AN EVALUATION OF THE IMPACT OF THE NIGERIAN AGRICULTURAL AND COOPERATIVE BANK'S DIRECT INVESTMENT LOAN SCHEME IN KATSINA STATE

By

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DEDICATION

Dedicated to my mother for her tender love and care.

DECLARATION

I, hereby declare that this Thesis has been written by me and it is a record of my own research work. It has never been presented in any application for a higher degree. All direct quotations are distinguished by quotation marks and the sources of information are acknowledged by means of references.

M.L. IDAH:.....

Date:.....28/8/56.....

CERTIFICATION

This thesis entitled "AN EVALUATION OF THE NIGERIAN AGRICULTURAL AND COOPERATIVE BANK'S DIRECT INVESTMENT LOAN SCHEME IN KATSINA STATE" by M.L. Idah meets the regulations governing the award of the degree of Master of Science of Ahmadu Bello University Zaria, and is approved for it's contribution to scientific knowledge and literary presentation.

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ABSTRACT

The contribution of the agricultural sector to the Nigeria's macro-economy has been declining in recent years. This is buttressed by the fact that the demand for food and raw materials have not kept pace with their ever increasing demand in the country.

In view of the indespensibility of agriculture to the growth and development of any nation state, successive government in Nigeria have employed policies and programmes aimed at ensuring that agriculture is given the priority it deserves.

The establishment of the Nigerian Agricultural and cooperative Bank (N.A.C.B.) Limited, in 1973 and the Agricultural Credit Guarantee Scheme Fund (A.C.G.S.F.) by the government in 1977 are the most recent efforts by the government to deliver agricultural credit to the innumerable farming population in Nigeria, The Bank operates both direct and on-lending credit programmes. Among the direct lending programmes is the Direct Investment Loan Scheme (D.I.L.S.) which caters for medium and large scale farmers involved in all the major agricultural productions.

The impact of the Direct Investment Loan Scheme operated by NACB was evaluated within Katsina state to ascertain its[1] impact on the use of modern technologies,

farm size and income using a sample of 64 beneficiaries Selected purposively. The influence of certain socio-economic characteristics of the beneficiaries such as age, educational background, farming experience and income/expenditure pattern on loan repayment, adoption of modern technologies and farm income were also investigated.

Descriptive statistics, correlation anaysis and analysis of variance were used to investigate the performance parameters. The findings of the study revealed that the adoption of modern technologies such as the use of fertilizers, herbicide, insecticide, improved Seeds and beneficiaries gross farm income were positively correlated with the use of the loan. However, number of tractors, work bulls and farm size were negatively correlated to the use of the loan. The impact of credit use on the adoption of modern technologies and farm income were all found to be significant at one per cent level of probability; while the ownership of tractors, work bulls and increase in the beneficiaries farm size v/ere not significant at both one and five per cent level of probability. The loan repayment rate in general, below 50 percent under the scheme was poor and discouraging considering the amount disbursed at any given period. The yearly dwindling recovery rates under the scheme were found to be 29 per cent, 21 per cent and 20 per cent for the years 1989, 1990 and 1991 respectively.

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CHAPTER ONE

INTRODUCTION

1.1 Focus and Scope of the Study

The performance of the Nigerian agricultural sector has been very disappointing since the 1970s. For instance, between 1970 and 1983 the sector recorded an annual average decline of about one per cent in the general level of agricultural production. Staple food items which contributed about fifty per cent of total value of agricultural production suffered the highest rate of annual decline of about 3.4 per cent during that period (Ojo, 1986). This poor performance is reflected in the decrease in both volume and value of the nation's agricultural exports and increases in the food imports. Table 1.1 shows the value of agricultural import (food) in relation to the total import in Nigeria from 1980 to 1992.

Faced with this deteriorating situation in the agricultural sector of the economy, the government initiated a number of measures aimed at strengthening the capacity of the sector to increase productivity and total production. These measures included the establishment of a full fledged lending institution - the Nigerian Agricultural and Cooperative Bank (NACB) Limited to cater for the credit needs of the sector. The other steps which were aimed at enhancing the supply of agricultural credit includes the establishment of the Agricultural Credit Guarantee Scheme Funds (A.C.G.S.F) in 1976, the Rural Banking Scheme and the provision of supportive institutions such as the River Basin Development Authorities (R.B.D.As),

Table 1.1: The value of Nigeria food and total imports (1980 - 1992).

YEAR	TOTAL IMPORTS VALUE(MILLION NAIRA)	FOOD, ANIMALS AND VEGETABLE OIL (MILLION NAIRA)	FOOD IMPORTS AS % OF TOTAL IMPORT
1980	9,095.6	1,552.5	17.07
1981	12,613.9	1,948.3	15.45
1982	10,100.2	1,793.7	17.76
1983	6,555.7	1,402.3	21.39
1984	4,484.5	945	21.07
1985	5,536.9	996.3	17.89
1986	5,536.9	926.8	15.52
1987	15,695.3	1,704.2	10.86
1988	21,445.7	1,758.5	8.20
1989	30,960.2	2,098.5	6.80
1990	45,717.9	3,899.5	8.53
1991	89,488.2	8,501.4	7.50
1992	143,151.2	13,742.5	9.60

Sources: 1. Central Bank of Nigeria, Annual Report and Statement of Accounts 1992.

2. Central Bank of Nigeria, Statistical Bulletin Vol. 3 (1) 1992.

Directorate of Food, Roads and Rural Infrastructures (D.F.R.R.I) and the Agricultural Development Projects (A.D.Ps). Despite these efforts made by the Government to boost agricultural production in Nigeria the performance of the sector remained unsatisfactory. This study is an assessement of the impact of

the Direct Investment Loan Scheme which is one of the major programmes of NACB on agricultural production.

1.2 Statement of the Problem

Different people hold different view points with regards to the role of credit in agricultural development. While some hold the view that credit is not an important constraint to agricultural production. Others like Miller (1977) Famorio and Nwagbo (1981) held the view that credit has strong effect on the adoption of modern technology, hence lack of credit can be a constraint to agricultural production. Credit programmes are among the major efforts put in by most low income countries to achieve and sustain increased agricultural productivity. In Nigeria, the establishment of the Nigerian Agricultural and Cooperative Bank (NACB) in 1973 was an attempt to achieve this objective. The Bank designed various loan schemes to suit the needs of different categories of farmers and for different enterprises within the agricultural sector. This ranges from production and processing to marketing and other agro-allied services. One of the schemes operated by the Bank is the Direct Investment Loan Scheme which caters for the medium and large scale farmers.

Inspite of the Bank's high loan port-folio under this scheme as compared to the Direct small Holder Loan Scheme (D.S.H.L.S.) which is the loan programme for the resources poor and small-holder farmers. Productivity, acreage, rate of loan recovery and adoption of modern technologies impact assessment have not been made among the beneficiaries of this scheme. This study was designed to provide those information.

1.3 Objectives of the Study

The purpose of this study is to determine the extent to which the Nigerian Agricultural and Cooperative Bank's Direct Investment Loan Scheme has achieved its main objectives. The specific objectives include the following:-

1. To determine the impact of the loan use on the use of modern farm technologies, farm size and income.
2. To determine the extent of the loan recovery under the scheme as a whole and according to enterprise types.
3. To identify and examine the problems associated with the scheme.

CHAPTER TWO

BACKGROUND INFORMATION ON THE NIGERIAN AGRICULTURAL AND COOPERATIVE BANK LIMITED

2.1 Establishment of Nigerian Agricultural and Cooperative Bank (NACB) Limited

The establishment of Nigerian Agricultural and Cooperative Bank in 1973, followed decades of frustration and dis-satisfaction with the agricultural credit delivery system to farmers in the country. The Bank was inaugurated as Nigerian Agricultural Bank (NAB) after a detailed study of Stonahams' report submitted to the Federal Government in 1969. In recognition of the role played by cooperatives in rural development, the name was changed to the Nigerian Agricultural and Cooperative Bank (NACB) Limited. The bank serves the entire nation with its' headquarters at Kaduna. In order to bring its services closer to its numerous clients more efficiently, and to achieve its objectives, the bank commenced on the decentralization of its operations in 1989. This decentralization gave birth to seven Zonal Offices spread across the country. The Zonal Offices are designed to coordinate the activities of the Banks' Branch Offices in a given geographical area. Thus, Abuja Zonal Office coordinates the activities of Branch Offices in the Middle Belt, Enugu Zonal Office coordinates the activities of the Branch Offices in the South eastern states. Kano Zonal Office takes care of Branch Offices in the North central states, Funtua Zonal Office coordinates the operations of North-Western states. In a similar way Bauchi, Ibadan,

Akure and Lagos Zonal Offices serve north-east, south-west, mid-west and southern states respectively. A detailed description of the Zonal Offices is shown in table 1.2.

Table 1.2: NACB Zonal Offices and Associated Branch Offices

ZONE	BRANCH OFFICES SERVICED
ABUJA	Abuja, Minna, Keffi, Jos, Kontagora, Makurdi, New-Bussa, Langtang, Otukpo, and Bida.
AKURE	Akure, Ipoti Ekiti, Benin, Asaba, Warri, Irrua, Kabba, Lokoja and Ayangba.
BAUCHI	Bauchi, Gwambe, Yola, Ganye, Donga, Azare, Mubi, Jalingo, Potiskum, Maiduguri, Biu, Damaturu and Wukari.
ENUGU	Enugu, Awka, Calabar, Ogoja, P/Harcourt, Owerri, Umuahia, Uyo, and Onitsha.
FUNTUA	Funtua, Katsina, Dutsin-ma, Sokoto, Gusau, Birnin Kebbi, Yawuri, Zuru and Talata Mafara.
IBADAN	Ibadan, Iseyin, Ikeja, Abeokuta, Ijebu-igbo, Ilorin, Lafiagi, Ilesha, Ile-Ife, and Oshogbo.
KANO	Kano, Tudun-wada, Gaya, Dutse, Hadejia, Kazaure, Kaduna, Kafanchan, Birnin-Gwari and Zaria.

Source: NACB Research And Planning Division (1994).

2.2 The Objectives and Scope of Activities of Nigerian Agricultural and Cooperative Bank (NACB)

The main objectives of the Nigerian Agricultural and Cooperative Bank (NACB) Limited are stated below:

i. to promote agricultural production and rural development;

ii. to improve the income and quality of life of the Nigerian population; and

iii. to promote the overal growth and development of the Nigerian economy through the provision of financial

support for the production, processing and marketing of agricultural produce.

The secondary role of the Bank is that of direct financial participation through investments in the equity of major agricultural and agro-allied industries, as well as provision of adequate guarantee for viable agricultural and agro-allied ventures to facilitate the raising of funds from both domestic and external sources. The bank seeks to attain these noble objectives through the operation of the following credit programmes:-

i. On Lending Loan Scheme

This is an indirect credit delivery scheme chanelled to farmers through several on-lending intermediaries that are expected to be close to the farming population at grass roots level. Under this scheme, loans are granted to state governments, state or Federal government institutions such as state Agricultural and Rural Development projects (ADPs), Cooperative societies and River Basin Development Authorities, etc. All loans are subject to being guaranteed for repayment by the state or Federal governments. However, consequent upon the discovery that the Banks' on-lending credit facilities did not actually reach most of the target beneficiaries the numerous resource-poor small-holder farmers and some medium and large scale farmers the bank has de-emphasized the promotion of this scheme and in its' place the direct Lending scheme is encouraged.

ii. Direct Lending Loan Scheme

Under the Direct Lending Loan Scheme, the Bank deals

directly with the beneficiaries. The Bank operates the following loan schemes under the Direct Lending Loan Scheme.

a. Direct Small-Holder Loan Scheme (DSHLS)

This is, perhaps, the most popular of all NACB credit programmes as it caters for the funding requirement of the resource - poor, small scale farmers who constitute the "centre Piece" of the agricultural development policy of Nigeria. The scheme also meets the funding needs of serving and retrenched civil servants who want to go into agricultural production on small-scale basis. The scheme was introduced in 1981 to meet the credit needs of the small-holder farmers who do not usually posses the collateral (s) required by the conventional banks for granting loans.

The main attraction of this scheme is that, the beneficiaries are not required to provide the usual collateral(s) demanded by banks and other financial institutions. The beneficiaries under the scheme do not also have to own a definite title to land or "own" a land in order to be eligible for a credit facility under the scheme. The loan period varies from one to two years. In addition, the interest rate charged under the scheme is only 15 per cent. The upper limit of this loan scheme has recently been increased to ₦25,000.00. The beneficiaries are required to provide two guarantors to guarantee the loan.

b. Second Livestock Development Project (SLDP)

This is a special joint programme that is being implemented by the Federal Government of Nigeria and the World Bank. It is primarily designed to boost livestock production

and development in the country. The project consists of two components, namely the technical and the credit components. The technical components is being handled by National Livestock Project Division (NLPD), while the credit component is being handled by NACB. Under SLDP, several project types are being operated. These projects include poultry, both layers and broiler production, cattle fattening, ram fattening, urban dairy, pasture development etc. The upper limit or the loan scheme is also ₦25,000.00. The beneficiaries and loan condition requirements are the same with those obtaining under DSHLS.

Under the scheme, credit is delivered to beneficiaries both in kind and in cash. The kind disbursement includes animal feeds, drugs, seeds and other working materials such as fencing poles and wire, while the cash disbursement is for purchase of the animals. Effective supervision arrangement is being jointly executed by both NACB and NLPD staff.

In order to accord this project its due recognition, the Bank carved out a seperate functional unit known as the livestock credit unit (LCU) in 1988. This unit is charged with the responsibility of implementing the credit component of the SLDP through the Banks' Branch offices.

c. Direct Investment Loan Scheme (DILS)

This is a credit programme designed to meet the requirements of both medium and large scale farmers. Under this scheme, the bank deals directly with individual farmers and farmer organisations without going through any on-lending intermediary. The specific objectives of the D.I.L.S. are:

i. to increase food and raw materials production for local industries and export;

ii. to encourage farmers to adopt modern technologies which will improve their income and standard of living; and

iii. to assist farmers who have adequate land but have no financial means or time to bring the land into production and create employment opportunities for some Nigerians.

2.3 The Administration of the Direct Investment Loan Scheme

a. Eligibility for Loan Under the Scheme

The Beneficiary for a loan under the scheme could be an individual farmer, corporate or un-incorporated body, Federal or State government, Ministry or Parastatal. The projects financed under the scheme must be technically feasible, commercially viable and economically desirable. The emphasis placed on any proposal under the scheme is on the repayment ability of the borrower. Interested applicants have to complete standard application form which are returned for further processing. The following documents are required to be submitted by all applicants under the scheme

1. The title deed of the proposed project land along with its sketch plan.
2. Title deed of collateral security belonging to the applicant or his guarantor or any intangible security acceptable to the bank such as irrivocable letter or guarantee by a State or Federal Government; bank guarantee, life insurance policy, share certificate from a reputable company.
3. Three years tax clearance certificate
4. Bank status report from the applicant's Bankers.

5. If the applicant is a corporate body, certificate of association.

In order to ascertain financial performance of a corporate applicant, three years duly audited report and statement of accounts, together with two copies of feasibility study of the proposed project are to be submitted. Other submission by a corporate applicant include, authority letter from board of governors empowering the company to raise a specific loan amount for a specific project. Names of directors, share holders and the number of shares they held will be forwarded to the bank. If the company has technical partners, details of the partnership and a copy of their signed agreement are required as well.

b. Loan Approval and Disbursement

The submission of completed application form and all other submissions form the basis for desk appraisal of the project. After this the project site is visited and discussion on the proposal is held with the applicant. Based on the findings of the visit, a report termed "Agricultural Project and Management committee (APMC) paper is prepared for consideration. A proposal that does not exceed ₦100,000.00 is considered at the branch office level. If the proposal exceeds the branch office limit, it is tabled before the Zonal Agricultural Project and Management Committee (ZAPMC) meeting. The limit of this committee is ₦500,000.00. Any loan proposal that exceeds this limit is recommended to the Central Agricultural Project and Management Committee (CAPMC)

for deliberation and recommendation to the board of directors for approval or otherwise.

After the approval, disbursement commences on receipt of legal clearance from the Zonal legal officer in case of loans approved by the Zonal Committee while legal department of the headquarters issues legal clearance for loans approved by the Board of Directors. Disbursement schedule specify the number of instalments and the time the loan funds will be released. It also specifies the mode of disbursement, (cash and/or kind). When the loan is fully implemented, normal project monitoring and evaluation continues up to the time the loan is repaid.

The four major agricultural productions namely Arable crop production, livestock farming, Mixed farming and Poultry are financed under the scheme within the study area. The loan sizes ranged from ₦10,000.00 to ₦415,000.00.

CHAPTER THREE

LITERATURE REVIEW

3.1 The Role of Agriculture in Nigeria Economic Development

Agriculture has been described as the mainstay of the Nigerian economy since it provided employment and means of live lihood to about 75 % of our population. The agricultural sector also provides the food requirements for the teeming population concentrated in urban areas as well as raw material for the industrial sector. Exportation of primary agricultural products also provided a stable source of foreign exchange earnings to the nation which was used to finance other development projects. In the area of capital formation, the savings generated from the agricultural sector was mobilized for development purposes, while the increases in rural income as a result of increase in agricultural activities can further stimulate industrial growth by creating additional demand for industrial products. Before the advent of the oil boom era of the late 1970s, the contribution of the agricultural sector to the Gross Domestic Product (G.D.P.) of the country was quite significant. Table 3.1 shows the relative contribution of agriculture to the GDP between 1984 - 1992. However, following the discovery of crude petroleum in commercial quantities in Nigeria in the early 1970s, the relative contribution of agriculture to the Gross Domestic product declined dramatically at an average of about 24 per cent between 1970 - 1979. This deteriorating situation slightly changed in 1987 when the salutary effects of the structural Adjustment Programme (SAP) embarked upon by the Federal Government in 1986 increased the agricultural sectors'

Table 3.1: The Share of Agriculture in the G.D.P. (at factor cost) for the Period of 1984 - 1992.

Acctivity (Subsector)	Percentage share in Total G.D.P.								
	1984	1985	1986	1987	1988	1989	1990	1991	1992
Agriculture (crops)	n.a	23.53	24.69	30.18	31.93	31.24	31.1	30.08	29.90
Livestocks n.a	n.a	7.87	8.12	5.94	6.93	6.07	5.8	5.6	5.46
Forestry	n.a	3.80	3.14	1.82	1.89	1.33	1.30	1.40	1.87
Fishing	n.a	1.80	1.71	2.26	1.29	1.91	1.90	1.90	1.87
Sub-total for Agriculture	25.9	36.28	37.66	40.2	41.5	40.55	39.1	38.98	38.51
Crude Petroleum	17.4	15.64	14.97	12.83	12.33	13.22	12.80	12.40	12.90
Mining & Quarring	1.5	0.39	0.21	0.52	0.31	0.30	0.30	0.30	0.28
Manufacturing	11.5	5.68	5.80	9.66	8.65	8.20	8.20	8.20	8.63
Others	43.7	42.01	41.30	36.77	37.21	37.73	39.60	40.20	39.68

Source: Central Bank of Nigeria Annual Report and Statement of accounts (various issues).

contribution to the GDP to about 40 per cent, Table 3:1.

In Nigeria and other developing countries, no matter how much development and structural transformation achieved, agriculture continues to be the corner stone of the economy for many decades to come. However, agriculture in Nigeria is faced with a series of problems. These include low productivity due to low yields, inadequate facilities for marketing and storage and lack of credit among others.

3.2. Role of Credit in Agricultural Development

Galbrith (1952), saw lack of credit and scarcity of savings as one of the major constraints limiting agricultural development in developing countries. Several authors and researchers such as Miller (1977), Dhawan and Kohlon (1978), share the same view on the role of credit in agricultural development. The present predicament of the agricultural sector of the economy under-scores the importance of credit. Schumpeter (1949) defined credit as a "transfer of purchasing power to the enterprenuer without which development can not take place". Available evidence indicates that credit plays important functions in agricultural development process. These functions include:

i. credit provides an incentive for adopting new technologies which will increase production such technologies would otherwise be slowly adopted or not at all;

ii. the use of credit in agricultural production forms an intergral part of commercializing agriculture which can lead to increase in rural savings;

iii. farmers use credit to became owners of land; and

iv. acquire capital items in form of better seeds and machinery among others.

Mosher (1971) stated that "most methods of increasing farm productivity involve the use of purchased inputs and those farms near the subsistance end of the continuum from subsistance to commercial, produce little cash income out of which inputs can be bought". However, it is partinent to note that the central focus of increasing farm productivity is not restricted to the farms near subsistance level. Therefore, apart from improved technology and other support services "capital" in form of credit must be injected into our agricultural system. Donald (1975), says that "financial credit is the most transferable form of economic resource, with cash obtained via credit one can buy anything that is for sale".

The need for formal credit in the agricultural sector seems to arise from the following line of reasoning advanced by Ogunfowora et al (1972).

i. Many innovations in farming inevitably increase the capital requirement of farmers. The low rate of adoption of improved practices is partly due to lack of adequate financial resources for implementing these practices.

ii. The bulk of the farmers produce at subsistence level and there is usually small surpluses out of which savings for future investment can be made.

iii. The supply of loans may strengthen the farmers position in the disposal of his farm produce instead of having the timing determined by urgent need for cash.

Ajakaiye (1986), has highlighted ways through which farmers can improve their net farm income by use of credit as follows:

i. Creating and maintaining adequate farm size, most farmers exhibit decreasing costs as the size of the business increases, because they begin to enjoy the economies of scale. This is so because credit can enable the farmer to acquire capital assets such as machinery and equipment needed to expand the business as well as maintaining a high volume of out-put through the purchase of operating inputs such as feeds, better seeds, fertilizers, pesticides etc;

ii. adjusting to changing economic conditions: New technological development or changing market conditions may require major adjustments. The change may require some capital out-lay which can be secured through credit;

iii. increasing efficiency: The use of credit may make it possible to substitute one resource for another. For example, machinery can be substituted for labour as a means of reducing cost and improving timeliness of operations. Credit may also be essential to improve the utilization of current resource;

iv. protection against adverse condition: It is not possible to eliminate all risks in farming. However, credit can play a major role in protecting the business

from financial failure or liquidation when adverse conditions occur; and

v. providing continuity: The transfer of an on-going business from one operator to another may involves large amounts of money. Without credit, many operations would have to be liquidated during transfer process because non-farm heirs frequently want their share in cash rather than ownership interest in farm real estate or other assets.

However, provision of credit should not be seen as a panancea for our agricultural development. The inherent risk of agricultural production such as drought, pests and diseases form a set of natural limiting factors. Another group of factors that limit agricultural development include lack of effective marketing strategy, untimely supply of inputs, lack of stable agricultural policy among others. Unless these problems are resolved or ameliorated, supplying farmers with credit will not achieve the desired result in the agricultural sector of the economy.

There are two sources of funds to farmers for agricultural purposes. These are the internal and external sources in relation to the farm business. The internal source is mainly from the sales of farm produce while the external sources include equity financing, sales of estate to raise funds and credit. In developing countries the internal sources can hardly meet the farmer's needs. Therefore to achieve the desired agricultural growth and development, the external sources must be utilized, among which credit is believed to be the most effective.

3.3 Sources of Credit to Nigerian Farmers

Two sources of credit can be identified for Nigerian farmers, the formal and the informal sources (Ighen, 1973, Osuntogun 1973 and Nwagbo 1981). The later include credit from friends, relatives, money lenders, middle men and Marchants. Informal credit dates back to when farmers, friends and relatives assisted one another in their different farm operations in-turn, this is credit in kind called "Gayya" in Hausa. However, the most common form of informal credit is "cash". Ijose (1972), found that this source of credit forms about 88 per cent of the credit received by farmers in Nigeria. Similarly, Osuntogun (1973) and Miller (1975) found that informal source of credit contributed over 57 per cent of loans enjoyed by farmers in their areas of study. Other sources of informal credit to Nigerian farmers include "Adashi" this is a local arrangement where-by farmers form themselves into groups and contribute agreed amounts of money from which each member withdraws in turn until all members benefit: - Mainly practiced in the northern part of Nigeria. Another source of credit almost similar to "Adashi" is ESUSU". However, in this case when the money has been collected it is loaned to members at a small i interest rate. Non-members can also benefit but at a higher interest rate, usually practiced in the western states of Nigeria.

Table 3.2: Informal sources of Credit

Source of Credit	Galeti 1958	Ijose 1971	FOA 1972	Miller 1975
Friends & Relatives	50	7.7	57.8	23.3
Money Lenders	7	5	24.4	12.6
Traders/Merchants	12.5	--	14.9	28.4
Credit Corporations	--	8.2	2.9	8.4
Commercial Banks	--	0.9	--	--
Own Savings	--	31.3	--	--
Deferred Payments	--	44	--	--
Cooperative Union	--	--	--	23.2

Source: 1. Galleti, Balwn and Dina (1958)
2. Ijose and Abalu (1971)
3. FOA (1972)
4. Miller, L.F. (1975).

Table 3.2 shows the importance of informal credit source to Nigerian farmers. This avenue of credit will continue to be an important source of finance for agricultural financing. Famoriyo (1976) reported that credit from informal sources consists of relatively localized transactions of money and real goods or services among friends and relatives who, usually provide loans more or less as social obligation rather than for economic benefits. This view asserts the point emphasized by Ogunfowora et al (1972)

who, have pointed out that "Loans from friends and relatives are generally small and of short duration because, they too, have low financial base".

The informal sources of credit has both its advantages and disadvantages in providing credit for agricultural purposes. The advantages from the farmers' point of view include ease with which loan is secured and timely release of funds. No third party guarantor is needed; in most cases often, verbal promise by the borrower to repay the loan at a specified date is sufficient. The other point which farmers consider important is the secrecy in the loan transaction.

However, the disadvantages of this source of credit out-weight its advantages. The disadvantages include:

i. small amount of money loaned for a short duration as a result of low financial bases of the lenders;

ii. high interest rate is charged sometimes up to 100 percent or more;

iii. where money is provided by middle men or merchants, farmers are compelled to repay with their produce at the time of harvest, thus preventing the beneficiaries from enjoying the maximum benefits of their production from seasonal price appreciation; and

iv. where the loan is used for production purposes, no supervision and/or technical advice is accompanying it.

Nisbet (1971) observed that "the informal money lender could prefer to maintain the status quo or actually promote the decline of the client so that he might acquire real asset

or accumulate labour service. Therefore, the system tends to worsen the already existing bad situation of the Nigerian farmers.

With all its apparent disadvantages, informal source of credit will continue to play a dorminant role in the supply of credit to the Nigerian farmers. Institutional credit will take decades before it could meet the credit needs of the farmers adequately.

The formal sources of credit to Nigerian farmers include co-operative societies, some agricultural organisations, financial institution and Banks which include both commercial, merchants and development banks. Nigerian Agricultural and cooperative Bank falls within the last group. It was established wholly to serve the credit needs of the Nigerian farmers.

The formal sources of credit to Nigerian farmers started as far back as 1930s with the introduction of the mixed farming credit programme in the savanna areas of Northern Nigeria. The programme was run by the Ministry of Agriculture through the Native Authorities (Oluwasanmi et al, 1976). The idea was adopted by the other regions in 1946 under the name of Nigerian Loan Development Board. This was the first National formal agricultural credit institution. The board was dissolved and replaced by three regional Loan Development Boards in 1949. These boards too were later dissolved in 1955 and the functions of the boards were taken by the Western, Eastern and Northern regional governments.

In the West, the Western region Finance Corporation took over the administration of credit to farmers. Loans were granted to farmers through their cooperative societies.

In the East, Agricultural and Industrial Development Board was established in 1963 to serve as a source of credit to the small scale farmers and industrial activities.

In the Northern region, the registrar of cooperatives designed and administered an on-lending programme that served the farmers. Fund for the programme was through a loan granted to the government by the Barclays Bank, now called Union Bank of Nigeria.

All the three institutional arrangements were unable to meet a larger percentage of the credit requirements of the farmers due to inadequate financial resources, (Osuntogun 1981).

In view of the importance attached to financing agricultural sector through a formal credit institutions, the Federal Government established Nigerian Agricultural and Cooperative Bank in 1973 and Agricultural credit Guaranttee Scheme fund (A.C.G.S.F.) through the central Bank in 1977. The latter is the apex institution for Agricultural financing in Nigeria and it runs many programmes that caters for both small, medium and large scale farmers.

3.4 Channels of Formal Credit Delivery

The channel through which credit is delivered for agriculutral purposes to a large extent contribute to the success or otherwise of the credit programme.

King (1974), discussed the advantages and disadvantages of formal credit institutions based on the channel of the credit delivery. These include:-

i. Institutions providing credit as part of development programme. Example of this group are the Agricultural Development projects (ADPs) and the River Basin Development Authorities (RBDAs). The major set-back of this channel of credit delivery is that loans are limited only to few people within the programmes' catchment area as people outside do not have the same opportunity. However, this channel of credit has been the most successful, probably because loan is accompanied by provision of new technology such as improved seeds and there are clearly defined objectives to be attained within a certain time frame.

ii. Institutions which undertake other lending activities including agricultural credit: Example is the commercial banks. These institutions are likely to pay little attention to agricultural credit which is usually required by numerous farmers scattered in widely separated locations. Also the farmers may not be able to meet the security requirements of such institutions. Agricultural credit delivery becomes risky and expensive to administer by such organisations which are profit oriented. Maqsod (1978), has observed that the commercial banks generally avoid dealing directly with small farmers because of high administrative cost.

iii. Institutions which provide credit to promote certain crops. Examples are the marketing or commodity Board and the commercial firms such as Cadbury Nigeria Limited. The major advantage of this type of credit is that loans are often combined with other farm inputs and extension services required to produce at a good price. However, these institutions do not pay similar attention to the production of food crops.

iv. Institutions which solely deliver agricultural credit. Example is NACB. These type of institutions were established to overcome the limitations faced by the institutions mentioned above. However, they are similarly faced by high administrative costs in the credit delivery. Therefore, if such institutions are not subsidized, they may not be able to lend to the farmers directly. They may resolve to lending to Government Ministries or other agencies which deals with the farmers directly.

Three channels of on-lending were identified and they were:-

i. agency to individual;

ii. agency to group user; and

iii. agency through group to individual.

In the first channel, large number of applications are processed by the agency for a large number of farmers. The agency determines the credit worthiness of the applicants. This method is expensive and requires a lot of subsidy and repayment often becomes a problem.

In order to reduce these problems, the second and third channels are adopted. In both cases the agency makes the group responsible for the loan repayment. The group members know the credit worthiness of each member and can exert presure on fellow members to repay the loan on time. The group approach reduces the administrative cost on the initial institution. Carrol (1973) recognised equitable distribution of income among beneficiaries as a further advantage of group lending. However, he noted that lack of reliable management, especially at local level, corruption, dishonesty and partiality among operators were some of problems associated with this channel.

3.5 Evaluation of the Performance of Formal Agricultural Programme

There are different criteria used in assessing the success or failure of agricultural credit programme. Tendler (1973), summerised the criteria on which performacne of small farmer credit programme can be evaluated into three broad categories. These are:-

i. economic efficiency of the activities financed by the credit;

ii. the ability of the programme to serve a hitherto neglected portion of the rural population; and

iii. the financial viability of the institution.

Some researchers such as Donald (1976), are of the view that the consistent problems arising from credit programmes, such as inability of the programme to serve their numerous applicants, low recovery rate and high administrative cost

should form the basis for assessing credit programme.

A pattern that incorporates financial logic and political economy in assessing credit performance was developed by Vonpischke (1981) in low income countries. He maintained that, good financial performance which can be achieved when loan losses are minimized could allow more people access to credit. Thus, access to credit is another important criterion for evaluating the performance of a credit programme.

Osuntogun (1973) on the other hand used volume of credit, number of beneficiaries reached, cost of the credit administration and level of defult to appraise agricultural credit institutions in some selected West African Countries.

In summary, it can be said that all the criteria used in assessing the impact of any credit programme or institution revolves on three basic parameters, namely:-

i. loan recovery rate which determines both institutional and the programme survival;

ii. number of beneficiaries reached which is strongly determined by funds availability via loan repayment or any other source; and

iii. the economic impact of the programme on the beneficiaries which include increase in their income and standard of living.

Other parameters that could be used may be peculiar to a given programme, for example, adoption of modern technology under the Direct Investment Loan Scheme. This parameter is one of the major objectives of the scheme.

Whichever criteria is adopted in assessing credit programmes or the credit institutions, they must be related to the factors that determines the success or failure of such programmes. The factors often associated with the credit institution which led to their failure include:

i. inadequate funding,
ii. diversion of agricultural loan to other purposes;
iii. over centralization of loan approvals;
iv. dearth of trained staff;
v. inability to release loan fund when most required by farmers;
vi. cumbersome procedure before loan is secured;
vii. lack of loan supervision,
viii. unacceptable default rate and
ix. undue political influence.

Most of the studies so far evaluated the performance of formal credit programmes with regard to small-scale farmers. However, since Nigerian Agriculture is gradually shifting from subsistence level to commercial production, evaluation of formal credit programme with particular reference to large scale farmers become imperative. This study therefore, it designed to evaluate the impact of an NACB credit programme that caters for medium and large-scale farmers.

Rate of loan repayment, level of adoption of modern technologies and financial impact of the scheme on the beneficiaries were used in this study to assess the impact of the Direct Investment Loan Scheme operated by NACB.

CHAPTER FOUR

METHODOLOGY

4.1 Area of Study

The study area is Katsina State which is among the youngest states in the Federation. Katsina state was created on 23rd September, 1987. The state was chosen for the study after taking some factors into consideration. Firstly, adequate knowledge of the area economically, politically and culturally by the researcher will allow for more authentic findings and interpretation of the results. Secondly, the financial cost of the researcher will be greatly minimized because of proximity of the area to the researcher. Thirdly, the diverse agro-ecological distribution within the state allows for various project types to be investigated.

Katsina state occupies almost the entire central portion of Nigeria's northern international border with Niger Republic. The state is bounded in the East by Kano State, in the West by Sokoto State and by Kaduna State in the s South. Geographically, the state lies Between Latitude $11^{o}7'$ N and Longitude 6^{o} 52' W and 9^{o} 02' E. The state covers a land mass of about 24,517 square kilometres with a population of about 4.7 million.

4.2 Climatic Conditions

The climate of the state is typical of the Sudan zone within which the state lies. There are marked dry and wet seasons. The rainy season with its deficit rainfall (in the northern part of the state) starts around May. The state

enjoys an average period of five to six months of wet season. The rainfall intensity, frequency and duration decreases from the south to the northern part of the state. The average rainfall for ten years (1980 - 1991) recorded from the three ecological zone's farm Institutes of Tambu, Kafin-soli and Daudawa were 86.22 mm, 707.66 mm and 930.72 mm respectively. The dry season sets in with three to four months period of harmattan and cold weather from November to February. This is followed by hot period of about three months and ends with the start of the new rainy season.

The vegation changes with season. During the rainy season, the soil is covered with grasses, crops shrubs and blooming trees. In the dry season, the grasses, crops and the shrubs wither and die, leaving the medium height trees typical of savannah land.

4.3 Economy and Agriculture

The predominant economic activity of the people of the state is crop farming and animal rearing. Both food and cash crops are produced, and these include cereals such as maize, guinea corn, millet and rice. Legumenous crops, tuberous crops, fruits and tree crops are produced in large quantities. During the dry season, irrigation farming around the major dams, like Zobe, Jibia, Ajiwa, Daberan and Mairuwa, is practiced. There are a lot of unexploited industrial potentialities in Katsina state. Mineral deposits discovered so far include Kaolin in Kankara Local Government Area and Asbestors in Sheme, Faskari Local Government Area. Currently there is only one major industry in the state, that is,

Katsina Steel Rolling Mill Company owned by the Federal Government. Small industries are now springing up everywhere with highest concentration in the southern part of the state. Such industries include Funtua Textiles, Funtua Cotton Seed Crushing Company and Cotton and Agricultural Processors all in Funtua town.

The state is connected to the rest of the country by a good network of roads. Currently there is only one rail line in the state that passes through Funtua to Gusau and Kaura Namoda in Sokoto State.

From the foregoing it could be seen that the geographical location with its three distinct climatic regimes allow various agricultural activities. In order to boost the productivity and production of the agricultural sector of the economy of the area, there is need for a special attention in terms of technological and financial

4.4 Sampling Frame and Size

The target population of this study comprises of Nigerian Agricultural and Cooperative Bank Direct Loan beneficiaries involved in production projects. The respondents are spread within the twenty-six Local Government Areas of Katsina State. However, due to the time and financial constraints, only twelve out of the twenty-six Local Government Areas were selected for the study (four from each of the three ecological zones mentioned). The respondents were purposively selected to include beneficiaries with different loan sizes, different farming

experiences, different occupations if not a full time farmer and different project types.

The Local Government Areas selected from the southern zone were Funtua, Bakori, Kanakara and Malumfashi. In the middle zone, Kankia, Batsari, Dutsin-ma and Musawa were selected. The Local Government selected in the northern zone were Katsina, Daura, Zango and Jibia. Sixty-four farmers out of one hundred beneficiaries under the scheme were selected from the four zones.

4.5 Data Source and Types

The principal source of data used in this study were secondary data obtained from the Bank's operations records, supervision reports and monthly and quarterly returns. These were supplemented with primary data obtained through administration of questionnaires to the beneficiaries. Literature have shown that among the factors that affect the farmers adoption of modern technologies, productivity, profitability and repayment ability are age, educational background, farming experience and income/expenditure patterns. Information on the mentioned factors were obtained, from each sampled farmer. The other types of data collected include loan volumes approved for the different projects, amount disbursed, time and mode of such disbursements, scale of operation, loan period, and the amount of loan repaid and percentage of such repayment in relation to the amount due for repayment. In order to establish whether or not farmers adopted modern technology, data on the method

of production used by the respondents before and after obtaining the loans were all collected.

4.6 Analytical Tools

Three principal tools of analysis were employed namely: descriptive statistics, involving the use of tables and percentages to interpret the data obtained from the field. Correlation analysis, used to explain the relationship between the variables and Analysis of variance which is used to predict the effect of each independent variable on the dependent one.

Correlation Analysis: Correlation analysis measures the relationship between two or more variables. The measure of relationship between the two variables is defined by a linear correlation coefficient denoted by P. while the measure of degree of relationship among several variables is given by the multiple and partial correlation coefficients. However, this study employs the use of linear correlation, that is, relationship between two variables X and Y. The correlation model used was:

$$Y = a \pm b_1x_1 \pm b_2x_2 \pm b_3x_3 \pm b_4x_4 \pm b_5x_5 \pm b_6x_6 \pm b_7x_7$$

Where Y = Loan Volume (₦)

X_1 = Chemical fertilizers (50 kg bags per Ha.)

X_2 = Herbicide used (litres per Ha.)

X_3 = Number of work bulls owned and used.

X_4 = Number of Tractors owned and used.

X_5 = Use of improved seeds (kg per Ha.)

X_6 = Farm size cultivated (Hectares)

X_7 = Farm income (₦).

Each of the variable on the right hand of the model was seperately correlated with that of the left hand side. The measure of the linear correlation between two variables called peason product - moment correlation coefficient or correlation coefficient "r" ranging from minus one to plus one is given by the following formular:

$$r_{xy} = \frac{(xi^2 - x^2)(yi - \bar{y})}{\sqrt{(xi - \bar{x})(yi - \bar{y})^2}}$$

where xi = change in the use of the variable

yi = loan volume per borrower

$\bar{x}$ = mean of the variable

$\bar{y}$ = mean of the loan volume.

The estimated correlation coefficient "r" were each tested for their level of significance using the t - statistics.

Analysis of Variance

This is a method for splitting total variation observed from a given data into different components that are responsible for the differences. The number of the major sources of the variation in the observed data gives you either one-way classification if you have single criterion, two-way classification for two criteria and multiway classification for more than two criteria.

For the purpose of this study one-tail t-test was used whereby loan obtained by the beneficiaries is the sole source of the observed variation on the other variables.

CHAPTER FIVE

RESULT AND DISCUSSION

5.1 Influence of the respondent's socio-economic characteristics on the use of credit

Among the factors that affect farmers adoption of modern technologies and loan repayment are age, educational background, number of years of farming experience and income/expenditure pattern.

The findings of this study revealed the extent to which these factors affected the beneficiaries' performance. It showed that the older beneficiaries performed better than the younger ones in terms of loan repayment. Farmers within the age group of 60 - 75 years showed the highest rate of loan repayment (83 per cent) followed by 76 per cent for farmers within the age group of 46 - 59 years. The least repayment rate of 65 per cent was observed for farmers within the age of 30 - 35 years, (Table 5.1)

Table 5.1: The respondents Age Distribution in Relation to loan repayment.

Age Group (in years)	Number of Respondents	Non-Delinquent Respondents	Repayment Rate
30 - 45	32	21	65
46 - 59	26	19	76
60 - 75	6	5	83
Total	64	35	

Source: Field Survey, 1990.

From the above result it can be concluded that the older clients are more reliable in terms of honouring their loan obligations as and when due than the younger beneficiaries. This behaviour could be due to fear of death at advance old age, for it is culturally considered a taboo to die indebted in the study area. The possible reason for lower repayment rate among the younger beneficiaries could be due to divertion of funds meant for loan repayment to other businesses. This class of clients seem to be more aggresive in trying to acquire wealth within a smaller period of time.

Educational Background

The second socio-economic characteristic that affects a farmer's performance is his educational background. Out of the 64 respondents, 46 attained some level of formal education from elementary to university level while the remaining 18 had no formal education. The rate of loan repayment among the formally educated clients was found to be higher (48 per cent) than that of the non-formally educated clients which was 33 per cent (table 5.2). These findings could be attributed to the fact that the formally educated beneficiaries were more enlightened on the use of credit. Furthermore, the illiterate clients may be thinking that the loans were their own share of the much talked about "national cake" and as the such loans were not meant to be repaid. It was also observed by Barau et al, (1991) that loan deliquency is higher among borrowers who had no formal education.

Table 5.2: Educational Background in Relation to Loan Repayment.

Educational Level	Number of Respondents	Delin-quent	Non-Delin-quent	Repayment Rate (%)
Islamic Education	18	12	6	33
Adult Education & Primary	24	4	20	83
Secondary Education	11	9	2	18
Above Secondary	11	6	5	45
Total	64	31	33	--

Source: Field Survey, 1991.

Farming Experience

Farmers experience in agricultural production is an important factor in determining the success or failure of farm operation whether or not credit was used. The c choice of crops to be produced and the type of cropping pattern (sole or mixture) to use in order to maximize profit and minimize risk are borne out of long years of farming experience. Among the sampled farmers, farming experience which means the number of years a respondent has been in agricultural production ranged from three to fifty years. It was found that farmers with longer years of experience has higher rate of loan repayment. This could be due to better managerial skill obtained via longer farming experience.

Income-expenditure Pattern

Income and expenditure pattern of a farmer has a strong influence on his ability to adopt modern technologies and repay his loan when due. After the loan repayments, the excess income realized from the farm business was supposed to be ploughed back into the same business the following year and to meet family cash needs. The items of farm expenses included labour, crop-protection chemicals, improved seeds, livestock drugs and chemical fertilizers among others. The family spending included school fees, medical bills, clothing, food and ceremonies. The study showed that both the family and farm expenditures of the beneficiaries were increasing yearly with the former being higher. The ultimate result was that, beneficiaries with higher family expenditure showed lower rate of loan repayment. This group of farmers also spend less on their farm operations which by implication means they buy and use less of the modern farm imputs which could have assisted to boost their production (Table 5.3).

5.2 The Impact of Credit on the Production Practices of the Farmers

The direct investment Loan Scheme has among its objectives, the encouragement of farmers to adopt modern technologies. To enable the beneficiaries under the scheme achieve and sustain high agricultural production, a package of modern method of production is built into the loan proposal. The package for arable crop production include

Table 5.3: Beneficiaries Income/Expenditure Pattern and Loan Repayment Rate.

Average Gross Income Distribution (₦)	Number of Respondents	Non-Delinquent Respondents	Average Expenditure (₦)		Repayment Rate (%)
			family	farm	
20 - 49	25	9	20	17	36
50 - 69	17	10	18	15	58
70 - 89	11	2	20	25	45
90 and above	10	2	50	40	20
Total	63	23	108	97	--

Source: Field Survey, 1990.

the use of fertilizer, herbicide and labour saving methods for land preparation by using tractors or animal traction.

Since the use of these inputs were not new to the loan beneficiaries, the difference in the rate of use of the inputs before and after the use of the loan was investigated. Table 5.4 shows the correlation coefficients between the use of the loan, adoption of modern production packages, farm size and farm income specified in the correlation model. The result shows that positive and linear correlation exist between the use of the loan funds and the use of the modern production package comprising of fertilizer herbicide, insecticide and improved seeds. This was expected since the availability of funds secured via credit enabled the beneficiaries to adopt

Table 5.4: Correlation Coefficient Between the use of Credit on one hand and use of Modern Technologies, farm size and farm income.

Input	Correlation Coefficient "r"
Fertilizer (50 kg bag per Ha.)	0.402
Herbicide (litre per Ha.)	0.070
Insecticide (litre per Ha.)	0.014
Improved seeds (kg per Ha.)	0.321
Farm Income (naira)	0.366
Work Bulls (number)	-0.134
Tractor (number)	-0.053
Farm Size (ha.)	-0.048

Source: Computation Based from field survey, 1(1991).

the modern method of production. The stronger linear correlation exhibited by the use of fertilizer and improved seeds with the use of loan, could be due to the great importance farmers attached to the use of these factors of production. This importance is as a result of the significant and crucial role played by these factors in increasing yield and subsequently income. The ultimate effect of adopting these modern factors of production is an increase in farmers income which also showed a linear correlation with the use of the loan.

However, the number of work bulls and tractors owned by the beneficiaries did not show a linear correlation with

the use of the loan. Probably because these items formed part of capital items of the project. These items have a longer life span and are used for more than one production season as against other operating inputs such as fertilizer, herbicide, insecticide and improved seeds which are used during one production cycle. The beneficiaries farm sizes also did not show a linear correlation with the use of the loan, because it is expected that beneficiaries should operate within a given project size during the loan period.

The result of the impact of credit on the use of modern technologies, farm size and farm income was further determined through one tail analysis of variance of the variables. To compare the before and after use of the loan situations. The result is shown in (Table 5.5).

The table showed that credit use has a significant impact on the use of modern technologies by farmers. For instance, the impact of credit use on fertilizer and herbicide by the beneficiaries were significant at one per cent. This was expected because, as farmers have more access to fund, they are able to use more fertilizers and herbicides as they could now afford to buy them. Similarly it was found that the use of improved seeds was significant at one per cent level of probability. While tractor use was significant at five per cent level of probability after acquiring credit by the farmers. Again, the fact that many of these farmers were poor in capital base, any form of capital injection will enable them to use more of these technologies which will improve their yields and invariably

Table 5.6 Loan Repayment Rate by Enterprise Types (1989 - 1991)

Project Type (Enterprise)	1989				1990				1991			
	Amount Disbursed (₦)	Amount Due (₦)	Amount Recovered (₦)	Recovery Rate %	Amount Disbursed (₦)	Amount Due (₦)	Amount Recovered (₦)	Recovery Rate %	Amount Disbursed (₦)	Amount Due (₦)	Amount Recovered (₦)	Recovery Rate %
Arable Crop	542,000	108,000	37,800	35	689,000	137,800	62,010	45	636,147	127,230	61,070	48
Mixed-Farming	162,000	23,143	5,787	25	54,000	15,667	3,760	24	80,574	13,429	4,029	30
Livestock	150,000	25,000	3,750	15	187,000	31,166	4,052	13	160,000	16,667	1,420	9
Poultry	127,000	21,167	4,000	19	-	21,167	-	0-	-	21,167	-	0-
Total	981,000	177,310	51,337	29	970,000	205,800	69,822	21	876,721	178,493	66,519	20

Source: Katsina and Funta Branch Offices Registers (1989 - 1991).

Table 5.5: One Tail T-Test Analysis of Variance Between Modern Technologies, Farm size and Farm Income Before and After use of the Loan.

Input Used	N	Means	Stdev	Mean	T	D.F	P
Fertilizer before	59	2.22	1.79	0.23			
Fertilizer after	59	24.40	37.8	4.9	4.5	58	0.000
Herbicide before	59	0.63	1.05	0.14			
Herbicide after	59	1.56	1.86	0.24	3.35	92	0.001
Animal before	59	1.93	1.96	0.26			
Animal after	59	2.63	2.18	0.28	1.82	115	0.
Tractor before	59	0.18	0.84	0.11			
Tractor after	59	0.55	0.50	0.66	2.93	95	0.004
Improved seed before	59	1.54	6.09	0.79			
Improved seed after	59	27.00	22.10	2.90	8.54	67	0.000
Income before	59	2.52	2.61	3.398			
Income after	59	44.69	40.78	5311	3.68	99	0.002
Hectarage before	59	8.06	273	35			
Hectarage after	59	104	278	36	0.47	116	0.640

Source: Computation Based from field survey, (1991).

their income. Infact, the use of credit to improve farm income was found to be significant at one per cent level of probability.

The use of credit to improve the level of animal power on the farm was found to be insignificant at both

one and five per cent level of probability. This result confirms the fact that most of the farmers owned and make use of animal power on their farm irrespective of their capital base. For this reason an additional source of fund may not influence the level of their use by farmers. Livestock keeping is a traditional occupation among the people. The impact of credit on farm size was insignificant at five per cent level of probability. This seems unrealistic but the result confirms the fact that farmers who benefited from the loan were not expected to expand their farm sizes within the given loan period. As a matter of fact, they were only expected to be more intensive in production by using improved technologies to achieve higher productivity and income.

5.3 Loan Recovery and Delinquency Under the Scheme

The loan repayment under the scheme was expected to be very high 'given' that farmers obtained increases in their gross farm income. The recovery rate however, was found to be below 50 per cent in all enterprises under the scheme (Table 5.6). The Recovery rate was calculated using the formular:

$$\text{Loan Recovery Rate} = \frac{\text{Amount of Loan Repaid}}{\text{Amount of Loan Due}} \times \frac{100}{1}$$

The repayment rates under the arable projects are higher than the rest of project types for all the three years under study. The repayment rates for the arable crops were 35 per cent, 45 per cent and 48 per cent for

1989, 1990 and 1991 respectively. Livestock showed the least performance with 15 per cent, 13 per cent and 9 per cent in 1989, 1990 and 1991 respectively. The better performance of the arable projects was due to the fact that larger percentage of the loan funds were used to finance the operating expenses. In addition, the loan periods were shorter which minimizes the risk of default among the beneficiaries. The total yearly recovery rate under the scheme 29 per cent, 38 per cent and 42 per cent for the years 1989, 1990 and 1991 respectively were not encouraging either. In all cases the yearly recovery rates were below 50 per cent.

It is pertinent to note that even though poultry falls under livestock classification scientifically, the bank classify poultry enterprise seperately for easier project categorization and reporting purposes.

In the case of livestock project greater part of the loan funds were devoted to the purchase of capital items and construction of structures, with little left to finance operating expenses. Furthermore, the loan period is longer and therefore the risk of loan default is higher.

The above findings on the performance of different project types in terms of loan repayment explain the reason why commercial banks shy away from financing agricultural enterprises, especially livestock farming. The other implication for findings is that the bank has

to device a means of financing procedure that reduces the risk of default among would be beneficiaries. Unless, of course, the bank is expected to render a social service or is dependent on government for subvention to cover cost and write-off bad and doubtfull debts, the observed recovery rate will jeopardize the schemes' viability.

A borrower is said to be delinquent (or defaulting) if he or she delays (or fails) to honour his or her loan obligation when due.

Loan delinquency can be measured in two ways:

i. by the number of borrowers that are delinquent,

ii. by the amount of loan delinquent.

Interms of number forty-five out of the sixty-four beneficiaries under the scheme defaulted. This gives a delinquency rate of seventy per cent. In other words, only 30 per cent of the beneficiaries met their loan obligation when due. Like the repayment rate the delinquency rate was calculated per project types under the scheme, (Table 5.7). The table revealed that delinquency rate in terms of amount was highest under livestock project. This was followed by poultry and mixed farming projects, arable crop projects showed the least delinquency rate.

Table 5.7: Delinquency Rate by Project Types Under the Scheme (1989 - 1991).

Project type	Amount Due (₦)	Amount Recovered (₦)	Delinquency Rate (%)
Arable crop	373,030	160,880	48.9
Mixed farming	52,235	13,576	74.0
Poultry	21,167	4,000	81.1
Livestock	72,833	9,222	87.3

Source: Funtua and Katsina Branch Offices Monthly Returns (1989 - 1991).

The high delinquency rate observed under livestock projects could be attributed to the following factors or reasons:

i. Most livestock project beneficiaries who obtained loan for fattening converted their project into breeding one which has higher gestation period. This delays repayments.

ii. In the event of any natural disaster, such as disease outbreak can theft livestock farmers lose more even though they are compelled to insure their operation. They also recover at a slower rate than their arable crop counter parts.

iii. Absence of competent management which is common among all the projects under the scheme, was more critical under livestock projects;

iv. The longer loan repayment period usually allowed for livestock projects increases the risk of default.

v. The high cost of agricultural input and non-availability of genuine livestock feed and drugs affect the livestock projects more than the arable projects.

vi. The dwindling market for the end products like beef, mutton and eggs due to the hard economic situation in the country.

vii. There is keen competition between livestock farmers who use improved method of production with the local livestock farmers for products sales. Projects under mixed farming and poultry share similar problems with livestock projects, hence they have low repayment rates.

The findings of the study thus revealed that arable crop projects are more promising in terms of loan repayment and therefore consistent with the viability of the scheme in the study area.

5.4 Problems of the Scheme in the State

The Direct Investment Loan Scheme like any credit programme in the country is not devoid of problems. The most common ones revealed in the study are:

1. Submission of permanent structure as collateral: It is believed that a farmer especially the small and medium scale farmers have no permanent building to offer as security. This requirement tend to scare away many intending applicants.
2. Provision of Tittle Deeds on the Proposed Project site: This was mentioned as a big problem. Farmers usually, do not hold deeds on their farm lands and as such could not provide them in order to seek for loan.
3. Long Bereaucratic Procedure in Loan Processing and Documentation: The bereaucratic procedure involved before the loan is approved was mentioned as a deterent to potential clients.
   Closely related to loan approval problem is loan documentation, that is, signing of the loan agreement papers before disbursement commences. The loan documentation process requires that so many papers be submitted. The papers include three years Tax Clearance Certificates of the applicant, Insurance Certificate on the property being proposed as security for the loan and consent to mortgage

the property to the Bank. All these delay loan disbursement and add to the cost of application which farmers correctly see as part of the cost of the loan.

4. Lack of Farm Inputs: Non-availability of genuine farm inputs especially animal feeds and drugs at controlled prices from the government or the Bank was a big problem in the utilization of the loan by farmers.

5. Lack of Timely Farm Visit: This often delay subsequent disbursement by the bank which operates supervised credit system.

6. High Interest Rate Charges: Farmers complained that the interest rate charged was too high in view of the nature of the enterprise in question (Agricultural production).

7. Insufficient Loan Amount: Most beneficiaries complained that the amount provided to them was insufficient for their operation.

8. Problem of Loan Default: This problem was found to be rampant among beneficiaries and this is a threat to the success of the scheme in the state.

9. Lack of Records: Farmers rarely keep farm records which make things difficult for the bank.

10. Project Alteration: It was observed that some beneficiaries do change their project without informing the bank for clearance. This distortion affects the proposed cash flow and ultimately, the loan repayment.

CHAPTER SIX

SUMMARY, CONCLUSION, RECOMMENDATION AND SUGGESTION FOR FURTHER STUDIES

6.1 Summary of Findings

The primary objective of this study was not only to evaluate the impact of the Direct Investment Loan Scheme of NACB within the study area, but also to proffer relevant solutions for improving its' operational efficiency. The Direct Investment Loan Scheme caters for medium and large scale farmers involved in agricultural production.

The study revealed that all the major agricultural enterprises namely Arable farming, livestock production, mixed farming and poultry were financed under the programme. The beneficiaries cut across people with different farming experience, income/expenditure pattern, educational background and ages.

It was found that the respondents socio-economic characteristics influenced their use of credit. For example, the older beneficiaries were found to honour their loan obligation more than the younger ones while the younger and more educated farmers adopted the use of more of the modern inputs than the older ones.

Adoption of modern technologies and increase in the beneficiaries farm income were positively correlated

with the use of the loan. Using analysis of variance, the study revealed that beneficiaries' income and adoption of modern technologies were all found to be significant at five per cent level of probability, while the beneficiaries' increase in farm sizes were not statistically significant.

The study further revealed that some enterprises like livestock fattening and poultry recorded very low repayment rates while others like arable crop production and mixed farming recorded comparatively higher repayment rate.

In general, it was found that the delinquency both in terms of number and the amount loaned out were in the study area. Based on the findings of the study, it was established that the Banks' loan recovery rate was about 40 per cent of the total amount disbursed and due for repayment. This figure was considered to be comparatively low when compared with figures obtained from similar financial institutions in other countries like Pakistan, Thailand and Indonesia where loan recovery rate ranges between 80 to 90 per cent (Insitor, 1993).

6.2 Conclusion

The study showed that all the major agricultural productions financed under the scheme were practiced in the state by both the medium and large scale farmers. The loan scheme cut across respondents with different

socio-economic characteristics which affected their performances on credit use in different ways.

The most remarkable finding was that the scheme achieved its major objectives as the increase in the use of improved inputs were found to be positively correlated with the use of loan. This has the effect of not only increasing farmers productivity and income but improvement in the beneficiaries' standard of living.

Although loan repayment which was one of the criteria used to measure the performance of the scheme was not encouraging as a whole, it was noted that some projects, especially the arable projects, were more viable than others in terms of rate of repayments. Indeed, with improvement in the loan recovery rate, and the steps taken to overcome most of the problems listed as militating against the scheme in the state, there is a great potential for the scheme in making a good impact on agricultural production in the state. It is thus, concluded that the Direct Investment Loan Scheme in Katsina State was successful within the stated limitations under which it is operated for the period covered in the study.

6.3 Suggestions for Improving Direct Investment Loan Scheme

Having analysed the findings of the study and established the potential benefits of the scheme,

the following suggestions are put forward for improvement in the operation of the scheme:

1. Inputs supply in kind: Availability of improved inputs at the right time and at affordable prices is the first step towards the successful implementation of viable agricultural development projects. Towards this goal, it was suggested that the bank should provide these inputs as disbursement in kind.
2. Timeliness of Approval and Disbursement: Since the success of agricultural business (especially rain-fed agriculture) is predominantly dependent on the timeliness of farm operations, the long procedure involved in processing investment loan projects should be reduced. This has often resulted in farmers getting their disbursement at the wrong times, usually when the key operations such land preparation and inputs purchase were over.
3. Selective Financing of Projects: Available evidence indicated that some projects appeared to be more vulnerable to loan default and abuses than others. It is, therefore suggested that funding of these unviable projects within the study area be de-emphasized while those project types that have been found to be doing well should be given priority. In the same manner medium scale projects should be

prefered to large scale projects involving a lot of money. The project type to be encouraged from the study is arable farming.

4. Functional Education: There is need for the bank to promote an aggressive public enlightment campaign, aimed at educating potential clients/ beneficiaries on the source of and conditions for obtaining our loanable funds. The beneficiaries of the scheme and the banks' clientele must be made to appreciate the fact that the Bank's loan is not and should not be treated as a "national cake". In other words, clients must be made to understand that NACB not only source its funds from the financial market, but also pays appropriate interest on them.

5. Provision of Adequate Working Facility: The level of success in the implementation of any supervised credit system on loan appraisal, supervision and loan recovery operations depends on the effectiveness of available transport facilities and qualified personnel. The Bank should employ more staff and provide them with adequate transportation facilities to facilitate frequent visit for loan recovery.

6. Subsidy on Agricultural Imports: Farm machinery and other essential inputs such as crop protection chemicals and drugs are becoming increasingly

scarce and exorbitant. To enable the Bank's beneficiaries use more of this improved te technologies, NACB should make special case to the government for government subsidy and concessional tarrif on agricultural machinery and equipment.

7. Use of Open Market Prices: All computations on input prices should be made on open market prices during project formulation, this becomes necessary in view of the fact that these inputs are hardly available at the controlled prices.

6.4 Suggestions for Further Studies

The findings of this work was based on field study of NACB Direct Investment Loan Scheme beneficiaries. In view of the fact that different project types are being financed under the scheme, detail studies on the performace of individual project types will be of great help in identifying their problems and in providing guidance on the selective project financing. The studies on their viability, taking into consideration cost of administration and their performance in terms of loan recovery are higly desirable. Another area for further studies is that of a comparative analysis of the scheme with the Direct Small Holder Loan Scheme with a view to justifying the large amount of scarce loanable funds injected into it. There is the need to study the logistics of supplying tractors, fertilizers, herbicides, insecticide and other farm inputs readily at controlled prices, as part of the loan package in kind disbursement.

APPENDIX

QUESTIONNAIRE

Questionnaire For Studying the Impact of NACB Direct Investment Loan Scheme in Katsina State.

SECTION I. (PERSONAL PARTICULARS)

a. Name.....

b. Age: .....

c. EXPERIENCE IN LARGE?SCALE FARMING:.....

.....

.....

D. NUMBER OF DEPENDENTS:.....

.....

e. MAIN OCCUPATION, IF NOT FULL-TIME FARMER:.....

.....

f. SUBSIDIARY OCCUPATION:.....

.....

G. NUMBER AND SIZE OF HOLDINGS:.....

.....

h. NUMBER OF BIRDS AT FULL CAPACITY:.....

.....

i. NUMBER OF HEADS:.....

.....

J. HOW DID YOU ACQUIRE YOUR LAND (TICK):

i. Inheritance ☐

ii. Purchase ☐

iii. Lease ☐

iv. Hire ☐

v. Others(specify) ☐

K. LEVEL OF EDUCATION (TICK):

i. Islamic Education ☐

ii. Adult Education ☐

iii. Primary Education ☐

iv. Secondary Education ☐

v. Above Secondary ☐

I. STATUS OF RESPONDENT (TICK):

i. Owner/Proprietor ☐

ii. Farm Manager ☐

iii. Others (specify) ☐

SECTION II. (FARMING PRACTICE):

a. What type of farming do you engage in ? (Tick):

i. Crop Farming ☐

ii. Livestock Farming ☐

iii. Poultry Farming ☐

iv. Mixed Farming ☐

b. Have you ever used our loan to finance your farming ?

Tick: (i) Yes ☐ (ii) No ☐

c. If yes, how much ? (Tick):

₦1,000.00 - ₦5,000.00 ☐

₦5,000.00 - ₦10,000.00 ☐

₦10,000.00 and above. ☐

d. Were you using the following inputs before taking the loan?:

1. Fertilizer
2. Herbicide
3. Insecticide
4. Animal Traction
5. Tractors
6. Improved Seeds.

(i) Yes ☐ (ii) No ☐

e. If yes, how much of each were you using per hectare?:

Input	Quantity (eg. number of bags, litres, kg & oxen)
Fertilizer	
Herbicide	-
Insecticide	-
Animal Traction	
Tractor	-
Improved Seed	-

f. After taking the loan how much of each of the following do you use?:

Fertilizer	7 Bags
Herbicide	-
Insecticide	-
Animal Traction	
Tractor	Used only during harrowing on hired basis.
Improved Seeds	

g. Who introduced you to the use of improved technology? (Tick:)

i. Agricultural Extension Officers ☐
ii. Fellow Farmers ☐
iii. Produce Vendors ☐
iv. Credit Institution ☐
v. Others (Specify) ☐

.....

.....

h. Do you have problems in getting improved farm inputs? (Tick): (i) Yes ☐ (ii) No ☐

i. If yes, what are the problems?

.....

.....

.....

.....

SECTION III. (EFFECT OF LOANS ON FARMERS' INCOME)

a. Do you notice any difference in your farm operation after using the loan? (Tick):

(i) Yes ☐ (ii) No ☐

b. If yes, what type of difference? (Tick):

i. Increase in yields ☐
ii. Increase in farm size ☐
iii. Increase in income ☐
iv. Others (Specify):.....

.....

.....

c. How do you rate the increase of output after using the loan? (Tick):

i. High increase ☐

ii. Moderate increase ☐

iii. Low increase ☐

iv. No Increase ☐

v. Others (Specify):.....

d. State the income (Before and after the loan) in the table below:

OUTPUT			INCOME	
YEAR	BEFORE	AFTER	BEFORE	AFTER
1				
2				
3				

SECTION IV. (LOAN OBLIGATIONS)

a. Are you expected to repay the loan?(Tick):

(i) Yes ☐ (ii) No ☐

b. Are you able to fulfil your repayment obligations as and when due? (Tick):

(i) Yes ☐ (ii) No ☐

c. If No, why (Tick):

i. Time allowed too short ☐
ii. I do not gain anything ☐
iii. I reinvested the money in other ventures ☐
iv. Others (specify):.....
.....

d. In what form do you want repay the loan ?

.....
.....
.....

e. How often do credit officers care to demand loan repayment ?

.....

f. Do you dispose off your produce easily ?

(i) Yes ☐ (ii) No ☐

g. If No, what problems do you encounter in this regard? .....
.....
.....

SECTION V (PROJECT EXECUTION)

a. What is the time lag between your application and release of loan funds? (Tick):

i. Less than six months ☐

ii. One year ☐

iii. Above one year ☐

iv. Others (specify).....

.....

.....

b. Were you given the amount you applied for?

(i) Yes ☐ (ii) No ☐

c. If No, was the amount given to you adequate for the project?.....

.....

d. Has any credit officer over visited you to advise you on the use of loan? (Tick):

(i) Yes ☐ (ii) No ☐

e. Do you need the advice of any credit officer ? (Tick): (i) Yes ☐ (ii) No ☐

f. If No, why not?:.....

.....

.....

g. In what form do you get the loan ? (Tick):

i. Cash ☐

ii. Cash and kind ☐

iii. Kind ☐

iv. Others (specify):.....

.....

.....

h. Was the loan given in one instalment? (Tick):

(i) Yes [ ] (ii) No [ ]

i. Do you employ the services of agricultural experts?

(i) Yes [ ] (ii) No [ ]

j. If No, why not?.....

.....

.....

SECTION VI:

a. What are the main problems associated with securing loan?.....

.....

.....

b. Do you intend to take more loans in future?

(i) Yes [ ] (ii) No [ ]

c. If No, why?.....

.....

.....

e. What general problems do you encounter in getting loan from financial institutions?

.....

.....

f. Do you have any advice to the financial houses as to how best to serve you financially ? Please briefly mention such advice here:.....

.....

.....

.....

Thank you.

REFERENCES

1. Amos, A.A. (1978). "Prospect and Problems of Foreign Investment in Nigerian Agriculture". Agricultural Administration Vol. 24, No.4.

2. Ajakaiye, M.B. (1986) "Credit as an Instrument for Livestock Development in Nigeria". Paper Delivered at the National Seminar on the Second Livestock Development Project, December, 9th - 10th.

3. Aku, P.S. (1981) "Problems in the Implementation of the Agricultural Credit Guarantee Scheme Fund: A case study of Selected Credit Institutution in Kaduna State of Nigeria)". Unpublished M.Sc. Thesis, Ahmadu Bello University Zaria, Nigeria.

4. Barau, A.D. et al (1991), "Loan Delinquency in the Benue State Small-scale Agriculture On-lending Credit Scheme". Nigerian Journal of Rural Economy and Sociology, Vol. 1 No.1. p. 73.

5. Carrol, T.F. (1973). "Group Credit for Small Farmers". Spring Review of Small Farm Credit vol. XIX

6. Donald, G. (1975), Credit for Small Farmers in Developing Countries, Westview Press, Colorado.

7. Garlbraith, J.K. (1952), "The Role of Agricultural Credit in Agricultural Development". Proceeding of the International Conference on Agricultural and Cooperative Credit, Vol.3 University of Carliffornia, Borkeley.

8. Ighen, M.S. (1973), Agricultural Credit Practices of Major Lenders in the Western States of Nigeria. Unpublished M.Sc. Thesis University of Ibadan, Ibadan, Nigeria.

9. Insitor, (1993), "Analysis of the Loan Repayment Problems Confronting the Clientele of the Nigerian Agricultural and Cooperative Bank Limited", Research and Development Occassional Paper, NACB, Kaduna, Nigeria.

10. King, R. (1974), "Agricultural Credit to Small farmers". Paper presented at workshop for cooperative officials at Bagauda Lake Hotel, Kano.

11. Maqsood, A. (1978). Agricultural Credit and Small Farmers. AERLS Agricultural Extension News Letter, Vol. 4.

12. Miller, L.F. (1977). Agricultural Credit and Finance in Africa. The Rockefelter Fundation, United State of America.

13. Mosher, A.T. (1986). Getting Agriculture Moving Essentials for Development and Modernization. Agricultural Development Council, Inc., New York.

14. Micheal, O.O. (1986) Some Implication of Government Policies for the Financing and Development of Agriculture in Nigeria Nigerian Association of Agricultural Economics (N.A.A.E) Publication, June, 1986.

15. Nisbet, C. (1971) Money Lending in Rural Areas of Latin America. American Journal of Economics and Sociology Vol. 30 (1) p. 40 .

16. Nigerian Agricultural and Cooperative Bank. Operation Manual.

17. Ogunfowora, O. et.al. (1972) "Capital and Credit in Nigerian Agricultural Development and Rural Development". Paper No. 6, Department of Agricultural Economics and Extension, University of Ibadan.

18. Osuntogun, A. (1973), "Some policy Considerations in the Execution of Public Agricultural Credit Schemes in West Africa". West African Journal of Agricultural Economics: Vol. 12 (1) pp.136 - 149.

19. Oluwasami, H.A. and Alea, J.A. (1964), "The Role of Credit in Transformation of Traditional Agriculture: The Nigerian Experience". Bulletin of Rural Economic and Sociology Vol.1 No.1. pp. 57 - 75.

20. Pischike, I.D. (1981), "Economy of Specialized farm Credit Institutions In Low Income Countries". World Bank Staff Working Paper No. 446 IBBD Washington D.C.

21. Rice, W. (1963), "Marketing and Money Lending A Note on Middle Monopsony in Malaya". Malayan Economic Review, Vol. 7, pp. 25-40.