SUB-THEME 3: INSTITUTIONAL REFORMS AND THE NATIONAL TRANSFORMATION AGENDA

SOCIO-ECONOMIC AND INSTITUTIONAL FACTORS AFFECTING LOAN REPAYMENT RATES OF MICROFINANCE INSTITUTIONS (MFIS) AND THEIR BENEFICIARIES IN NIGER STATE, NIGERIA

Ndanitsa, M.A) Umar, I.S; Tyabo. I.S; Sallawu, H. and M., Ibrahim.
Department of Agricultural Economics and Extension Technology, School of Agriculture and Agricultural Technology, Federal Usniversity of Technology, Minna, Nigeria.
E-MAIL: attahirundanitsa@yahoo.com

ABSTRACT
The study focuses on the Socio-economic and Institutional Determinants of Loan Repayment rates of Microfinance Institutions and their Beneficiaries in Niger State, Nigeria. The objectives of the study were to highlight the socio-economic characteristics of the respondents and determine factors affecting the repayment rate of the microfinance institutions in the study area. A Multi-stage sampling technique was used to draw up the respondents, and 144 respondents were interviewed using questionnaires. Similarly, the respondents were drawn from 36 microfinance institutions in the study area. Also, 2 executive members from each of the institutions were also interviewed. Data were analyzed using both Descriptive Statistics and Multiple Regression model. The result of the analysis reveals that most of the beneficiaries of these institutions (67.4%) were females and were married couples (71.5%). The mean age of respondents was 41.12 years. Average family size of the respondents was 8 people. Most respondents also had modern education (70%). Crop farming, poultry farming, artisans and trading were the major occupation of the beneficiaries and have been in these businesses for over 11 years for most clients. Capital turn-over base for most beneficiaries was =N=114,000.00 - =N=144,000.00 which suggests that they were small-scale business operators. The result of the regression analysis shows that the determinants of repayment rate of the beneficiaries of the microfinance institutions in the area include Loan size, Dependency ratio, Educational attainment, Age of the beneficiaries/institutions, Type of enterprise operated, Level of experience, Profitability Index, Interest rate. Outreach of the institutions, etc. It was however recommended that extension education, provision of infrastructure, manpower training etc; should be provided for the beneficiaries in the area.

KEYWORDS:- **Microfinance Institutions, Institutional Factors, Repayment Rates.**

INTRODUCTION
Microfinance Institutions (MFIs) represent institutional arrangements which provide micro-credit to the poor productive to finance economic activities. These MFIs can be formal, semi-formal and informal. They render both financial (micro-credit) and non-financial services (e.g. community development activities on both health and training on vocations) to their members mainly the rural (productive) poor, especially women. They provide credit to the poor who are vulnerable to income fluctuations in times of needs, thereby permitting "consumption soothing (Weiss and Montgomery, 2004). Some of them are legal entities and are mostly registered as not for profit companies limited by guarantee and as such are able to sue and be sued under their name (Marx, 2001).

It has been documented in many development economic theories that one factor inhibiting the attainment of development goals in less developed countries (LDCs) is the populace's general inability to access factors of production, especially finance. This limits the entrepreneurial ability of the people especially the poor. Potential employment opportunities and household prospects for creating wealth and improving income are lost. Entrepreneurs such as farmers, traders and artisans are engulfed in the vicious cycle of small holdings, low income, low savings and low capital investment.

Over the years, the macro-economic objectives of the government had been geared to ensure economic growth, reduction of unemployment and poverty, among others, provision of credit facilities to the rural sector whose main occupation is agriculture and farming (Baba, 2004), and contributing 95 per cent of Nigeria's food crops and livestock under favourable conditions. The inability of this sector to realize its full potentials could be traced to the existing financial gap between the demand for, and supply of credits for economic activities.

However, in an effort to facilitate credit flow to farmers, small and medium enterprises and rural economies, the Federal Government of Nigeria (FGN) introduced Agricultural Credit and Agricultural Financial Intermediation Policies to Agricultural Entrepreneurs as an intervention measures to direct the growth and development of

agriculture and the rural areas. The Nigerian Agricultural, Cooperative and Rural Development Bank (NACRDB) now transformed into Bank of Agriculture (BoA) was established in 1978, as well as Rural (Commercial) Banks to provide credit for agricultural purposes and other rural ventures (Ogunsumi, 2007). However, Adelakun 1998), Manyong etal (2005) and Ogungbile (2008) in their separate studies revealed that most of these credit schemes, despite their general acceptance and a wide appreciation for agricultural transformation/modernization have failed at various times and places to yield the expected and significant results.

The inability of the formal financial institutions to provide financial services to the urban and rural poor coupled with the unsustainability of government sponsored development financial schemes gave birth to a private sector led innovative credit delivery systems known as micro-credit. It is regarded as an anti-poverty instrument in the developing world. Thus, MFIs by definition, are those financial institutions (Semi-formal, non-governmental and community development organizations) involved in rural development and poverty alleviation through the provision of micro-credit program./facilities (Marx, 2001).

Microfinance program like provision of credit to the farmers will enable them reap the economies of scale, discover new and better products, created demand where none existed, introduction of supplementary enterprises that could increase labour utilization and promote steady flow, and provide utilities to satisfy a widening market (Ijere, 2007). Etsu (2007) however, noted that many of these interventions including those supported by multilateral agencies (World Bank, UNDP Micro-start projects etc) have diverted considerable resources to supplying cheap credit in a myriad of institutional settings, but the results have been disappointing. The financial position (liquidity/solvency) and operation efficiency were not encouraging. In addition to this poor financial ratio results, is the critical problem of low repayment rates associated with the different schemes. This is considered unsatisfactory and calls for urgent attention to redress the situation. Is therefore has become imperative to address the problem since many of loan schemes are recycling in nature and their consequence may result in capital rationing by these institutions. Furthermore, this will definitely deny many beneficiaries the opportunity of benefitting from these loan schemes.

Poor repayment rate of credit from the financial institutions, like the MFIs reduces lenders' return thereby decreasing the ability of the lender to generate resources internally for institutional growth. Bersley (1994) affirmed that the issue of enforcing loan repayment constitutes a major problem in credit market.

The study therefore seeks to provide answers to the following research questions. What are the socio-economic characteristics of the beneficiaries that have direct and indirect effects on their enterprise in the study area? What types of enterprises are engaged in by the beneficiaries and what are the socio-economic factors affecting the repayment rates of both the beneficiaries and the institutions? The study objectives therefore, are to highlight the socio-economic characteristics of the beneficiaries and determine those factors that affect repayment rates of the beneficiaries and the institutions?

This study is a timely one since it has to do with encouraging entrepreneurs especially the farmers to access micro-credit facilities and increase their productivity, as well as ensuring food security-a focal point of the transformation agenda of the FGN. Furthermore, injection of capital by Government and Non-governmental organizations into sectors like agriculture, trade and commerce through financial intermediation agencies like the MFIs can only be encouraged and supported if the borrowers of such funds will not default at the end of the repayment period, since such funds ought to be a revolving fund for all the beneficiaries. This has made it imperative to determine the factors that affect repayments of loan facility by both the beneficiaries and the institutions.

METHODOLOGY

STUDY AREA

The study was conducted in Niger State of Nigeria. Data for the study was collected between May, 2009 and March, 2010 through field survey and using interview schedule. Credit is one of the critical inputs required by entrepreneurs who are either farmers, traders or artisans to facilitate production activities and the adoption of innovations. Generally, there are a few financial institutions that grant credit to these entrepreneurs, especially farmers in the study area. The institutions are MFIs that are either formal or informal, that provide credits to farmers or traders in the area after acknowledging the fact that their activities (production and marketing) constitutes an important source of income/empowerment, employment and socio-economic development of the area.

SAMPLING TECHNIQUE AND DATA COLLECTION

The target population for this study is the farmers engaged in maize and rice enterprises, the marketers of these products and the potters that were beneficiaries of the MFIs in the study area. A multi-stage Sampling (MS) technique was used to draw up the respondents and the MFIs. The sample frame was provided by the Central Bank of Nigeria (CBN) for the list of formal MFIs, Community Banks (CBs) that transform into Microfinance Banks (MFBs) and the informal MFIs. In stage 1 of the sampling procedure, two (2) out of the three (3) agro-ecological zones were purposively selected in consonance with the Niger State Agricultural Development Projects (NSADP) activities of 25 LGAs in consonance with ecological characteristics and cultural practices. The zones selected were zone I and zone 3. In stage 2 of the sampling procedure, MFIs which are stratified into formal, semi-formal and informal were randomly selected. From each stratum, 6 institutions were randomly selected, thus giving a total of 18 MFIs per zone and 36 MFIs for the state. Furthermore, two executive members of each of the selected MFIs were interviewed. In the final selection stage, 6 respondents/beneficiaries from each of the MFIs in a zone were randomly selected, thus giving a total of 72 beneficiaries per zone and 144 beneficiaries for the entire state. This represents 72 per cent of the total number of LGAs in the state.

The Data for the study were from a combination of both primary and secondary sources, but mainly through the former. The later was obtained from records and documents of the UNDP, World Bank CGAP (The Consultative Group to Assist the Poor) and their website from the internet, periodicals, magazines, journals, textbooks, annual accounts and returns from banks. Additional information came from official documents of the State's Agency for Economic Empowerments as well as Special programmes targeted at rural development. Primary data were obtained using two sets of well structured and pre-tested questionnaires. One was for the selected institutions and their key officials who completed them. The second set of questionnaires was for the loan beneficiaries. Essentially, it was corroborative of the information in the first questionnaires and helped in determining the workability and constraints of each scheme. Other data gathered were those on the socio-economic characteristics of the respondents including age, farm size, household size, educational level and gender. Additional other information gathered were those of production resources, and farm outputs during the period.

ANALYTICAL TECHNIQUES

A combination of both Descriptive Statistics such as tabulations, frequency distribution, means and averages, percentages etc, and Quantitative techniques like the Multiple Regression model were employed. Descriptive Statistics was used in analyzing the socio-economic characteristics of the beneficiaries as well as their enterprise types. Multiple Regression Model was employed in the determination and influence of the institutional (Socio-economic) factors on the repayment behaviour of the beneficiaries and the institutions in the study area.

MODEL SPECIFICATION

THE MULTIPLE REGRESSION MODEL

Regression analysis was employed to determine and isolate factors which affect repayment rate and the extent to which these factors explain repayment. To determine and isolate these factors in the study area, four functional forms Linear, semi-log, exponential and double log functions were fitted and the best functional form selected.

The regression model employed for this study was fitted as follows:

Linear Functional Form:

$Yi = Bo + B_1X_1 + B_2X_2 + \ldots\ldots\ldots\ldots B_{16}X_{16} + e \ldots\ldots$ Equation 1

Semi –Logarithm Functional Form:

$Yi = LogBo + B_1 LogX_1 + B_2 LogX_2 + \ldots\ldots + B_{16}LogX_{16} + e \ldots\ldots$ Equation 2

Double – Logarithm Functional Form:

$Log\ Yi = LogBo + B_1LogX_1 + B_2 LogX_2 \ldots\ldots + B_{16}LogX_{16} + e \ldots\ldots$ Equation 3

Exponential Functional Form:

$Log\ Yi = Bo + B_1LogX_1 + B_2 {}_+LogX_2 \ldots\ldots + B_{16}LogX_{16} + e \ldots\ldots$ Equation 4

Where,

Yi = Repayment rate (%) : Mean Percentage of amount repaid

X_1 = Loan size (₦)

X_2 = Dependency Ratio (Children as percentage of total household size)

X_3 = Level of Education (Years of Formal Education)

X_4 = Age of clients/Age of operations (Years)

X_5 = Enterprises type (Dummy variable: Farming enterprises only = 1 and other enterprises = 0
X_6 = Experience (Years) of the entrepreneur/credit officer.
X_7 = Profitability of respondents' enterprises (₦)
X_8 = Training (Total No. of days of training per year).
X_9 = Interest Rate (%)
X_{10} = Repeat Loan (₦)
X_{11} = Gender dominance factor (Percentage of females in the MFIs/Scheme, in %).
X_{12} = Shocks (No. of family emergencies, crop failure, income lose due to incidence of pests and diseases, major social events that occurred in the previous 18 months etc).
X_{13} = Portfolio Diversity (Proportion of members that have secondary or more occupations).
X_{14} = Outreach index (No. of Participants – product of average group size and average No. of groups).
X_{15} = Methodology
e = Error term

RESULTS AND DISCUSSION

SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENTS

Table 1 presents the socio-economic characteristics of MFIs beneficiaries in the study area. Majority of the beneficiaries of MFIs (67.4%) were females and males constituted only 32.6%, this implies that the loan beneficiaries of MFIs in the study area was mostly dominated by female entrepreneurs. This probably may be due to the fact that female folks are mostly into marketing and trading enterprises. However, this is contrary to the popular belief about the study area, that farming and other related business are dominated by the male folks and that female folks are only to prepare food for their male counterparts while working on the farm or in other business centers.

Table 1 also shows that majority of the beneficiaries (about 55%) were of middle age with about 45% being youths. The mean age of the respondents was 41.12 years and the modal age group was 41 – 50 years. The small percentage of the young beneficiaries of the MFIs in the area could be due to the migration of able bodied youths from the rural areas to the urban centers in search of white collar job and the quest for modern education training. However, the implication of the prime age of most respondents is that most beneficiaries are within the active labour age of productivity and might utilize credit obtained for high level productivity to earn higher income which consequently increase his capacity and willingness to repay the borrowed fund. Furthermore, because farming and other related business like trading and artisanry are surrounded by risks uncertainties, such as flooding, pests/diseases infestation fire, etc, it therefore requires people who are able and willing to take risks in expectation of profit. Similarly, in terms of marital status, 71.5% of the beneficiaries of MFIs were married couples.

Family size of respondents is another socio-economic characteristics presented in table 1. The family size of respondents on average was 8 people. The large family size could imply a probable more family labour and a consequent greater output for the farmers. The importance of large family size especially in traditional agriculture was also expressed by Olufe (1988), in his study of resource productivity in food crop production in Kwara State of Nigeria. According to the researcher, family labour accounted for a significant proportion of the total labour force used in traditional agriculture, thereby enabling the cultivation of large hectarage of farmlands and reducing the cost of hiring labour to farm operations. Lending credence to this assertion, Ndanitsa (1994) in his study of problems of fish production and marketing in Niger State, Nigeria also submitted that large family size among the entrepreneurs encourages large-scale production and marketing. However, Baba and Etuk (1993) and Baba and Wando (1998) explained that the implication of large family sizes is that family expenditure tends to draw more on family income so that only a meager sum is saved and invested eventually on farming.

Agriculture and other agriculture related businesses served as beneficiaries' major enterprises with most clients (over 70%) having 11 years and above of farming/trading experience. As posited by Osuntogun and Oludimu

(1981), several factors are known to affect the credit needs of farmers and other businesses, prominent among these factors are due to their past experience. Most of the beneficiaries of MFIs (70%) were literate with one form of education or the other; having gone through at least primary school education. This suggested that the majority of the clients can read and write, and by implication can easily be educated on skills' acquisition to improve on their performance, which could translate to increased productivity and higher incomes with higher propensity to repay the borrowed capital (Binswanger etal, 1993). In spite of high level of literacy (which is predominantly due to modern education stitches), beneficiaries of MFIs in the study area have little or no record kept. However, about 30% of the respondents in the study area had acquired no form of formal education. These findings on the literacy level did not concur with Adewumi etal, (2005), that although farmers are educated with one form of education or the other, majority of them did not have primary school education.

Furthermore, the enterprises size (Turnover in Naira for farmers, Traders and Artisans) is also revealed in table 1. It shows that most of the beneficiaries (20.8%) had a capital turnover base of between =N=114,000.00 - =N=144,000.00. This suggests that most of the MFI clients in the study area are of low income groups, operating small-scale enterprises. For example, 80 percent of the poultry farmers sampled have not more than 152 birds in their stock (and the mean stock of birds was 102). Also, the arable farmers had an average farm size of 0.40 hectares scattered in different plots.

Table 1: Socio-economic characteristics of MFIs clients (=144)

Age Group (years)	Frequency	Percentage
10-20	2	1.4
21-30	7	4.9
31-40	56	38.9
41-50	68	47.2
51-60	9	6.2
61-70	2	1.2
Mean Age Group = 41.12 years		
Modal Age Group = 41-50 years		
Gender:		
Male	47	32.6
Female	97	67.4
Marital Status:		
Single	29	20.2
Married	103	71.5
Divorced	4	2.8
Widowed	2	1.4
Separated	7	4.1
Family Size		
1-4	42	29.2
5-8	71	49.3
9-12	22	15.3
13-16	9	6.2
Mean Family size = 8		
Standard deviation = 4.6		
Characteristics	Frequency	Percentage
Enterprise Experience (Years):		
1 – 5	17	11.8
6 – 10	25	17.4
11 – 15	61	42.4
16 – 20	22	15.3
21 – 25	15	10.4
> - 25	4	2.7
(X) = 11.4 years		
SD = 8.2 years		

Highest Educational Level Attained:			
No Formal Education	43		29.9
Primary Education	31		21.5
Secondary Education	24		16.7
Tertiary Education	46		31.9
Enterprises Size (Turnover in Naira, =N= for all enterprises):			
Less than	20,000.00	5	3.5
21,000.00	51,000.00	10	6.9
52,000.00	82,000.00	17	11.8
83,000.00	113,000.00	25	17.4
114,000.00	144,000.00	30	20.8
145,000.00	175,000.00	26	18.1
176,000.00	206,000.00	21	14.6
Greater than	206,000.00	10	6.9

*SD = Standard Derivation

Source: Field Survey, 2011

ENTERPRISE OF BENEFICIARIES OF MFIS

MFI clients in the study area had one form of primary occupation or the other, ranging from arable farming, trading, poultry farming to other forms of businesses like the artisanry. This is revealed in table 2.

Table 2: Distribution of MFIs clients based on their primary occupation (N = 144).

Item	Frequency	Percentage
Trading	48	33.3
Poultry farming	27	18.8
Crop farming	41	28.5
Agro-processing	17	11.8
Others (Artisan)	11	7.6

Source: Field survey, 2011.

Table 2 revealed that one-third (1/3) of the beneficiaries of MFIs micro-credit program were traders while 60 percent were involved in one form of agriculture or the other, with crop farming taking the lead (28.5%), followed by poultry farming (18.8%), and then agro-processing (11.8%). Artisans (Pottery, carpenter, tailoring, vulcanizing, barbing) brought the rear (7.6%). It suggested that trading was the primary occupation of the greatest number (33.3%) of the beneficiaries of the MFIs in the study area. However, on the aggregate, farming constituted about 60 percent of respondents' primary occupation while non-farm enterprises constituted about 40 percent.

DETERMINATES OF FACTORS AFFECTING REPAYMENT RATES OF MFIS

These determinates include those of MFIs as well as those of the beneficiaries. Table 3 is a summary of the regression analysis. The Double – log functional form was chosen because it gave the best fit of the equation with the highest R^2 (0.79356), lowest standard error of Y estimate (0.0846), and the highest F – Value (7.3286). The functional form shows that 11 variables out of the 15 employed were statistically significant at 1% ($P<0.01$) and expected signs of the regression coefficient both in terms of the economic and agricultural logic, and is considered as appropriate form to represent the activities of the MFIs in the area (Ndanitsa, 2012).

Table 38: Summary of Regression Results: Determinants of Loan Repayments of Respondents.

Variable	Unit	Coefficient	t-ratio
Loan size (X_1)	Naria	0.0736	3.4227*
Dependency Ratio (X_2)	Percent	-0.0265	-3.4216*
Level of Education (X_3)	Years	0.2316	3.0101*
Age (X_4)	Years	-0.0497	01.3216
Enterprise type (X_5)	Dummy	0.0573	2.8947*
Experience (X_6)	Years	0.0646	2.7561*
Profitability index (X_7)	Number	0.0728	3.4525*
Training period (X_8)	Day	0.0524	1.0371

Interest rate (X_9)	Percent	-0.0658	-2.9667*
Repeat loan (X_{10})	Dummy	0.0669	1.2982
Gender factor (X_{11})	Percent	0.0872	1.0638
Stocks (X_{12})	Ranking	0.0481	-3.5661*
Portfolio diversity (X_{13})	Dummy	0.0617	3.1842*
Outreach index (X_{14})	Number	0.0844	3.7689*
Methodology (X_{15})	Ranking	0.0841	2.8761*
Constant	84.3562		
R^2	0.7936		
F-value	7.3286		
n	144		
d.f	130		

* LOS at 1%

Source: Field survey Data Analyses: Computer Printout, 2011

From table 3, it is evident that the variables that were statistically significant (P<0.01) were: Loan size (X_1), Dependency Ratio (X_2), Level of Education (X_3),Enterprise type (X_5), Experience (X_6), Profitability index (X_7), Shocks (X_{12}), and Portfolio diversity (X_{13}). Meanwhile, those factors not found to be statistically significant were Age (X_4), Training period (X_8), Repeat loan (X_{10}) and Gender factor (X_{11}).

For the loan size (X_1), the analysis reveals that the greater the size of the loan, the lower the default and the higher the repayment rate by the beneficiaries. This is because it is contended that bigger loans make possible larger investment opportunities with potentially higher returns that facilitates repayment. Njoku and Obasi (2001) isolated loan size, between two other variables as important, and have positive relationship with loan repayment under the ACGFS (Agricultural Credit Guarantee Scheme Funds) in Imo State, Nigeria. Also Ike and Abojei (2009) revealed that the size of the loan advanced to the farmers under the Delta State Agricultural Loan Scheme has a significant relationship with the repayment efforts of the years under study – 1993, 1998, 2000 and 2004. However, this findings did not concur with Zeller etal (2001) in their study of group based financial institutions for the rural poor in Bangladesh found that the greater the loan size, the greater the probability of default. Infact, with regard to the institutions, some studies revealed a negative relationship with repayment rate, i.e the higher the loan size given by the institution the lower the repayment rate of the clients.

Dependency ratio (proportion of children and other dependents to the household) (X_2) was statistically significant but inversely related to repayment. This suggests that high dependency ratio impaired repayments due to huge outstanding commitments. This argument was to facilitate the full realization of production credit and ensure prompt repayment. The vulnerability of households with high dependency ratio to bear risks could turn out to be the "raison 'd'être" to ensure minimal default. This was the findings of Zeller et al (2001), and it was based on the fact that consequences of adverse economic shocks were more serious for children. Hence, Cetris Paribus, the higher the dependency ratio, the less likely the default, because households with lower risk-bearing capacity would want to avoid the loss of future borrowing privileges. In other words, vulnerable households put a higher premium on maintaining access to future credit, and this would make more sacrifices in order to repay the loans promptly and avoid default.

Level of educational attainment of the beneficiaries of MFIs credit facility was also positively significant at 1% (P<0.01). This could be interpreted that as the level of education improved the beneficiaries also improved ability to read and write and in the process, improved dexterity in the occupation (greater potential for the adoption of improved farming technologies or expanded farming activities, which concomitantly improved profit and the capacity to repay loans).

Enterprise type also has a positive statistical relationship with repayment rate. Artisans repay loans better than agricultural businesses like crop farming, poultry, fisheries, forestry etc, which was replete with more risks/uncertainties than any other economic activities and in addition requires gestation period. These could cause repayment difficulties, if cash flow becomes untimely. However, the study by Zeller etal (2001) reported a contrary view, with the default increasing with those groups having a greater proportion of non-agricultural income. He

asserted that as the proportion of agricultural enterprise increased, incomes within groups tended to be less covariant, making it easier to bail out errant members.

The coefficient of experience was positive and significant at the 1% level, suggesting that the length of experience in occupation was a potent factor in loan repayment. This was because experience provided the compass with which the entrepreneur navigated the turmoil business environment and was a veritable decision tool. Table 8 showed that over 70% of the respondents had eight or more years in terms of business experience. This finding of positive and significant relationship between repayment capacity and coefficient of experience corroborates those of Ike (2009), who revealed that farming experience among other factors all contributed significantly to loan repayment.

The profitability index was positive and statistically significant at the 1% ($P<0.01$) and was in consonance with a priori expectation that profitability ratio of income to costs) had direct and strong relationship with repayment. This was because difficulties in repayments arose whenever a business is unprofitable and is an indication or index of management ability.

Interest rate represents to a large extent cost of capital and its magnitude may seriously impair the profit margin of any enterprise, including the institutions. Accordingly, the coefficient of this variable was negatively signed and was significant at the 1% level in consonance with the apriori expectation, which meant that the higher the interest charged by the MFIs the lower would be the repayment by the clients. High interest rate and sundry deductions on agricultural loans is usually considered to be high due to risks/uncertainties associated with most enterprises, especially farming or agricultural enterprises. The implication of interest rate on repayment capacity of clients has a higher support in literature (Adams and Vogel, 1999, Udry, 1990; Nwaru etal, 2006) who variously asserted that the demand for capital and repayment rate decreases with an increase in its cost.

Shock is another statistically significant variable and has to do with different types of farming emergencies like crop/income failure, major social events etc. The coefficient was negatively signed and significant at 1% level. In other words, as number of shocks increased, default of respondents also increased.

Portfolio diversity is another important determinant of repayment rates of beneficiaries of MFIs, and is defined by the proportion of beneficiaries who have secondary occupation. It is therefore, an indicator of asset portfolio diversity of the groups/respondents. It was positively signed and statistically significant at 1%, suggesting that as the portfolio diversity increases, the ability of the beneficiaries to repay borrowed funds increases.

Outreach is the number of participants in the MFIs programme within the period of study. The coefficient of the variable was positive and highly significant, suggesting that the greater the number of people covered, the greater the repayment rate. However, if MFIs cover larger clientele base in terms of number and geographical coverage without a proportionate increase in management, development and logistic/operational facilities, inefficiency is likely to creep-in both co-ordination and performance. Repayment will surely slide down under such circumstances.

The regression coefficient also shows a positive relationship between the methodology (manner or operational procedures of MFIs) and the repayment rate. This implied that improved methods through innovations and adoptions such as the use of computer facilities would engender good performance of the MFIs, particularly loan repayment.

The other four factors (Age, Training, Repeat loan, Gender), which affected loan repayment of the beneficiaries and the MFIs but were not significant at both 1% and 5% LOS were positively signed, except age that was negatively signed, meaning that as the beneficiaries grow older they are no longer keen about obtaining and repaying loan. This agrees with Ajakaiye (1992), that age distribution could be used to determine loan repayment ability of farmers, since effective labour availability for agricultural production declines with age.

The equation for the regression result can generally be represented thus:

$$\text{Log } Y_1 = 84.3562 + 0.0736X_1 - 0.0265X_2 + 0.2316X_3 - 0.0497X_4 + 0.0573X_5 + 0.0646X_6 +$$
$$(3.4227^*)\ (-3.4126^*)\ (3.0101^*)\ (-1.3216^*)\ (2.8947^*)\ \ (2.7561^*)$$

$$0.0728X_7 + \ 0.0524X_8 - 0.0658X_9 + 0.0669X_{10} + 0.0872X_{11} - 0.0481X_{12} + 0.0617X_{13} +$$

(3.4525*) (1.0371) (-2.9667*) (1.2982) (1.0638) (-3.5661*) (3.1842*)

$0.0844X_{14} + 0.0841X_{15}$
(3.7689*) (2.8761*)

$R^2 = 0.7936$ F-value = 7.3286 *1% LOS

CONCLUSION AND RECOMMENDATIONS

From the study, it is evident that MFIs exist in the study area and rendering micro-credit programme to agricultural entrepreneurs, artisans and traders. The beneficiaries are actually small scale entrepreneurs with little capital. Micro-credit facility from the MFIs enhance their scale of operations which enable them earn higher income for raising their standard of living, alleviate poverty and repay the loans from the income generated. However, many factors determine their repayment capacities, including interest rate, repeat loans, training period, age of the beneficiaries/institution, size of the loan, level of education, enterprise type, etc. To enhance the performance of the beneficiaries and the institutions in the area, it was suggested that education extension be provided to the beneficiaries on how to utilize the micro-credit facility, there should be provision of infrastructures in the area, the MFIs should employ competent and trained/skilled personnel, concessionary interest rate should be given to the beneficiaries especially those involved in agricultural enterprises, defaulting beneficiaries should be denied of repeat loans and made to face the wrath of the law among others.

REFERENCES

Adams, P. and Vogel (1990). Rural Financial Market in Low-income Countries, Agricultural Development in the third world. In Eicher, C. K. and J. M. Staats (eds) Baltimore: John Hopkins University Press. 175Pp.

Adelekun, A. B. (1998); "An Evaluation of Loan repayment capacity of Small Scale Farmers", a case study of Akinyele Local Government Area of Oyo State. Unpublished B.Sc. Project, Department of Agricultural Economics, University of Ibadan, Nigeria. Pp 64.

Adewumi, M. O.; Omotesho, O. A. and Tsoho, B.A. (2005). Economics of Irrigation Farming in Nigeria: A case study of Tomoto – based Farming Systems in Sokoto State, Nigeria. Intercontinental Journal of Rural Development 6: 130 – 110.

Ajakaiye,M.B.(1991). National Action Committee on the Control of Aids (NACA) as a Development Finance Intermediary: Its impact on the Development process. The Democrats weekly, Sunday, July 7th

Baba, K. M. (2004). Impact of National Fadama Development Programme on profitability and organization of Small irrigation Farms in Zamfara State, Nigeria. (An unpublished paper).

Baba, K.M. and Etuk, E.G.(1993). "Resource-use efficiency and constraints in irrigated agriculture, Empirical evidence from Bauchi state, Nigeria". Journal of Agricultural Technology, Abubakar Tafawa Balewa University, Bauchi. Pp 1-6

Baba, K.M. and Wando, M.A. (1998). " Impact of membership of Fadama Users Associations on resource use, crop yield and farm incomes: a case study from two Local Government Areas in Niger state". Nigeria Journal of Basic and Applied Sciences 6:7- 15.

Besley, T. (1994). How do Market Failures Justify Interventions in Rural Credit Markets. The World Bank Research Observer, Vol. 9, No 1, PP 27 – 48.

Biswanger, H.P; Khandkar, S.R and Rosenzweig, M. (1993). "How Infrastructure and Financial Institutions Affect Agricultural Output and Investment in India". Journal of Development Economics 41:337 – 366.

Etsu, . P. (2007) "Sources and Uses of Credit in Zone A Senatorial District of Niger State, Nigeria. Unpublished M.Tech Thesis, Department of Water Resources, Aquaculture and Fisheries Technology, Federal University of Technology, Minna, Nigeria.

Ijere, M.O (2007). Estimation of Farm-level Technical efficiency in small-scale Swamp Rice Production in Cross-River state, Nigeria: A Stochastic frontier Approach. World Journal of Agricultural Sciences 3 (5): 653-658.

Ike, P. C. (2009). Credit Availability, Utilization and Repayment among Small Holder Women Crop Farmers in Enugu State, Nigeria. FAMAN. Journal, Vol. 10, No. 1, pp. 1 - 5.

Ike, P. C. and Abojei, J. O. (2009). Access and Loan Repayment in Delta State Agricultural Loan Scheme, Nigeria. Proceedings of 23rd Annual Conference of FAMAN, 14th – 17th, pp 25 – 33.

Manyong, V. M; A. Ikpi; J. K. Olayemi; S. A. Yusuf; B. T. Omonona; V. Okoniwa and F. S. Idachaba (2005). Agriculture in Nigeria: Identifying opportunities for increased Agricultural Commercialization and Investment, IITA, Ibadan, Nigeria.

Marx, M. T. (2001), "Nigeria's Rural and Microfinance: Rural and Micro-Finance options," (Report on Formulation Mission by IFAD/world Bank/ CBN), Abuja, CBN; PP 4 – 22.

Ndanitsa, M.A. (1994). "Problems of Fish Production and Marketing in Niger State, Nigeria". Unpublished B.sc. Project, Faculty of Agriculture, Usman Danfodiyo University, Sokoto, Nigeria. Pp64.

Ndanitsa, M.A. (2012). The Performance of Microfinance Institutions on Poverty alleviation of Farm Households in North –Central Nigeria. Unpublished Ph.D Dissertation, Department of Agricultural Economics and Extension, Bayero University, Kano, Nigeria.

Njoku, J. E. and P. C. Obasi (2001); Loan Repayment and its Determinants under the ACGS in Imo State, Nigeria. African Review of money, Finance and Banking, No. 1 Pp. 201 – 206.

Nwaru, J. C., C. E. Onenweaku and E. C. Nwagbo (2006). Comparative Analysis of Allocative Efficiency in Input use by Credit and Non-Credit user food crop farmers in Imo State of Nigeria: Journal of the Science of Agriculture, Food Technology and the Environment, 6:90 -97.

Ogungbile, A. O. (2008); Poverty reduction and access to agricultural inputs; In: Ingawa, S. A; Okuneye, P. A; Oredipe, A. A; and Adepoju, S. O. (Eds). Government Seven Point Agenda: Implication for Agricultural Development. Nigerian Association of Agricultural Economists Economic and Policy Series. Vol. 1 (1).

Ogunsumi, L. O. (2007), Socio – Economic Condition of Peasant farmers: a case of agricultural technologies sustainability in South – West Nigeria. World Journal of Agricultural Sciences 3(5): 678 – 684. Idosi Publications: 2007

Olufe, J. (1988). "Resource Productivity in Food-crop Production in some selected villages of Oyi Local Government Area, Kwara state, Nigeria" Unpublished B.Agric. Project. Development of Agricultural Economics and Farm Management, University of Ilorin, Nigeria.

Osuntogun, A. and O. Oludimu (1981), "Extending Agricultural Credit through Public study of the Ondo State Agricultural Development Corporation and Ogun state Agricultural Development corporation", in Ojo, M. O; C. C. Edordu, and J. A. Akingbade (eds). Agricultural Credit and Finance in Nigeria: Problems and Prospects; Lagos, Central Bank of Nigeria.

Udry, C. (1990). Credit Markets in Northern Nigeria: Credit as Insurance in a Rural Economy. World Bank Economic Review. 4(3): 251 – 268.

Weiss, J. and H. Montgomery (2004). Great Expectations: Microfinance and Poverty Reduction in Asia and Latin America. ADB Discussion paper No. 15.

Zeller, M., Manohar, S., Aklter, U. A. and Saidur, R. (2001), Grouped – Based Financial Institutions for the Rural Poor in Bangladesh: An Institutional and Household Level Analysis". IFPRI Research Report 120 (Disc. I. D. 2004 – 01 – 008); IFPRI, Washingwon, DC.