The data on food price inflation, food import and the Gross Domestic Product that was used to compute the per capita income was derived from the CBN Statistical Bulletin. Data on agricultural export and the agricultural Gross Domestic Product was derived from data compiled by the Federal Office of Statistics, and the population data used to compute the agric Gross Domestic Product per capita and the Per Capita Income of the country was computed from data compiled by the National Population Commission.

4.0 RESULTS

REGRESSION A

$$FPI = \alpha_0 + \alpha_1 AGDP + \alpha_2 PCI + \alpha_3 FM + \alpha_4 FX + \alpha_5 POP \dots \dots \dots \text{Equation 2}$$

$$FPI = 33.0047 + .0021691AGDP + .3470PCI + .0055251FM + .0030909FX + .0024927POP$$

$$SE \quad (19.7338) \quad (.1337) \quad (.0069471) \quad (.0016374) \quad (.0010669) \quad (.6359)$$

$$t^* \quad (1.6725) \quad (16.2188) \quad (.049954) \quad (3.3743) \quad (2.8970) \quad (3.9199)$$

$$R^2 \quad .99765$$

$$R\text{-Bar}^2 \quad .99725$$

$$F^* \quad (5, 29)$$

$$D.W \quad 1.6015$$

REGRESSION B

$$FPI = \alpha_0 + \alpha_1 AGDP + \alpha_2 FM + \alpha_3 FX \dots \dots \dots \text{Equation 4}$$

$$FPI = 59.8808 + .0026128 AGDP + .0034908 FM + .0030343 FX$$

$$SE \quad (22.5214) \quad (.5254) \quad (.6224) \quad (.6218)$$

$$t^* \quad (2.6588) \quad (49.7277) \quad (5.6084) \quad (4.8795)$$

$$R^2 \quad .99628$$

$$R\text{-Bar}^2 \quad .99592$$

$$F^* \quad (3, 31)$$

$$D.W \quad .99214$$

USING COCHRANE – ORCUTT METHOD

$$FPI = \alpha_0 + \alpha_1 AGDP + \alpha_2 FM + \alpha_3 FX \dots \dots \dots \text{Equation 4}$$

$$FPI = 280.5407 + .0025436 AGDP + .0017747 FM + .8605 FX$$

$$SE \quad (331.4819) \quad (.1412) \quad (.4315) \quad (.3321)$$

$$t^* \quad (.84632) \quad (18.0130) \quad (4.1130) \quad (2.5914)$$

$$R^2 \quad .99882$$

$$R\text{-Bar}^2 \quad .99860$$

$$F^* \quad (5, 27)$$

$$D.W \quad 2.0311$$

4.1: DISCUSSION OF RESULT

REGRESSION A

The constant parameter, which is the intercept, has a positive impact on food prices. Meaning that if there is no contribution to other FPI determinants, the food prices would still increase.

The regression result shows that on the basis of apriori specification, all the slope coefficients conformed to our expectation, with the exception of AGDP and food import value FM, which carried the expected positive sign. The magnitude of .0055251 associated with the FM variable implies that an increase in FM by one unit will increase food prices by .0055251 or an increase in FM by 100 units will increase food prices by .55251.

Where as, all the other coefficients of the variables AGDP, PCI, FX and P, also carried positive signs. This means that all the variables in the model has a positive relationship with food prices, and a unit increase in each of them would bring about an increase in FPI by the value their respective coefficient.

On the basis of the individual significance of the parameter estimates, all the slope coefficients are individually, statistically significant or different from zero, with the exception of the estimates of per capita income and population whose estimates cannot be correctly interpreted as they appear because they are estimates of collinear variables and so they are not relevant in our analysis. The other coefficients however passed the test at the 1% level of significance, because their t-values of 16.29, 3.37, 2.897, and 3.92 are all greater than the table t-value at this level which is 2.756. From the estimated result our adjusted R^2 value of .997 shows that about 99.7% systematic variation in the endogenous variable can be explained by changes in all the independent variables. This is surely an excellent fit, as only about 0.3% systematic variation in FPI is left unexplained by the model, which we may attribute to the error term.

The regression result also shows that the model is a preferable one relative to other alternative combinations of variables to build a similar model, as the mean of dependent variable of 1163.1 is greater than the standard error of regression of 89.88. A test of the overall significance of the model shows that the overall model is significant at both the 5% and the 1% level of the test of significance, because the calculated F-value or F-statistic of 2465.8 is far greater than the table F-values at both levels of significance. This indicates that all the slope coefficients taken together are simultaneously significantly different from zero.

The D.W value of 1.6015 however, leaves us indecisive regarding the presence or absence of first-order positive or negative auto correlation. Therefore we can assume that there is no auto correlation in the model. An important problem with this result is that there was multicollinearity among the explanatory variables as a result of the presence of PCI and POP.

REGRESSION B

USING OLS METHOD.

This regression was arrived at after dropping variables PCI and POP due to multi-collinearity problem. The regression result shows that on the basis of apriori specification, all the slope coefficients did not conform to our expectation with the exception of the food import value which carried the expected positive sign.

The magnitude of .0030343 associated with the FX variable implies that an increase in FX by one unit will increase FPI by .0030343 units or an increase in FX by 100 units will increase FPI by .30343 units. The same applies to AGDP and FM which did not conform to apriori. On the basis of our result, an increase in AGDP by one unit will increase price of food or FPI by .0026128 units. Also an increase in FM by one unit will increase FPI by .0034908 units. If all the independent variables are held constant at zero, FPI will be 59.8808.

On the basis of the individual significance of the parameter estimates, all the slope coefficients are individually statistically significant or different from zero at the 1%, 5%, and 10% levels of significance because for instance, their t-values of 49.7277, 5.6084, and 4.8795 are all greater than the table values of 2.750, 2.042 and 1.697 at the 1%, 5%, and 10% level of significance respectively.

From the estimated result, our adjusted R^2 value of .996 shows that about 99.6% systematic variation in the endogenous variable can be explained by changes in all independent variables. This is surely a very good fit because only about 0.4% systematic variation in FPI is left unexplained by the model, which we may attribute to the error term. The regression result also shows that the model is a preferable one relative to other alternative combinations of variables to build a similar model, as the mean of dependent variables of 1163.1 is greater than the standard error of regression of 109.4278.

A test of the overall significance of the model shows that the overall model is significant at both the 1% and the 5% levels of significance, because the calculated F-value or F-statistic of 2768.9 is greater than the table F-value at both levels of significance. This indicates that all the slope coefficients taken together are simultaneously significantly different from zero. The D.W. value of .99214 however is indicative of the presence of auto-correlation in the model.

Therefore, it is required that a Cochrane-Orcutt method should be adopted to correct for auto-correlation.

USING COCHRANE-ORCUTT ITERATION METHOD

The regression result using the Cochrane-Orcutt method shows that on the basis of apriori specification, all the slope coefficients did not conform to our expectation with the exception of the food import value which carried the expected positive sign. This was also the case in the previous results.

The magnitude of .8605 associated with the FX variable implies that an increase in FX by one unit will increase FPI by .8605 units or an increase in FX by 100 units will increase FPI by 86.05 units. The same applies to AGDP and FM which did not conform to apriori. On the basis of our result, an increase in AGDP by one unit will increase price of food or FPI by .0025436 units.

Also an increase in FM by one unit will increase FPI by .0017747 units. If all the independent variables are held constant at zero, FPI will be 280.5047.

On the basis of the individual significance of the parameter estimates, all the slope coefficients are individually statistically significant or different from zero at the 1%, 5%, and 10% levels of significance because for instance, their t-values of 18.0130, 4.1130, and 2.5914 are all greater than the table values of at the 1%, 5%, and 10% level of significance respectively.

From the estimated result, our adjusted R^2 value of .99860 shows that about 99.8% systematic variation in the endogenous variable can be explained by changes in all independent variables. This is surely an excellent fit because only about 0.2% systematic variation in FPI is left unexplained by the model, which we may attribute to the error term. The regression result also shows that the model is a preferable one relative to other alternative combinations of variables to build a similar model, as the mean of dependent variables of 1163.1 is greater than the standard error of regression of 65.1530.

A test of the overall significance of the model shows that the overall model is significant at both the 1% and the 5% levels of significance, because the calculated F-value or F-statistic of 2768.9 is greater than the table F-value at both levels of significance.

This indicates that all the slope coefficients taken together are simultaneously significantly different from zero. The D.W. value corrected which is 2.0311 implies that there is no presence of first-order positive or negative auto correlation.

Moreover due to the elimination of PCI and POP, the problem of multi-collinearity was solved.

5.0 CONCLUSION AND RECOMMENDATION

From the study it is likely to say that the determinants of food security were actually captured using the agric gross domestic product, per capita income, food import, food export and population and they all proved to be determinants because they all had effects on food prices relative to food security. It is observed that the agricultural sector contributes immensely to the gross domestic product of the country compared to other sectors. Therefore, this sector provides resources such as; physical, capital, industrial and raw-materials for the use and development of other sectors of the economy. From the findings of this research, increase in agricultural gross domestic product increases the price of food in the country due to the high cost of production prevailing in the agricultural sector, brought about by excessive importation of agricultural inputs, lack of adequate use of improved technology, inadequate subsidies, grants, etc. Moreover, the increase in prices of food as a result of increase in agricultural gross domestic product is also due to the fact that the available food is not sufficient for the large population in the country. The rising population poses a hindrance to the supply of food because the supply falls short of the food demand, bringing about food price inflation. In a nut shell, the prevailing high cost of production in the country and the ever increasing population brings about a negative impact on food security in Nigeria.

Large volume of importation of food into the country where foreign exchange is not sufficient and exchange rate prevailing in the country is high, or where foreign exchange is needed for the importation of other essential resources actually imposes a negative impact on food security, there by causing a detrimental effect on the economic growth and development of the country.

The positive effect food imports have on prices of food is as a result of the low import capacity of our country, which depends greatly on our export earnings, debt service obligations, and foreign exchange reserve.

It is observed that through Agricultural enhancing programmes such as SAP and other policies adopted by the government showed positive impact on Agricultural or the food sector but due to mismanagement of these policies in the country, the positive effect of the programmes in the country later turn out to be insignificant due to the collapse of the policies and this causes a negative effect on food security in the country.

Food security in Nigeria can be improved if all the measures discussed and recommended in the study are carried out.

However, Nigeria is a very rich and blessed country that is capable of attaining economic development in terms of food security if certain hindrances like corruption can be expelled in the country. Also the factors that determine food security were actually revealed to have negative influences on food security in the period examined. Hence, it is to be concluded that for a sustained food security to be achieved in this country, there has

to be a stability in food prices rather than inflation which causes food insecurity. Moreover, increased productivity should be directed towards keeping pace with the growing population and through improvement in technology, there would be sufficient food available in the country for both consumption and export which would yield high foreign exchange in order to increase growth in the economy trailing a path for development.

BIBLIOGRAPHY

BOOKS

- Ami, G.A. (1966). Food Supply and Economic Development with special reference to Egypt. London: Frank Cass.
- Gurkan, A.A. (1994). "Determining the Structure of Food Insecurity at the Global Level: A Cross- Country Framework for Analyzing Policy Issues for the Agro-Food Sector." National Population Commission
- Ojo, M.O. (1991). Food Policy and Economic Development in Nigeria. Central Bank of Nigeria. Page Publishers Services Ltd.
- Sharma, R.P. (1992): Monitoring Access to Food and Household Security, Food Nutrition and Agriculture 2(4).

JOURNALS

- Abayomi Y.O. (1997). The Agricultural Sector In Nigeria The Way Forward. Local Government Finance Office, Research Dept. CBN.
- Akanji, O.O. and Ukeje, E.U. (1993). A review and analysis of Agricultural prices in Nigeria. CBN Economic and Financial Review Vol. 33 No. 1
- Sen, T.A. (1988). An Ordinary Approach to Measurement. Econometrical, 44:219-31.

CONFERENCE PAPERS

- Adedipe, N.O. (1999). Fluxes, forces and flash in Nigeria Agriculture. University of agriculture, Abeokuta Alumni Association lecture Series 1.19p.
- Essang, S.M. (1975). Population and Food Supply in Nigeria. Paper delivered at the conference of Eastern African Agricultural Economics Society, May 7-10, 1975, Kampala.
- Eyo, E.E. (1996). Implication of Pricing for National Food Security. Seminar paper presented at the National Workshop on Strategic Grains Storage. Nucleus for National Food Security, Abuja, July, 1996.
- Olayemi, J.K. (1995): "Issues in Nigeria Food Security". Seminar paper presented at the Development Policy Centre, Ibadan, Nigeria.
- Olayemi, J.K. (1996): "Poverty, Food Security and Development in West Africa". Invited paper presented at the Regional Workshop on Governance and Development: Prospects for 21st Century West Africa, organized by the ARSSRN and Winrock International in Accra, Ghana.

OTHERS

- Central Bank of Nigeria Annual Report and Statement of Accounts, 1980-2004.
- Federal Office of Statistics (FOS) (1983\1984). The Health of Nigeria and Nutrition Status Survey, F.O.S. Lagos.
- Federal Office of Statistics, National Account of Nigeria, 2004
- National Population Commission
- Siamwalla, A. and Valdes, A. 1984: "Food Security in Developing Countries: International Issues ". In Eicher and Staaaz (eds.) op. cit.
- World Bank (1991). Nigeria: Strategy for Food and Nutrition Security. World Bank Document Report No. 13053 – UNI.
- World Bank (1995). World Development Report

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:

<http://www.iiste.org>

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: <http://www.iiste.org/journals/> All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: <http://www.iiste.org/book/>

Academic conference: <http://www.iiste.org/conference/upcoming-conferences-call-for-paper/>

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar

