PROCEEDINGS

THE AFRICAN FARM MANAGEMENT ASSOCIATION (AFMA)

> BIENNIVAL CONGRESS

MAURITANIA

THEME:

AGRI-BUSINESS IN THE AFRICAN CENTURY

Edited by

SOUTH APRICA

Prof. Peter 'Bola Okuneye & Mrs Grace O. Evbuomwan

PROCEEDINGS OF THE AFRICAN FARM MANAGEMENT ASSOCIATION (AFMA)

7TH BIENNIAL CONGRESS

THEME: AGRI-BUSINESS IN THE AFRICAN CENTURY

VENUE: CENTRAL BANK OF NIGERIA (CBN), CORPORATE HEADQUARTERS, ABUJA, NIGERIA

DATE: 19th - 21ST OCTOBER, 2004

Organized by the Farm Management Association of Nigeria (FAMAN) in conjunction with the Development Finance Department, CBN, Abuja

Edited by:

Prof. Peter 'Bola Okuneye & Mrs. Grace O. Evbuomwan

First Published in 2005

Copyright (C) African Farm Management Association

Published by Daily Graphics Nigeria Limited Tel: 0803-3108965, 0803-3263532

All rights reserved. The text of this publication or any part thereof may not be reproduced or transmitted in any form or by any means, electric or mechanical including photocopying, recording, storage in an information retrieve system or otherwise without the written permission of the owner.

ISBN: 978-8095-08-9

Designed & Printed in Nigeria by:
Daily Graphics (Nigeria) Limited,
Victory House, ODK Street,
Isebo-Alakia, Off Ife Road,
G.P.O. Box 12668, Ibadan.
Tel: 0803-3108965, 0803-3263532,

0804-4104608, 0803-3449198 E-mail: dailygrafix@yahoo.co.uk

Contents

		Page
AFMA 2004 Congress Spo Acknowledge	Management Association Executive Council Organizing Committee onsors ement The Conference	xiii xv xv xvii xviii
PAPERS		*
	SECTION I	
INVITED PA	APERS	
Chapter 1	Food Security and Livelihood Improvement in Africa Through Agric-Business Development by Prof. Bisi Ogunfowora	3
Chapter 2	Effective Economic Farm Management Guidelines by Julian H. Wood	29
	SECTION II	
INSTITUTIO	ONS AND AGRICULTURAL ORGANISATIONS	
Chapter 3	Cross Categorical Analysis of Factors Influencing Agricultural Credit Delivery Decisions by Cooperative Societies in Edo and Delta States, Nigeria by G. O. Alufohai and P. O. Erhabor	49
Chapter 4	Economic Impact Assessment of Development Finance Institutions in Nigeria with Particular Reference to NACB and ACGSF(1973-2000) by G. B. Ayoola and S. B. Audu.	62

Contents

Chapter 5	Africa Growth and Opportunity Act (AGOA) and African Agriculture by Mrs. O.O. Akanji,	70
Chapter 6	African Regional Integration and Challenges of Globalization: A Review of the New Partnership for Africas' Development (NEPAD) by Mrs. Grace O. Evbuomwan	82
	SECTION III	
BASIC SKIL	LS DEVELOPMENT	
Chapter 7	Promoting Smallholder Agricultural Enterprises Development: The Role of Business Development Service (BDS) by Dr. Olaitan, Mudashir Adeola	101
Chapter 8	Assessment of the Use of Information Communication Technologies on the Economic Performance of Agro-based Food Industries in South-West Nigeria by Adebayo, O. A., Ayinde, I. A, Agbonlahor, M. U. and Mafimisebi, T. E	111
Chapter 9	Environmental Stress in Sheep Breeds in Bauchi, Nigeria by Kalla, D. J. U., Ngele, M. B. Abubakar, M. and Othman, O. Y.	121
Chapter 10	Developing Farmers Financial Management Skills for Effective Farm Business Management by Aminu Abba and Amina Mustapha	128

Chapter 21

Financing Agri-Business in Nigeria: Challenges and Prospects

by

Mrs. Grace O. Evbuomwan

Abstract

It is generally agreed among researchers and policy makers that poor rural households in developing countries lack adequate access to credit. This lack of adequate access to credit is in turn believed to have significant negative consequences for various aggregate and household-level outcomes, including technology adoption, agricultural productivity, food security, nutrition, health, and overall household welfare. In the bid to increase farmers' access to credit and hence stimulate increased agricultural output, various credit initiatives were put in place by the Nigerian government. Among these were the establishment of the Nigerian Agricultural and Cooperative Bank(NACB) in 1972, the Agricultural Credit Guarantee Scheme(ACGS) in 1977 and more recently the Small and Medium Scale Equity Investment Scheme(SMIEIS). Despite

Mrs. G. O. Evbuomwan is an Assistant Director in the Research Department of the Central Bank of Nigeria, FCT Abuja.

these efforts by government, agricultural output has not increased significantly in recent years. Available data indicated that, Aggregate Index of Agricultural Production which recorded a negative 0.9 percent average growth rate between 1970-1985, improved substantially to 9.0 percent between 1986-1993 but had since stagnated at an average annual growth rate of 3 to 4 percent. Some authors have maintained that access to credit by small scale farmers who dominate the Nigerian agricultural sector is a major constraint militating against increased agricultural productivity, while others believe that the high cost of credit is the problem. Consequently, this paper attempts to establish whether access to credit is the problem or cost of credit with the aid of structured questionnaires, using small scale farmers in Alimosho Local Government Area of Lagos State which is in rural Lagos as a case study. Results of the survey revealed that about 80 percent of the respondents depended on their 'own capital' only for their operations while only about 20 percent obtained loan to augment their operating capital. Further analysis of the returns indicated that, from the small scale farmer's perspective, access to credit is more critical than cost of credit as over 40 percent of the respondents so indicated while, about 20 percent felt cost of credit is most critical. From the foregoing, it is recommended that government agricultural credit initiatives particularly the activities of the Nigerian Agricultural, Cooperative and Rural Development Bank(NACRDB), ACGS, SMIEIS, etc., be intensified to improve small scale farmers' access to credit as has been done in other developing countries like India and Ghana so as to increase agricultural productivity in Nigeria considering the enormous potentials of this sector in Nigeria's quest for economic development.

INTRODUCTION

The consensus in literature is that increased agricultural productivity is a vital pre-requisite for rapid economic growth and development. Among the roles conventionally ascribed to the agricultural sector in a growing economy are those of:

- (i) providing adequate food for an increasing population;
- (ii) supplying raw materials to a growing industrial sector;
- (iii) constituting the major source of employment;

- (iv) earning foreign exchange through commodity export; and
- (v) providing a market for the products of the industrial sector. In Nigeria, agriculture has traditionally been described as the "mainstay" of the economy. The following are the specific objectives of the Agricultural Policy:
- attainment of self-sufficiency in basic food items, particularly commodities which consume considerable shares of Nigeria's foreign exchange.
- increased production of agricultural raw materials to meet the growing needs of an expanding industrial sector;
- (iii) increased export earnings, enhanced by further processing of agricultural produce and adding of value;
- (iv) modernization of agricultural production, processing, storage and distribution, through the infusion of improved technology and management so that the sector can be more responsive to various demands of a developing economy;
- (v) creation of more rural employment opportunities by engaging in further improvement and maintenance of rural infrastructural facilities;
- (vi) improvement in the quality of life of rural dwellers through the provision of social amenities such as potable water and improved health and educational facilities; and
- (vii) continuous protection of agricultural land resources from drought, desert encroachment, soil erosion and flood.

Agro-based industries in Nigeria can be categorised broadly into two. First, there are the large-scale agro-allied industries such as textile, brewery, flour, soap, sugar, sawmill and plywood, leather and feed manufacturing industries which depend, to a large extent, on primary agricultural commodities as major inputs. Second, there are agro-processing industries, which transform primary agricultural commodities into preservable and marketable forms. In this group are the rice milling, cassava processing, grains/flour milling, cocoa processing and vegetable oil milling, among others. The agro-based industrial policy of the country is derived from the overall industrial development policy. Specifically, its objectives are to:

- (i) provide greater employment opportunities;
- (ii) increase private sector participation in the manufacturing sector among others. The specific objectives of the industrial sector policy, under which the agro-based industries are classified, are not significantly

different from those for the agricultural sector. To a large degree, the objectives for both sectors seem to be mutually re-enforcing.

Various strategies were embarked upon to facilitate the attainment of these objectives among which was formal credit delivery as it is generally agreed among researchers and policy makers that poor rural households in developing countries lack adequate access to credit. This lack of adequate access to credit is in turn believed to have significant negative consequences for various aggregate and household-level outcomes, including technology adoption, agricultural productivity, food security, nutrition, health, and overall household welfare.

In the bid to increase farmers' access to credit and hence stimulate increased agricultural output, among the credit schemes instituted were; the establishment of the Nigerian Agricultural and Cooperative Bank(NACB) in 1972, the Agricultural Credit Guarantee Scheme(ACGS) in 1977 and more recently the Small and Medium Scale Equity Investment Scheme(SMIEIS).

Despite these efforts by government, agricultural output has not increased significantly in recent years. Available data indicated that, Aggregate Index of Agricultural Production which recorded a negative 0.9 percent average growth rate between 1970-1985, improved substantially to 9.0 percent between 1986-1993 but had since stagnated at an average annual growth rate of 3 to 4 percent.

Some authors have maintained that access to credit by small scale farmers who dominate the Nigerian agricultural sector is a major constraint militating against increased agricultural productivity, while others believe that the high cost of credit is the problem.

Consequently, this paper attempts to establish whether access to credit is the problem or cost of credit with the aid of structured questionnaires, using small scale farmers in Alimosho Local Government Area of Lagos State which is in rural Lagos as a case study. Result of this pilot enquiry is expected to guide future agricultural credit policy initiatives.

The rest of this paper is distributed into four sections, with this Introduction as Section One. Section Two, highlights some relevant Literature reviewed in the course of this exercise. Section Three, is devoted to the review of some past agricultural credit initiatives by government. Section Four presents the results of our enquiry, while the last section summarises and concludes the paper.

LITERATURE REVIEW

Credit policies have been used widely in Nigeria to stimulate agricultural development. Meeting credit needs or credit demands, or easing credit constraints of a strategic sector or a target group, are frequently mentioned in documents used to solicit support for projects offering credit. Project identification and preparation, the first stages in the project cycle, often include projections of credit need for credit demand. Credit need, credit demand, and credit constrains combine as a broad criterion for providing funds for credit programs, for credit allocation and for government intervention in finance. This section highlights some theoretical and empirical literature on credit policies as a background to this paper.

As opined by Von Pischke(1991), procedures used to allocate credit critically affect the performance of credit programs. Because of the large volume of assistance devoted to credit, and because of the vast potential for the more effective use of human, financial and other resources in low-income countries, credit allocation strategies and criteria deserve careful examination.

The fundamental problem with credit need according to Von Pischke, is that need, as the word is commonly used, has so little to do with finance or with a financial view of human activity. Need implies something absolute, like the necessities for survival. As an absolute, need ignores the subtleties of risk and confidence and denies the possibility that there may be alternative ways to achieve development objectives. When these dimensions are considered, it is clear that equating credit with need easily overstates the role of credit, submitted the author.

Von Pischke, maintains that if credit is considered a basic necessity for survival or a critical missing link in processes that ought to produce growth, an attitude is cultivated that does not assist the search for good loans or for efficient measures capable of stimulating development. Those giving "needed" credit may be shielded from hard scrutiny. Project designers may portray their efforts as good works, providing something so clearly valuable that close examination is not helpful or necessary, or as offering something without which other activities expected to have high returns cannot be undertaken.

The author went further by stating that emphasis on credit need may also lead to efforts to discredit those who question the concept. At the extreme,

sceptics may be portrayed as having no understanding of the problems of the poor, as unsympathetic to their condition, as ignorant of the dynamics of progress, and as generally incompetent to participate in the dialogue of development.

According to the author, the assumption behind credit need is that without credit very little happens: the technology or behaviour desired by development planners or project designers would not be adopted by the target group of project beneficiaries. Evidence from a number of countries which suggests that, even without institutional credit, significant advances occur was cited. Examples include expansion of informal credit in the Philippines in response to new investment opportunities in the Green Revolution, the tremendous popularity of savings clubs to facilitate fertilizer purchase by the rural poor in Zimbabwe, and experience with small business development in Colombia. Circumstantial evidence consists of the tremendous progress made in developing country agriculture over the last 25 years, while far less than a third of rural household receive official credit. The author, then asked if it is reasonable to assume that these households alone are responsible for all of the progress?

What are credit needs and how are they quantified? The author used the results of the All-India Rural Credit Survey published in the 1950s as an analogy in response to this critical question. This survey was said to have provided the basis for the construction of one of the world's largest rural credit systems. More than any other event, the survey marked the start of the modern era of government attempts to use credit on a broad scale for purposes regarded as developmental. Along with the European cooperative model and the US Farmers Home Administration model, the Indian rural credit system, at least at one time, inspired credit project designers around the world.

The survey report according to Von Pischke, defines credit needs variously as:

- The amount of credit a rural family actually obtains.
- The amount of credit a rural family wants to obtain for either
- proper and legitimate productive purposes that would be economic and enable loans to be self-liquidating, or
- activities that are not directly productive, such as family consumption.
 In the latter case, need could be inferred with reference to the maintenance of some accepted or acceptable standard of living and to

the inability of the family to repay without sacrificing such a standard of living.

- Funds requested in addition to loans actually obtained that, to be provided would require changes in prevailing lending terms and conditions (interest, tenor, security, etc.) to permit profitable use by borrowers.
- Arising from "standards of performance and efficiency in production or of living in consumption" related to input requirements for crops and the optimum use of land, or to some minimum acceptable standard of living. This requirement could be demonstrated by differences in husbandry practices and living conditions between strata of society obtaining credit and those not obtaining credit.
- The additional credit that could be supplied by a reorganized or ideal credit system offering terms and conditions different from those presently available, in the form of a demand schedule for credit for productive uses.
- Changes in investment or differences in levels of investment associated with variables other than the size of farming activities; that is, investment used for purposes other than the purchase of land.
- Credit required for the purchase of land.
- Credit use related to actual expenditures by cultivators, or to some fraction or possibly multiple of actual expenditures.
- · The reported requirements of cultivators for specific purposes.
- Comparison "between relative importance of an (expenditure) item in
 the total reported credit requirements and the relative importance of
 the expenditure on the item in the actual total expenditure incurred on
 all items under consideration" for a surveyed household and period.
- Indicators of "real efforts that might be made if the reported credit requirements or parts of them could be met on terms that are reasonable, though not necessarily as low as the cultivator reported in reply to the questionnaire used to obtain estimates of credit needs".

These definitions according to Von Pischke, include references to levels of production, administratively-determined standard of living targets, and the amount of credit requested or provided or that might be available under ideal conditions. Concern for repayment the author felt, is not a prominent feature here. The promoters of a credit project can define need as they choose and proceed to meet the need they claim they have identified. False

confidence or simplistic approaches based on credit need lead to systems of credit allocation that operate with little meaningful quantification, slight regard for risk and confidence, and lagging loan collections, the author concluded.

The article by Balogun, E. D. and Otu, M. F. (1991) evaluated through econometric methods the influence of credit polices on both institutional lending and borrowing behaviour of farmers, and ascertained the relationship between credit and agricultural developments. The results showed that credit quota and portfolio ceiling devices and the pursuit of cheap interest rate policies had negative effect on agricultural credit supply, while policies associated with plough back of rural savings mobilization and availability of guarantee were marginally effective. Farmers demand for credit was influenced mainly by the availability of credit subsidies, relative profitability of the farming enterprise vis-à-vis manufacturing investment portfolios; and availability of guarantees. However, availability of rural bank branches according to Balogun and Otu did not confer accessibility to institutional farm credit, and rising trend in farm credit outstanding did not imply rising access to institutional credit. Finally the study showed that a positive but inelastic relationship existed between credit and agricultural output. Among the key factors which militate against the effectiveness of agricultural credit policies according to the authors included: lack of viable technologies and defective production environment, weak and defective administrative setups for credit policy implementation and the wrong perception of the roles of credit in development which informed the pursuit of defective financial intermediation policies that tended to undermine rather than promote growth. An agenda for credit policy reforms by the authors stressed the need to evolve and adopt policies, which foster desirable financial technologies, which serve both the interest of institutional borrowers and lenders.

A review of the works by Aliou Diagne and Manfred Zeller (2001) revealed that as in many countries in Sub-Saharan Africa, the majority of poor smallholders in Malawi are left out of the agricultural extension and credit systems. These households, characterized by landholdings of less than 1 hectare and very low crop yields, are unable to grow enough food to feed themselves even though they focus much effort on producing food crops, especially maize. It had been argued that most of these farmers are too poor and cash-strapped to be able to benefit from any kind of access to credit and that, even if they received adequate supplies of the right inputs,

their land constraints are so severe that any increase in productivity would still fall short of guaranteeing their food security. For these households, credit to support non-farm income generating activities had been suggested as a policy alternative for alleviating their food insecurity.

To gain a better understanding of the possible role of credit in improving household food security and alleviating poverty in Malawi, in November 1994 the International Food Policy Research Institute and the Department of Rural Development, Bunda College of Agriculture, University of Malawi, initiated a research program on rural financial markets and household food security in Malawi. The main objective of the research program was to analyse the determinants of access to credit in Malawi and its impact on farm and non-farm income and on household food security. The study also sought to quantify the relationship between the demand for formal loans and that for informal loans. From a policy perspective, such an analysis was said to be important for at least two reasons. First, by quantifying the welfare impact of access to financial services, it could inform policymakers about the social benefits of policy strategies to promote the formation and expansion of micro-finance institutions in rural areas. Second, the analysis could provide knowledge about the relative importance of the various socioeconomic factors within or beyond the control of policy that determine whether or not some households will benefit from access to formal credit. This latter information according to the authors could guide the design of institutional arrangements and the choice of financial services to be offered to different target groups.

The study analysed the determinants of access to formal and informal credit and the demand for loans. It found that formal lenders in Malawi, such as rural banks, savings and credit cooperatives, and special credit programs supported by the government and nongovernmental organizations, preferred to give loans to households with diversified asset portfolios and therefore more diversified incomes. This was presumably done to increase and stabilize repayment rates. It also found that households in Malawi were generally credit constrained in both the formal and informal sectors of the credit market. For example, close to half of the households participating in formal credit programs still had binding credit constraints. However, Malawian households would borrow on average only about half the amount of any increase in their credit limits.

The level of interest rates charged on loans according to the authors, seemed not to be an important factor for households in deciding in which microfinance institution to participate. Non-price attributes of credit institutions and their services play a larger role. These attributes include the types of loans provided and the restrictions on their use, as well as the types of non-financial services provided by the programs, such as training in the management of micro-enterprises. This result suggested that the acceptance of an institution by its clientele, and therefore its prospects for growth and sustainability, were determined by a range of characteristics of both its financial and its non-financial services.

The main findings of the study regarding the impact of access to credit on household welfare outcomes did not support the notion that improving access to micro-credit is always a potent means for alleviating poverty- an opinion that was said to have been voiced, at the Micro-credit Summit in Washington, D.C, in February 1997. Both the tabular and the econometric analysis of their results showed that when households choose to borrow they realize lower net crop incomes than non-borrowers. Although this result was not statistically significant, it nonetheless pointed out the risk of borrowing that borrowers can be worse off after repaying the principal and interest.

Two main reasons for the negative (albeit insignificant) relationship between borrowing and net crop incomes were identified in this Malawian study. Both had important implications for financial sector policy and the conduct of rural financial institutions in the country (Malawi). The first reason was the focus of the loan portfolio on one loan product, which provided farmers too much costly fertilizer for hybrid maize. Three of the four institutions investigated in the study provided agricultural credit, focusing mainly on an input package for hybrid maize. The second reason was the below-average rainfall in the two survey years and the concentration of the loan portfolios of the formal lenders on maize, a drought-sensitive crop.

Consistent with the insignificant results for crop income, they found no significant impact of access to credit on the per capita income, food security, and nutritional status of credit program members. As the credit services of the formal institutions were mostly geared toward income generation, and in particular toward the growing of fertilized hybrid maize and tobacco, access to the type of credit products offered in Malawi was expected to have mostly indirect effects on consumption and nutrition through its potential effect on income. The rural financial institutions in Malawi covered in the

study did not offer financial products, such as consumption credit and precautionary savings options that could eventually have a direct effect on consumption or on nutritional status.

Growing tobacco was found to be the most important determinant of household crop income. Another finding of the study, however, was the fact that households that grew tobacco were less food secure, with significantly lower per capita daily calorie intake and a higher prevalence of both chronic and acute malnutrition compared with households that do not. The food insecurity and malnutrition of tobacco households were traced to the combination of larger than average household sizes because of the labour-intensive nature of tobacco growing and the high relative cost of buying maize for consumption. The study also found that the price of maize had a significant and negative direct impact on household per capita calore intake, while its indirect effect on the latter through household income was positive but statistically insignificant. This finding according to the authors. was consistent with two other findings of the study: that the marginal impact of the price of maize on household income, although sizable, was not statistically different from zero and that smallholder farmers in Malawi were, on average, not buyers of maize because of their 59 percent average maize self-sufficiency. Therefore any increase in the price of maize was likely to have a negative impact on the food security of the average smallholder farm household

A major conclusion of this study was that the contribution of rural micro finance institutions to the income of smallholders could be limited or outright negative if the design of the institutions and their services does not take into account the constraints on and demands of their clients. That, developing attractive credit services requires both identifying farm and non-farm enterprises and technologies that are profitable under the conditions experienced by subsistence-oriented farmers and responding to the numerous constraints of resource-poor rural households. The results suggested that a strategy of expanding financial institutions in rural, drought-prone areas with inadequate market and other infrastructure may-at least in below-average rainfall years-have no significant positive welfare effects. The risk of drought in Malawi, as in much of rain-fed Sub-Saharan Africa and other countries, constitutes a considerable challenge for developing sustainable rural financial institutions. In such environments, a strategy providing for greater diversification of the portfolio of assets and liabilities

of the rural financial institutions, as well as adequate provisions for loan defaults and the building up of reserves for rescheduling loans, was said to be a necessary precondition for rural financial institutions to prosper and to be able to offer their clientele reliable access to future credit and savings services.

The necessary resources, infrastructure, and socio-economic environment were said not to be in place yet, for access to formal credit to realize its full potential benefits for Malawi's rural population. Therefore-considering that the formation of sustainable rural financial institutions was a difficult task to achieve in rural economies that lack irrigation, exhibit insufficient hard and soft infrastructure, and support a poorly educated rural population adversely affected by malnutrition and disease, and considering that the benefits at the household level may not materialize in drought years-the report recommended a cautions and gradual strategy for expansion of rural financial institutions in Malawi. This strategy the authors felt, would require direct support by the state through an adequate legal and regulatory framework, through the support of institutional innovations and pilot programs in rural areas that may have the potential to reduce transaction costs in providing savings, credit, and insurance services to rural clientele.

Adoption of a cautious strategy would also imply that the formation and initial expansion of rural financial institutions should focus on high potential agricultural areas that allow for lending to those growing a diversified array of cash and food crops as well as offering financial services for off-farm enterprises at low transaction costs. This the authors said did not mean that low-potential and drought-prone agricultural areas should be neglected, because credit may be the best or only option for the smallholder farmers to finance their input acquisitions after experiencing a crop failure. Indeed the evidence showed that without access to credit the ability of smallholder farmers to recover from a crop failure was extremely limited. The mere knowledge that credit will be available in case of crop failure can be beneficial to poor farmers by inducing them to adopt new and more risky but potentially profitable crops or technologies. Their econometric analysis confirmed the positive and quite sizable (though not statistically significant) impact of merely having the option to borrow, even if it is not exercised. However, the expansion of micro finance into marginal areas with insufficient market and other infrastructure the authors said, should be coupled with a greater emphasis on other growth and welfare-enhancing investments (such as those in transport, health, and communications infrastructure) and with targeted safety-net interventions for the very poor.

In summary, therefore, benefits of access to credit for smallholder farmers depend on a range of agro-ecological and socio-economic factors, some of which are time-variant and subject to shocks such as drought. Access to credit is therefore no panacea for poverty alleviation. The full potential of credit access in increasing the welfare of the poor can only be realized if coupled with adequate investments in hard and soft infrastructure as well as investments in human capital.

Ghana is reported to have a tiered range of formal, semi-formal and informal institutions, providing micro-finance services to the urban and rural poor and underserved sectors of the economy. Financial intermediation and credit activities are under the regulatory jurisdiction of the Bank of Ghana (BOG). The regulatory framework under the Banking Law (1989) and the Non-Bank Financial Institutions (NBFI) Law (1993) accommodate a tiered structure of licensed financial intermediaries and of financial regulation. Among the range of institutions providing micro finance services (mostly micro credit and savings facilities) is the Agricultural Development Bank. The bank was set up by Act of Parliament in 1965 as the Agricultural Credit and Cooperative Bank to promote and modernise the agricultural sector through appropriate financial intermediation. In 1967, the name of the bank was changed to the Agricultural Development Bank (ADB) and its functions were also broadened in 1970. The ADB then took advantage of Ghana's new Banking Law to broaden its corporate mission from mere dispensing of agricultural credit schemes to undertake the entire range of financial intermediation without sacrificing its primary function.

ADB is currently the biggest provider of institutional financing or credit to the Ghanaian agricultural sector. Its share of total bank lending to the sector is said to be 85 percent. This is in the face of the growing withdrawal of the traditional commercial-oriented financial institutions from the sector due to the perceived high risk and high cost associated with lending and other operations in the agricultural sector. The bank operates throughout Ghana with 42 branches and 6 area offices.

Analysis of ADB's loan portfolio in 2002, indicated that the Agric. and Allied sector took the lions share of 70.90 percent, Commerce and Finance (6.28 percent), Manufacturing (4.16 percent), Construction, Mining and services (7.70 percent), Fuel and Gas (0.70 percent) while, Miscellaneous

sectors got 10.22 percent. A breakdown, of the Agric. and Allied sectors share showed that, Industrial Crops received 47.28 percent, Food crops (25.50 percent) Cocoa (10.97 percent), Poultry/Livestock (4.38 percent), Agric. Marketing (7.17 percent) while the Non-Traditional agricultural sector, which provides services to the mainstream agricultural sector, such as the importation and supply of agricultural inputs, distribution and storage of agricultural produce, hiring of agricultural equipment, and the provision of transport and haulage services, got 4.69 percent.

REVIEW OF THE GOVERNMENT AGRI-BUSINESS FINANCING INITIATIVES (1970-2004)

The past approach to economic development in Nigeria relied heavily on government intervention in virtually all the sectors of the economy, including the financial sectors. Thus, in the bid to provide access to investible funds to induce output growth for the improvement in living standards in the rural areas, which were perceived to have been more disadvantaged the Central Bank of Nigeria (CBN) through its various policy circulars compelled commercial and merchant banks to open branches in rural areas in 1977, in addition to the various specialised financial institutions established by government in the early 1970s.

In the 1980s government established more specialised financial institutions targeted specifically at the low income group and the rural communities. In the 1990s up to the present time (2004) government have continued to evolve policies aimed at further increasing the access of the rural communities and the small and medium scale enterprises to financial services. A brief appraisal of some of the institutions created and policy measures evolved by government to provide financial services to the rural communities in the past are presented below.

Appraisal of Development Finance Institutions

Development Finance Institutions (DFIs) or specialised financial institutions were established to contribute to the development of specific sectors of the economy. Among the first to be established were the Nigerian Industrial Development Bank (NIDB), Nigerian Bank for Commerce and Industry (NBCI) and the Nigerian Agricultural and Co-operative Bank (NACB).

(a) The Nigerian Industrial Development Bank (NIDB)

The NIDB was established in 1964 and charged with the function of harnessing local and foreign skills and local and foreign private capital in the development of new industries and the expansion of existing ones. The NIDB sourced funds from banks, the CBN, and Federal Government and the International Finance Corporation. NIDB's total disbursements for various projects grew from N50.3 million in 1980 to peak at N1,294.2 million in 1992. Subsequently, credit activities of the institution declined, dropping to N85.3 million in 1998. Like other DFIs, NIDB was faced with one problem or the other ranging from poor asset quality to management problems. A restructuring exercise was commenced in the late 1990s and this has led to the merger of most of the development finance institutions in the country.

(b) The Nigerian Bank for Commerce and Industry (NBCI)

It was established by Decree 22 of May, 1973 and charged with the function of providing equity capital and funds by way of loans to small and medium scale industries. Its capital needs were provided by its proprietors (the Federal Government and the Central Bank of Nigeria). NBCI invested a total sum of N17,725.56 million in small and medium scale enterprises between 1981 and 2000 as the bank's loans and advances grew from N 12.7 million in 1981 to N 6,338.8 million in 2000. There was no record of loan disbursement in 2001. The bank recorded no growth in deposit mobilisation since 1993 and continued to operate with huge negative position and a high proportion of long-term borrowings and unclassified liabilities. As at end 2000, the banks long-term borrowing and other liabilities had grown to N3, 511.5 million and N8,640.6 million respectively. The high incidence of non-performing credit and other related financial problems continued to be the major factors militating against the bank's performance which also resulted in the merger of the bank with two other DFIs in 2000. Currently, we have the Bank of Industry (BOI) which is the outcome of the merger of the Nigerian Bank for Commerce and Industry (NBCI), the Nigerian Industrial Development Bank (NIDB) and the National Economic Reconstruction Fund (NERFUND). The new bank has taken off and is setting the stage to forge a strong and enduring partnership with the Organised Private Sector (OPS) in discharging its mandate.

(c) The Nigerian Agricultural and Co-operative Bank (NACB) The NACB was established in 1972 to assist in financing viable agricultural projects and thus enhance the level and quality of agricultural production. It sourced funds from government subventions; credit shortfall on agricultural loans through the CBN and loans from international finance institutions such as the International Bank for Reconstruction and Development (IBRD), African Development Bank (ADB), European Investment Bank (EIB), and the International Fund for Agricultural Development (IFAD). In 1980, NACB disbursed the sum of N28.6 million for various categories of lending to agriculture. The highest disbursement of N6,104.2 million was made by the NACB in 1994. NACB's loan disbursement amounted to N443.9 million in 1998 indicating a fall of 9.6 per cent from the level of loan disbursed in 1997. The number of projects financed has also declined. There were no records of loan disbursement from 1999 to 2001. Due to NACBs unimpressive performance in recent years, it was merged with two other institutions, the Peoples Bank of Nigeria (PBN) and the Family Economic Advancement Programme (FEAP). The merger gave birth to the Nigerian Agricultural Co-operative and Rural Development Bank(NACRDB) jointly owned by the Federal Ministry of Finance Incorporated (MOFI) and the Central Bank of Nigeria (CBN) with a shareholding ratio of 60% and 40% respectively. On the successful completion of the restructuring programme, the Board of Directors approved appropriate Credit Guidelines for the Bank. Consequently, the Bank embarked upon a full-scale loan approvals and disbursements to empower its clientele and give financial succour to the agricultural sector.

From July 2001 to May 2004 the Bank approved loans totalling N10, 975,749,104. Out of this amount the agricultural sector got N9, 034,385,660 while non-agricultural sector had N2, 281, 118,584.

As at May, 2004, the Bank has disbursed a total of N5, 200,088,035.49 as loans. The other clients have not fulfilled the mandatory conditions preceding drawdown. In order to protect these loans, the Bank has some necessary guidelines, which must be followed before clients could drawdown on the approvals. As soon as these clients fulfil the condition, they will have access to their loans. It was expected that these clients would meet the conditions within the second and their quarters of 2004.

As approved by the Federal Executive Council, the loan portfolio of Nigerian Agricultural, Co-operative and Rural Development Bank Ltd is spread in the ratio of 70:30 in favour of micro-loan.

Management has also intensified efforts at loan recovery. These efforts have yielded considerable results as some outstanding loans disbursed by the defunct institutions are now being recovered. Separate from the equity-funded loans, the Bank has continued to participate in such other funding arrangements as the Artisanal Fishing Project(s) being financed by ECOWAS and IFAD as well as the Federal Government-funded Animal Traction and Hand-tools Programme. Similarly, such moribund projects as the hitherto World Bank-assisted Livestock Development Programme (LDP) are gradually being revived.

It is also note-worthy that NACRDB has been nominated by the Bureau of Public Enterprises (BPE) as a participating Bank in the Privatisation Share Purchase Loans Scheme (PSPLS). The scheme as originated and funded by the BPE would enable the poor to purchase shares under the privatisation programme. In a similar vein, the Bank has, in collaboration with the National Directorate of Employment (NDE) established a high-powered committee to work out a cooperative arrangement under which NACRDB would provide adequate capital for NDE-trained entrepreneurs. This is a collaborative effort aimed at addressing the critical issue of youth restiveness in the country.

To provide liquidity for lending activities, NACRDB has made tremendous progress in deposit mobilization. The resumption of lending activities has helped in restoring customers' confidence in the Bank. This is reflected in increased customers' deposit over time. As at May 2004, net customers' deposit was over N4.0 billion from the Bank's 1.2 million (Nos) customers operating accounts in 200 branches nationwide. The recorded success has again demonstrated that rural financing is a veritable tool for poverty alleviation and inculcation of banking habits among the target populace in Nigeria.

NACRDB has involved its beneficiaries in project identification and programme design as well as the implementation and evaluation. This is done through the activities of the constituted NACRDB Community Relation Committees (CRC) and the regular fora organized in the branches for the enlightenment of the clientele.

Furthermore, NACRDB recognizes cooperative movement as a veritable instrument of change for rural development. For a long time, lack of credit facilities has limited the growth and the capacity building process within the Nigerian cooperative movement. The Bank has, therefore, instituted a scheme of whole lending to viable cooperative bodies for the benefit of their numerous members. NACRDB is not only a funding agency, but is also empowering the Cooperative Groups as an effective instrument for poverty alleviation and the attendant improvement in the quality of life of the beneficiaries.

A major constraint facing the Bank currently is high cost of overheads. The Bank has 2,375 members of staff spread across 200 Branches, Six Zonal Offices and one Head Office. Due to the difficult terrains where some of the branches are located as deliberate efforts of the government to take development to the people, the cost is as of necessity very high. Another important constraint facing the Bank is the paucity of loanable

Another important constraint facing the Bank is the paucity of loanable funds to service its numerous clients who are highly desirous of benefiting from the credit schemes being operated by the Bank for the promotion of their income generating activities. The profile of funding and the pattern since inception tells the story of the Bank's financial difficulties. It will be recalled that Mr. President approved the sum of N50 billion Equity Capital for the Bank, to be released in four equal instalments at the rate of N12.5 billion per annum commencing from year 2002. As at December 2003, the Bank was expected to have received N25,740,383,000. However, out of the sum of N9,164,383,000 appropriated for the Bank in the Federal Budgets between 2001 and 2003, only N2,240,383,000 was actually released. The Federal Ministry of Finance Incorporated (MOFI) gave a loan of N3 billion to the Bank in September 2001 at an interest rate of 4% per annum. The loan which is now due had a moratorium period of 2 years after which it became payable bi-annually over a period of 10 years.

Equally important is the fact that in establishing NACRDB, the Federal Executive Council (FEC) directed that the Bank should provide micro and macro credit facilities for all agricultural activities and only micro credit for non-agricultural projects. While micro credit facilities account for 70%, the balance of 30% is for macro-credit facilities. However, the interest rate on micro credit loans has been fixed at 8% (per annum), while loans for cotton production and vegetable oil (production, processing and marketing) are fixed at 7% and 8% respectively in line with the Federal

Government "single-digit interest rate" directives. With respect to vegetable oil, whether for production, processing or marketing, NACRD is also expected to refinance commercial and merchant bank loans from that sector at 8%. The implications of this stance for NACRBD operations are as follows:

NACRDB cannot cover the cost of its overhead and credit administration with only 8% interest rate on micro credit facilities (70% of its loan portfolio). The cost of credit delivery to the nooks and crannies of this country is exceedingly high. For NACRDB to provide its services in locations where other banks shy away from, there is an urgent need for some succour to cover both the Bank's overhead and personnel costs which currently stands at about N 2.4 billion per annum. Despite the high overhead, due to the advantages derivable from the location of branches, more communities are still requesting for branches of the Bank in their vicinity. This is part of the social pressures the management has to contend with.

The spread between the interest paid by the Bank to its depositors and what it charges on loans is very low. It cannot pay the total cost of running the Bank for it to break-even talk less of making profit. The urgent need for the underwriting of the cost of the bank's operations is further illustrated by the perusal of NACRDB lending rates, as recently approved by the Board. This downward review is in response to the general clamour for a further reduction in the interest rate regime of the Bank.

Other Financial Institutions established to purvey credit to the rural areas were the Peoples Bank of Nigeria (PBN), the Community Banks (CBs) and the Nigerian Export-Import Bank (NEXIM).

Appraisal of Special Schemes and Funds

Special schemes and funds were also created to facilitate access to credit for economic activities nationwide. Among these are the Agricultural Credit Guarantee Scheme (ACGS) and the Small and Medium Industries Equity Investment Scheme (SMIEIS).

The Agricultural Credit Guarantee Scheme (ACGS)

The Agricultural Credit Guarantee Scheme (ACGS), was established in 1977 and it took off in April, 1978 under the management of the CBN, while a Board of Directors was constituted for policy making. The scheme was designed to encourage banks to increase lending to the agricultural

sector by providing some form of guarantee against risks inherent in agricultural lending. In case of default, the lending bank is expected to exhaust all legal means of loans recovery, including realisation of any security pledged for loans, before the FUND pays 75 per cent of guaranteed loans in default.

The authorised capital of the Fund which had remained at N100.0 million from inception was reviewed upward to N3.0 billion in 1999. In view of the prevailing inflation and high cost of inputs, the loan limit under the scheme was raised from N5,000.00 to N20,000.00 for unsecured loans, and N100,000.00 to N500,000.00 for secured loans to individuals, as well as from N1.0 million to N5.0 million for corporate borrowers.

In order to ensure that loans are used for the purpose for which they are meant and foster repayment, the CBN organises courses on finance and accounts for agricultural credit officers, undertakes farm visits in connection with pre-guarantee appraisals, and post-guarantee monitoring of projects and investigate default claims. The Bank also holds regular meetings with farmers and officials of the lending banks, Ministries of Agriculture and Agricultural Development Projects on the Operations of the Scheme. In order to provide incentives for efficient utilisation of bank loans, farmers who benefit from loans under the ACGS and achieve outstanding performance in output, loan repayment and adoption of good husbandry practices, are presented with certificates of merit annually. The CBN introduced an award of a certificate to the best bank in 1995. The value of loans guaranteed under the ACGS grew from N36,307.5 thousand in 1983 to N1.2billion in 2003, while the number of loan beneficiaries grew from 1,333 to 24,303 in the period. Small borrowers of N5,000.00 and below have constituted the bulk of the number of beneficiaries constituting 41.6 percent in 2003.

The Small and Medium Industries Equity Investment Scheme(SMIEIS) New policy measures aimed at increasing credit access to the real sector of the economy have been initiated by the Central Bank of Nigeria. One of which is the decision by the Bankers Committee chaired by the Governor of the CBN, that 10.0 per cent of profit before tax of every bank be set aside and channelled to equity investment in small and medium scale industries. To ensure the effectiveness of the programme, banks are expected to identify guide and nurture enterprises to be financed under the

scheme. The Small and Medium Industries Equity Investment Scheme (SMIEIS) was launched in August, 2001. As at end April,2004, a total of N22.29billion had been set aside by 83 banks for investment in the scheme. Out of this amount, N9.75 billion or 42.57 percent had been invested by 53 banks in 185 projects. A sectoral breakdown showed that the real sector recorded investments valued at N6.57 billion (67.43 percent) in 133 projects. The activities targeted under the scheme include agro-allied, information technology, telecommunications, manufacturing, educational establishments, services, tourism and leisure, solid minerals and construction. Banks are expected to render to the CBN, on quarterly basis, their investment report under the scheme.

RESULTS OF THE EMPIRICAL ANALYSIS

In order to establish if access to credit by small scale farmers was the problem responsible for their not being able to expand their operations or the high cost of credit, structured questionnaires were administered to 80 small scale farmers involved in arable crop farming, livestock raising, fish farming, agro-processing, agro-marketing and farm equipment fabrication in Alimosho Local Government Area of Lagos State in September 2004. Out of the 80 questionnaires administered, 67 were retrieved within the two weeks period scheduled for the survey, which gave an 83.75 percent response rate. Detailed results collated from the returns are presented below.

1. Access to credit

- (i) Out of the 67 respondents, only 11 obtained loan while the remaining 56 relied mainly on 'own capital' for their operations. In proportionate terms, 16.42 of the respondents had access to credit while 83.58percent of the respondents did not have access to formal credit.
- (ii) Further analysis of the returns revealed that only 4 of the respondents (5.97 percent) had benefited from the Agricultural Credit Guarantee Scheme (ACGS). Two respondents(2.99 percent) obtained loan from the Nigeria Agricultural, Cooperative and Rural Development Bank while, only one of the respondents (1.49percent) had benefited from the Small and Medium Industries Equity Investment Scheme. Other sources of formal credit were Non-governmental Organisations(NGOs), where 5 respondents(7.46 percent) benefited.

One respondent (1.49percent) obtained loan the National Directorate of Employment and 3(4.47 Percent) got loan from cooperatives. A respondent (1.49percent) reported obtaining loan from local moneylender while 2 (2.99 percent) reported that family and friends were their sources of loan. One respondent(1.49 percent) patronised the 'Esusu' which is the prevalent informal credit group. Five of the respondents(7.46 percent) reported that they benefited from some other government credit schemes.

2. Cost of credit

Average cost of credit for the respondents who borrowed from commercial banks was 20.63percent in 2003 and 20.43percent, in 2004. This was followed by the 14.0 and 20.0 percent interest rate charged by the NGOs in the respective years. Those who borrowed from the NACRDB paid 9.0 percent and 8.0 percent interest rates in 2003 and 2004 respectively. For the respondent who borrowed from cooperative it was 5.0percent in 2003 and 7.0percent, in 2004. Thus, while interest rate charged by commercial banks declined in 2004 relative to 2003 it was still very much higher than that charged by the cooperative.

Further analysis of the responses obtained on cost of credit indicated that the interest rate considered optimal by all the respondents ranged from 2 to 25 percent, with a median of 5percent. This confirms the fact that interest rate charged by banks is too high for small scale farmers.

In response to the direct enquiry on which is most important, between access to credit and cost of credit, 51.15percent of the respondents felt access was most important, while 21.85percent of the respondents felt cost was most important. However, 27.4percent were of the view that both access and cost were equally important.

3. Suggestions to Government to help expand operations

Respondents were also asked to render suggestions on what government could do to help expand their operations. In response over 50.0 percent of them requested for access to credit at affordable cost (5-10 percent interest rate).

Other suggestions included the following:

- Islam discourages taking loan with interest, so government should grant interest free loan but penalise those that refuse to pay.
- (ii) Government should provide agro-incentives instead of credit facilities that are not available.
- (iii) Reduce protocol and bureaucracy, and nepotism to improve access to credit.
- (iv) Waive collateral for small-scale farmers, particularly as poultry farm is not accepted as collateral.
- A respondent indicated that he would prefer to operate with own funds only.
- (vi) Improve infrastructure such as transportation, electricity etc, to facilitate marketing, processing and storage.
- (vii) Subsidy on fertiliser and livestock feed.
- (viii) Enlightenment on how to obtain credit, quick processing of applications and timely disbursement of loan granted.
- (ix) Assist farmers with land acquisition.
- (x) Don't give loan to political farmers.

From the foregoing, it is obvious that access to credit by small scale farmers is yet to reach the desired level, that cost of credit by commercial banks are too high while farmers need more than credit to expand their operations.

SUMMARY AND CONCLUSIONS

The paper has reviewed the policy measures and activities of institutions established by the Nigerian government to effect the provision of financial services to the agricultural sector in the bid to stimulate output growth. Available evidence from the survey carried out in the course of writing this paper, indicated that the past policy measures and institutions created have not been able to facilitate access of small scale farmers to formal credit to the extent that would stimulate output growth and eradicate poverty. This has been attributed to a number of factors, prominent among which were the poor operational modalities of these institutions, and the fact that some small-scale farmers cannot even approach the banks for loan due to cultural problems. Over the years the various specialised financial institutions established by the government have been faced with one problem or the other and as such could not meet the objectives for which they were set up. The reasons for their failure include the following: First, because the

programmes offered very low – interest loans, the volume of funds they could supply was limited, and it was impossible for the lending institutions to achieve self-sustainability. Second, lending volume and sustainability were further eroded because these institutions lacked incentive to undertake careful underwriting and enforce timely repayment. Finally, there were evidences that borrowers were frequently selected for political reasons rather than because they fit the profile of the ostensibly targeted beneficiaries or were sound credit risks. Finally, wealthy households appropriated the benefits of many of these programmes because they preferred to borrow from them rather than from the unsubsidized formal sector. Consequently, the development finance institutions suffered serious erosion of their capital bases and have to be recapitalised for continued survival.

In the bid to come up with an effective and efficient framework for the provision of financial services to the agricultural sector in Nigeria, literature on theoretical and empirical issues and some country case studies were also reviewed.

Based on the results of our survey and the information obtained from our literature review, it is recommended that activities of the credit institutions be intensified, in order to increase farmer's access to credit.

Admittedly, growth in output is not dependent on credit alone, but evidences drawn from the country case studies as well as in Nigeria confirms the fact that capital to start or expand business is one of the major problems of the rural poor. For instance, in Nigeria, the major problem limiting output growth in the agricultural sector is the absence of or inadequate utilisation of modern farm inputs as farmers cannot continue to obtain improved yield from old and unimproved varieties and animal stock, or by cultivating the same parcel of land year in year out without soil improvement materials. The availability of these modern inputs alone cannot guarantee the modernisation process if farmers do not have the means to purchase them; therein lays the relevance of finance.

It is in this vein that we are recommending that the restructured DFISs be empowered by government to take off effectively as the conventional commercial banks still shy away from the agricultural sector.

Additional funding for the NACRDB will assist the nation to achieve the following social, economic and political benefits:

 Boosting of agricultural production and alleviation of poverty level especially in rural areas.

- (ii) Providing employment for the unemployed and under employed.
- (iii) Contributing to food security for the nation.
- (iv) Boosting export of agricultural production nation-wide.
- (v) Keeping the people engaged thereby reducing rural-urban migration
- (vi) Reduction of civil strikes, communal clashes, etc.
- (vii) Improving the political and economic well being of the people through empowerment and provision of food.

BIBLIOGRAPHY

- Agricultural Development Bank: Annual Report and Accounts, 2002, Cedi House, Liberia Road, P.O. Box 4191, Accra.
- Aliou Diagne & Manfred Zeller (2001): "Access to Credit and its Impact on Welfare in Malawi", Research Report 116, International Food Policy Research Institute, Washington, D.C.
- Akanji, O.O, (Mrs), (1994): "Towards a Viable Rural Financial Market in Nigeria", in Central Bank of Nigeria Bullion, Vol. 18, No. 4, Oct/Dec., 1994.
- Balogun, E.D. & Otu, M.F. (1991): "Credit Policies and Agricultural Development in Nigeria", in the Central Bank of Nigeria Economic and Financial Review, Volume 29, No.2 June, 1991.
- Central Bank of Nigeria: Annual Report and Statement of Account, 1980 2003.
- Central Bank of Nigeria, (1981): Agricultural Credit and Finance in Nigeria: Problems and Prospects. Proceedings of a Seminar Organised by the CBN, April 27 30, 1981, Edited by M. O. Ojo, C.C. Edordu and J. Ayo Akingbade. October, 1981.
- Central Bank of Nigeria, (1986): Nigerian Agricultural Credit System: Analysis of Operation and Performance. Report of the National Agricultural Credit Study Team, Volume II.
- Central Bank of Nigeria: Statistical Bulletin, Volume II, No.2, December, 2001.
- Central Bank of Nigeria, (1992): "Developmental Activities of the Central Bank of Nigeria", in CBN Briefs, Research Department, July, 1992.
- Evbuomwan G. O. (Mrs.), (2001): "A Review of the Activities of Community Banks in Nigeria", in the Central Bank of Nigeria Bullion, Vol. 25, No. 2, April/June, 2001.

- Evbuomwan G. O. (Mrs.), (1997): "Poverty Alleviation Through Agricultural Projects,: A Review of the Concept of the World Bank Assisted Agricultural Development Projects in Nigeria", in CBN Bullion, Vol.21, No. 3, July/Sept., 1997.
- Evbuomwan G.O. (Mrs), Ukeje, E.U. and Afelumo, F.A. (Mrs), (1993): "Review of Policy and Developmental Objectives in Agricultural and Agro-Based Industrial Financing", in CBN Bullion, Vol. 17, No. 4, Oct/Dec., 1993.
- Federal Office of Statistics, (1997): Socio-Economic Profile of Nigeria 1996. Federal Office of Statistics, Abuja.
- Federal Office of Statistics, National Planning Commission, The Federal Republic of Nigeria and the World Bank,: Poverty and Welfare in Nigeria. American Writing Corporation, Washington D.C.
- Gallardo Joselito, (2001): "A Framework for Regulating Microfinance Institutions: The Experience in Ghana and the Philippines". The World Bank Financial Sector Development Department, Nov., 2001.
- Raviez Marisol R.,: "Searching for Sustainable Microfinance: A Review of Five Indonesian Initiatives". Rural Cluster Development Economics Research Group.
- Pischke Von, J.D.: "Finance at the Frontier, Debt Capacity and the Role of Credit in the Private Economy". The World Bank Economic Development Studies, Revised Edition, 1993.
- Ukeje E. U., Productivity in the Agricultural Sector: Proceedings of the Ninth Annual Conference of the Zonal Research Units, 2000.
- The World Bank (2001): World Development Report 2000/2001, Attacking Poverty. The International Bank for Reconstruction and Development/the World Bank, Washington D.C., USA.