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THE INFLUENCE OF AGRICULTURAL CREDIT ON FOOD PRODUCTION IN NIGERIA (1990 – 2018)

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Abstract:

The study identified poor infrastructures, inadequate loan assessment schemes, inappropriate technology, poor marketing system and other natural hazards as some of the factors that necessitated this study. In view of these, the research sought to quantify the nature of relationship between Loan Assessment and Food Security in Nigeria. This study was anchored on the Structural Change Theory by Lewis Arthur in the year 1954 as framework. The study adopted correlational survey to establish what relationship exists between two or more variables while only secondary data. The study utilized the Ordinary Least Square (OLS) method of analysis. This statistical tool seeks to establish the strength or degree of association between the dependent and independent variables. The findings of the study revealed that there was a significant positive relationship between Loan Assessment and Food Security in Nigeria. And concluded that easy access of agricultural credit through loans and subsidies greatly improves food production through food availability, food assess and food utilization in Nigeria since the coefficients of loan assessment on food security shows a significant positive relationship. In line with the conclusion, the study recommended that more loan facilities and grants should be extended to the agricultural sector by the federal government, state government, various agricultural institutions like the Bank of Industry (BOI), Nigerian Agricultural Credit and Rural Development Bank (NACRDB), African Development Bank (AfDB), etc to sustain the increase in food production in Nigeria.

INTRODUCTION

In Nigeria today, agriculture accounts for one third of the Gross Domestic Product GDP and employs about two third of the labour force (Oyeyinka, 2002). Agriculture contributes immensely to the Nigerian economy in various ways, namely, in the provision of food for the increasing population; supply of adequate raw materials (and labour input) to a growing industrial sector; a major source of employment; generation of foreign exchange earnings and provision of a market for the products of the industrial sector (FAO, 2006).

In the 80s, Nigeria was noted for her high production performance in terms of food and cash crops, as well as the supply of most industrial raw materials. For instance, the total agricultural

output between 1986 and 1992 grew at the rate of 0.6 percent per year on the average (World Bank, 1996).

Support for agriculture is widely driven by the public sector, which has established institutional support in form of agricultural research, extension, commodity marketing, input supply, and land use legislation, to fast-track development of agriculture. These are aside the Private sector participation is not limited to local or foreign direct and portfolio investment financing, but also to sponsorship of research and breakthrough on agricultural issues in universities, capacity building for farmers and, most importantly, the provision of financing to farm businesses.

In a bid to develop the agricultural sector and achieve the corresponding benefits, Nigerian Government through its institutions has been providing support largely in the form of financial interventions to farmers. The focus on financial aid is not surprising since limited finance and credits are some of the major problems faced by the agricultural sector (Food and Agriculture Organisation, 2016). Moreover, agricultural credit is believed to increase agricultural productivity as well as efficiency of land, water, capital and human resources (Okulegu, 2014).

Nigeria has embarked on a series of sector specific financial interventions in the form of micro credit schemes/programmes and Development Finance Institutions (DFI) to help improve the productivity and livelihood of the poor (CBN 2005) who are predominantly rural farmers. Notable among the agriculture specific institutions was the Nigerian Agricultural Bank (NAB) established in 1973. Through a series of policy changes, restructuring and merger of notable financial institutions in the country, the Nigerian Agricultural Bank's nomenclature has changed over the years and evolved into the Bank of Agriculture (BOA) Limited in 2010. Given the several years of restructuring and its premier agricultural financial institution status in the country, BOA is expected to provide services that guarantees the financially less privileged farmer the opportunity of participating in its loan scheme. Nevertheless, as government strive to promote agricultural development through credit provision obtainable from BOA (Olagunju and Adeyemo, 2008), farmers' continued resource limitation and failure to participate in the loan scheme call for concern. Between December 2016 and May 2017, the BOA disclosed making over 23 Billion Naira available for farmers as part of its agricultural development efforts.

Agricultural credit financing has been identified as a means of transforming the agricultural sector and revamping the Nigeria economy by ensuring food security, job creation and economic

diversification. Food Security for all means that people at all times must have economic and physical access to adequate level of nutritious, safe and culturally appropriate food and energy (The World Food Summit, 1996). The term “food security” used to refer the access to adequate amount of food for meeting dietary energy needs that implied for many as self-sufficiency at the national level producing required food domestically. A country which cannot produce the needed food quantity and has no resources or afford to buy food from the international market to meeting its needs is not food sovereign state (Pinstrup-Andersen, 2009). Food security, thus, becomes a fundamental component of national security that which is generally ignored (Fullbrook, 2010).

Despite the fact that over the years, the Nigerian government has created and implemented various agricultural development policies and programmes in a tremendous effort to lift their productive capacities to a greater height, the sector has continually fallen below expectation and the output from the agricultural sector is not making a significant impact on the nation’s economy. Factors responsible for this includes poor infrastructures, loan assessment schemes, inappropriate technology, poor marketing system. The problems faced by the Nigerian agricultural sector are legion and needs to be tackled headlong before severe hunger typified by poverty and lack of adequate nutrient becomes an issue. Therefore, the study is to justify the linkage between Agricultural Credit and Food Production in Nigeria and specifically, to quantify the nature of relationship between Loan Assessment and Food Security in Nigeria.

REVIEW OF RELATED LITERATURE

Agricultural Credit is the amount of investment funds made available for agricultural production from resources outside the farm sector. Agricultural credit is any of several credit vehicles used to finance agricultural transactions, including loans, notes, bills of exchange, and banker's acceptances. This type of financing is adapted to the specific financial needs of farmers, which are determined by planting, harvesting, and marketing cycles (Emeaghalu, 2017).

Murray (2013) defined agricultural credit as funds borrowed by farmers from agricultural lending agencies and banks for the purpose of improving the operations of farm in terms of planting and other agricultural purposes. It is defined as a type of financing used to provide funding for agricultural producers. This may be in the form of letters of credit, loans or banker’s acceptance documents.

Agricultural credit is the financial credit that should be made available to farmers so that they can purchase new equipment and mechanize their farms. It is the provision of credit which is crucial to the development of the farming sector (Ali, 2016)

Challenges of agricultural credit policies

According to Eze, Lemchi, Ugochukwu and Okon (2010), these challenges have been the reason for failure of previous policies, and they continue to threaten existing ones.

a. Lack of adequate skills to deliver services effectively: Most of the credit institutions undertook lending to agriculture without the use of trained agricultural credit officers vested with knowledge of agriculture and the constraints to farmer performance. Additionally, supervision of credit programmes has often been below acceptable standards. Invariably, the schemes fail due to poor repayment performance.

b. Low management capacity of farmer-clients: Most farmers who should benefit from the financing policies, especially the financing schemes, lack the basic skills of farm management, including record keeping. And when these are called up as requirement for accessing facilities, as is always the case, they become ineligible.

c. Unwillingness of conventional banks to support agriculture: Even with mandatory (preferred sector) lending, guarantee of exposure and subsidized fund schemes, most banks prefer not to lend for farming, citing its lower productivity and higher risk relative to the non-agricultural sector as their reason.

d. Paucity of loanable funds: Most of the loanable funds have come from government sources and is not sufficient for any meaningful agricultural investment. The government cannot go it all alone. This creates a finance supply deficit relative to demand. Statistics show that bank credit to agriculture as a proportion of total bank credit to the economy has hardly exceeded 17 per cent since recorded history in 1970, yet the sector contributes over 35 per cent of the gross domestic product annually (CBN, 2007).

e. Weak institutional support in the sector: Infrastructure for processing and storage, land tenure systems, legal system for registration and perfection of collateral, judicial system for the enforcement of loan contracts and foreclosure of collateral, etc, are weak. This does not encourage private sector commitment to the agricultural financing policies.

f. Poor funding of public financing institutions: The NACRDB, for instance, has a capital base of N50 billion to be contributed to by the FGN and the CBN in a 60:40 ratio. However, as of

date, about N23 billion has been paid up. DFRRI and other non-bank institutions were or have been similarly starved of funds. These institutions cannot deliver effectively in the face of this dearth in funding.

g. Undue political interference in lending operations: Any time Government initiates a credit policy; most beneficiaries are those close to corridors of power. The result is diversion of the fund and default in repayment

Loan Assessment in Nigeria

Access to loan may be referred to as, the right to obtain or make use of or take advantage of borrowed money from a lender. In Nigeria, credit is an important instrument for improving and enhancing the productivity capacity of any sector. It also facilitates the flow of savings from surplus units to deficit units (Diagne, 2000). The outcome of this is that only a small proportion of the total number of rural households and farmers credit from the formal sector.

Again, among those with access to the institutional credit, a very small group particularly the rich and the elites in the village receive a very large share of the total amount disbursed. Consequently, the overwhelmingly constrained borrowers are forced to turn to the rather expensive and unreliable informal credit sources (Okuru, 2004). Agriculture loans are specifically designated for use in the industry, and there are plenty of ways you can use the proceeds to get your farm or ranch up and running or expand your operations.

The access to loan and funding among farmers in Nigeria remains largely unmet despite government's efforts of diversifying the country's economy through its agricultural revolution initiatives supported by the Central Bank of Nigeria. The challenges are not only on the farmers themselves but also on financial institutions that can hardly identify genuine farmers from those who have been described overtime as political farmers.

Food Security

Food security can be defined as access by people at all times to enough food for an active, healthy life and includes at a minimum: the ready availability of nutritionally adequate and safe food, and the assured ability to acquire acceptable food in socially acceptable ways without resorting to emergency food supplies, scavenging, stealing and other coping strategies (Adetiloye, 2012). The World Health Organization (2013) states that there are three pillars that

determine food security: food availability, food access, and food use and misuse. The Food and Agriculture Organization (2012) adds a fourth pillar: the stability of the first three dimensions of food security over time. In 2009, the World Summit on Food Security stated that the "four pillars of food security are availability, access, utilization, and absorption.

This is sometimes referred to as the availability and safety of consumable food through the production and preservation processes up to the time of consumption. Food insecurity is described as the unavailability of food, safety and intake at individual, household, sub-national and global levels (Oladeji, Ayegbusi & Olowe, 2004). This goes to show that a nation that cannot feed itself is food insecure. A more straightforward definition of food security concerns the availability of food in sufficient quantities to meet the sustenance of the population. Hunger is a severe manifestation of food insecurity.

The National Agency for Food and Drug Administration and Control (NAFDAC) is involved in quality control and safety of packaged foods in Nigeria especially of meat and poultry. The emphasis should be first on production before preservation of the produce. Eugenio, Babinand & Thomas, (2002) believes in the possibility of a globalizing world being fully food secure via the circulation of safe affordable food throughout the world. Nevertheless, for a country like Nigeria this should be avoided as much as possible given the outflow of scarce resources.

Theoretical Framework

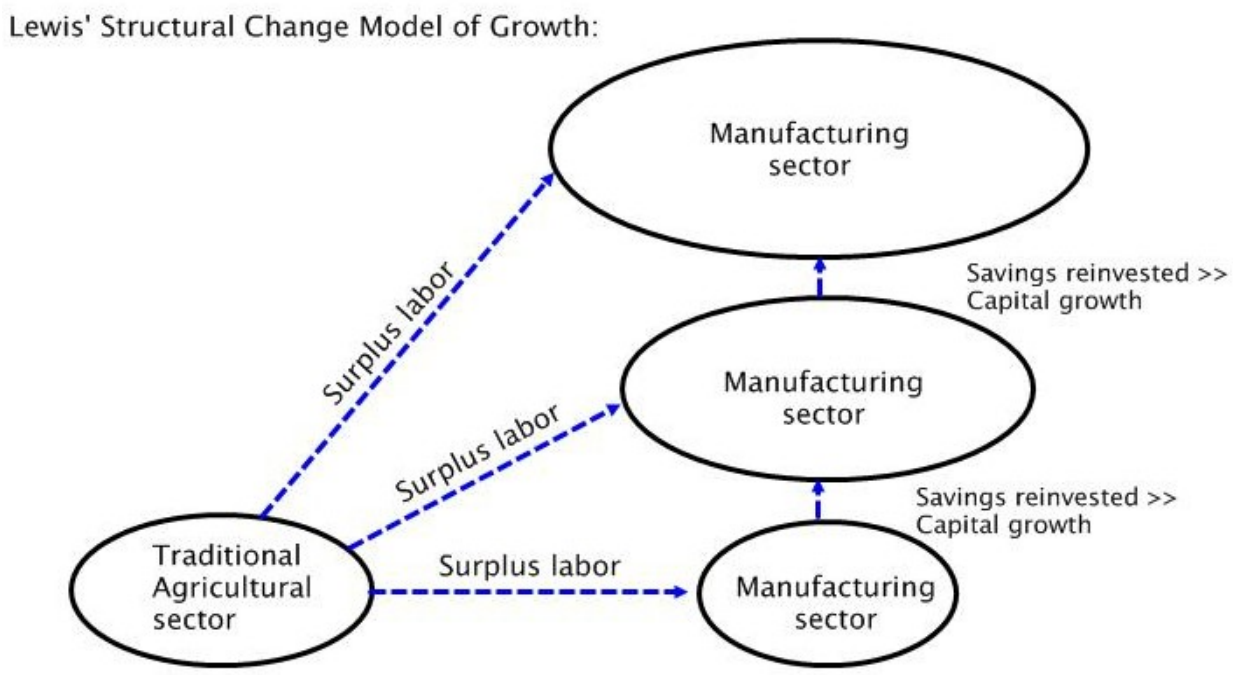
The study adopted the Structural Change Theory as framework. The Structural Change Theory was developed by Lewis Arthur in the year 1954 and called it “development with unlimited supply of labour”. The assumption of this theory states that an economy is made up of two sectors. One is the traditional (agricultural or subsistence) sector while the other is the modern (capitalist, industrial or manufacturing) sector. This gave rise to the two-sector model. The theory also assumed that the development of an economy is dependent on the growth of the two sectors.

Y = f (AGRIC, IND)

Where; Y = Economic development,

AGRIC =Agricultural sector and

IND = Industrial sector.



Source: Pinstrup-Andersen, (2009).

The agricultural sector and the industrial sector are interrelated. The agricultural sector employs capital inputs, labour expertise and also a final consumer of the output of the industrial sector, while the industrial sector employs labour and output of the agricultural sector. This theory is important to this study because agricultural development cannot be possible without proper funding. The proper funding of agriculture is made possible through the provision of agricultural credits schemes; the proper funding of these schemes will lead to increase in agricultural output which will, in turn, lead to adequate food security through food availability, food utilization, food absorption and food access and consequently, economic development.

Empirical Review

Ekwere and Edem (2014) examine the effect of agricultural credit on agricultural production among small scale farmers. Structured questionnaires were administered to 136 farmers, who had been selected using the stratified random sampling technique, and the data obtained were summarized into percentages. Regression analysis was adopted to assess the impacts of socio-economic factors on loan size among farmers. The analysis revealed that access to agricultural credit impacts positively on agricultural production. The study concluded that agricultural credit enhances productivity and promotes standard of living by breaking vicious

cycle of poverty of small-scale farmers and recommended that government and the organized private sector should regularly and timely offer credit to farmers.

Ijioma and Osondu (2015) focused on agricultural credit sources and determinants of credit acquisition by farmers in Idemili local government area of Anambra State, Nigeria. Ninety farmers were randomly selected by multi stage random sampling technique. Semi-structured questionnaire was used to elicit data for the study. Descriptive statistics and multiple regression model were used in achieving the objectives. The result of the multiple regression analysis revealed age, household size, membership of cooperative societies, marital status, education level, farm size and amount of loan repaid at varied signs and levels as significant predictors of amount of agricultural credit acquired by farmers. The study recommends that the state government should pass policies aimed at providing free educative seminars to all illiterate farmers to teach them possible ways and methods of acquiring credit.

Ojiegbe and Duruechi (2015) evaluated the impact of these agricultural loans on food production, the problems and prospects. Data for the study were sourced through secondary means and hypotheses formulated in order to attain the objective of the research. The data were analysed with SPSS (multiple regression) and formulated hypotheses tested with F-ratio and student t-test. Findings revealed that agricultural loans have significant and positive impact on food production in Nigeria. The study concluded that there is need to increase and sustain the amount of credits disbursed to the sector if the rate of food production is to meet with the pace at which the population is growing and recommended that more loan facilities should be extended to the agricultural sector to sustain the increase in food production, given the demographic state of Nigeria.

Nzomo and Muturi (2014) examined the effect of Agricultural credit programmes on the productivity of rural farming households in Kimilili Bungoma Sub County. The study adopted a cross sectional survey design, where data was collected, with the use of a well-structured questionnaire from 123 randomly selected small-scale rural farmers, who are users of micro-credit based on their statement, through multi-stage sampling technique. The data was processed and analyzed using the Statistical Package for Social Sciences (SPSS). The findings of this study showed that, Agricultural credit has the capacity to enhance the income of farmers who utilize it by more than 100% and concluded that credit not only helps to expand the economies of size but

also helps to increase the productivity of farms from the available resources. The study recommended among other things that the government should provide attractive incentive system to farmers so as to boost production from the smallholder sector.

METHODOLOGY

Research Design

Research design is a plan or blueprint which specifies which specifies how data relating to a given problem should be collected and analysed (Onyeizugbe, 2013). The study adopted descriptive research and correlational survey design; this type of study seeks to establish what relationship exist between two or more variables. Usually, such studies indicate the direction and magnitude of relationship between the variables (Nworgu, 2006). The study used time series data from the period of 1990 – 2018.

Method of Data Collection

The study used only secondary data. These data were sourced from the Central Bank of Nigeria Statistical Bulletin, Bank of Agriculture, African Development Bank, the Food and Agriculture Organization, National Bureau of Statistics yearly publications, World Bank Publications, Internet, Journals and Articles.

Method of Data Analysis

The data analysis techniques that was adopted for this study consist of multiple regression using the Ordinary Least Square method of estimation (OLS). This statistical tool seeks to establish the strength or degree of association between the dependent and independent variables. EVIEW7 software was used for the analysis

Model Specification

- **Loan Assessment Equation:** To quantify the nature of relationship between Loan Assessment and Food Security in Nigeria.

For the purpose of this study, it is essential to decompose Loan Assessment with Loan Assessment and Food Security with Food Availability (FA), food assessment (FAS), Food Utilization (FU) and Food Absorption (FAB).

Data Analysis
Regression Analysis

Dependent Variable: LS
Method: Least Squares
Date: 10/08/19 Time: 11:04
Sample: 1990 2019
Included observations: 29

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8716.968	1514.912	5.754109	0.0001
FA	-0.005617	0.019081	-0.294356	0.0231
FAS	1.094806	1.63E-05	-0.066870	0.0477
FU	4.152830	3.179259	-1.306226	0.0141
FAB	0.004874	0.004841	-1.006886	0.0724

R-squared	0.861768	Mean dependent var	6024.789
Adjusted R-squared	0.802448	S.D. dependent var	1541.703
S.E. of regression	1130.345	Akaike info criterion	17.15052
Sum squared resid	16609834	Schwarz criterion	17.44877
Log likelihood	-156.9300	Hannan-Quinn criter.	17.20100
F-statistic	4.097025	Durbin-Watson stat	1.162252
Prob(F-statistic)	0.018723		

Model is significant at 0.05 per cent which implies the model is adequate and can be used for decision making. In the test of significant of parameters in the model using t-test, the p-values of parameters are less than 0.05 per cent. The p-values of t-test imply all parameters in the model are significant except Food Absorption (FAB) which is greater than 0.05 per cent. The coefficient of determination (R-Square) of the model is 86 per cent which implies the independent variables contributed up to 80 per cent to the fluctuation of the dependent variable.

The Regression equation shows that

LS= 8716.968-0.005617FA +1.094806FAS – 4.152830FU - 0.004874FAB

Loan Assessment (LS) was regressed on Food Availability (FA), Food Assessment (FAS), Food Utilization (FU) and Food Absorption (FAB). Model is significant at 0.05%.

The estimated coefficient of the constant term is 8716.968 and it is statistically significant at 0.0 percent.

The coefficient of Food Availability (FA) carries a negative sign and is statistically significant at 0.02 percent which implies that Loan Assessment contributed to the quantum of Food Availability in the country.

The coefficient of Food Assessment (FAS) carries a positive sign and is statistically significant at 0.04 percent which implies that Loan Assessment contributed to the level of Food Assessment in the Nigeria.

The coefficient of Food Utilization (FU) carries a positive sign and is statistically significant at 0.01 percent which implies that Loan Assessment contributed to the manner of Food Utilization in the Nigeria.

The coefficient of Food Absorption (FAB) carries a positive sign and is statistically not significant at 0.07 percent which implies that Loan Assessment did not contribute to the level of Food Absorption in the Country.

The coefficient of R- Square (R^2) is 86 percent indicating a high casual relationship between the dependent variables and independent variables.

Adj.R^2 is 80 percent shows that all the variables are correlated. The value of Durbin-Watson Statistics (1.162252) is greater than the R^2 (0.861768). This means that there is no case for autocorrelation in the model and the result is respectable.

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

This chapter focuses on the summary of findings, conclusion and recommendations of the study as follows:

Summary of Findings

The broad objective of the study is to justify the linkage between Agricultural Credit and Food Production in Nigeria. The specific objective of the study is to quantify the nature of relationship between Loan Assessment and Food Security in Nigeria. The study utilized the Ordinary Least Square method of analysis using secondary data of required variables from the year 1990 to 2018.

The regression result of the hypothesis; H_i showed that there was a significant positive relationship between Loan Assessment and Food Security in Nigeria.

CONCLUSION

Finally, based on the econometric result on the linkage between Agricultural Credit and Food Production in Nigeria, this paper concluded that easy access of agricultural credit through loans and subsidies greatly improves food production through food availability, food assess and food utilization in Nigeria since the coefficients of loan assessment on food security shows a significant positive relationship. The role of agricultural credit in the agricultural sector of the Nigerian economy cannot be overemphasized. Government has put in place various policies aimed at financing agriculture and thus, agricultural credit in particular has provided farmers with better access to loans and farm inputs such as improved seeds, chemicals, labour and machinery, among others, which can translate to increased agricultural production.

RECOMMENDATIONS

In line with the above conclusion, the study recommended that more loan facilities and grants should be extended to the agricultural sector by the federal government, state government, various agricultural institutions like the Bank of Industry (BOI), Nigerian Agricultural Credit and Rural Development Bank (NACRDB), African Development Bank (AfDB), etc and other concerned bodies to sustain the increase in food production, given the demographic state of Nigeria. These funds must be made available to serious minded farmers at affordable interest rates.

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