THE NEXUS BETWEEN INFORMAL FINANCIAL INSTITUTIONS (IFIs), INVESTMENT AND POVERTY ALLEVIATION IN NORTH CENTRAL STATES OF NIGERIA

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ABSTRACT

Government has identified the need for the development of SMEs. One of such Sectoral strategies is the introduction and pursuit of policies such as concessionary financing to encourage and strengthen the growth of SMEs in Nigeria. However, a well-functioning and regulated informal economy will be a critical prerequisite to sustainable growth. This is because the link between, informality, Investment, poverty alleviation and growth is not fully understood. This study seeks to investigate the nexus between Informal Financial Institutions, Investment and poverty alleviation in north central states, Nigeria. A binomial Logit Linear Regression approach was employed with data from structured questionnaires having Investment and repayment plan as variables. The finding revealed that the odd ratio of investment against the IFIs chance of alleviating poverty in north central-states-Nigeria is 2.21. The study therefore concluded that there exist a significant relationship between IFIs, Investment and poverty alleviation in north central-Nigeria. The study recommends among others that there is the need for the government to utilize Informal Financial Institutions in its poverty reduction programmes, since about 75 percent of the Small and Medium scale Enterprises (SMEs) could assess credit for investment through them. This will go a long way in promoting inclusive growth in the country.

Keywords: IFIs, Investment, Economic growth, Poverty Alleviation and SMEs

INTRODUCTION

The economies of third world countries such as Nigeria operate with dual financial institutions. On one hand are group which function through direct governmental control known as Formal Financial Institutions such as Commercial Banks, Insurance Companies and Mortgage Banks. And on the other hand are those financial institutions which are not directly controlled by government, called Informal Financial Institutions such as money lenders, cooperative societies, thrift and loan societies, local bankers, cooperatives etc. It should however be noted that statutory dominance of formal financial sector since independence is hinged on the thinking that the sector would stimulate the growth of the economy and ensure the upliftment of the socio-economic lives of the people.

It has been contended that the Formal financial sector will promote savings and investment, improve opportunities for credit, and engender reduce poverty. But it has been observed that Formal financial institutions have seriously come short of the expectations as they have made things harder for Nigerians through stringent conditionalities for credit, poor customer services and high interest rates (Frank, 2010). Even the micro finance institutions that was created for the purpose of developing the small and medium scale enterprises has not been able to realize any of the objectives for which it was created, thereby leaving the small and medium scale enterprises to be sourcing for their respective means.

The introduction of the informal financial institutions by individuals and groups is to cushion the effects of the Formal financial institutions on the socio-economic wellbeing of the people. This practically done by borrowing loans to small and medium scale enterprises and individual for the purpose of expanding their respective businesses. It has been acknowledged all over the world that small and medium scale enterprises are the powerful tool any country can use to stimulate fast and sustainable socio-economic growth.

The informal financial institutions are creation of the indigenous people with aim of making credit/loan facilities more accessible to the people and SMEs so as help solve their socio-economic and financial problems (Gulong, 2012). Small scale enterprises prefer to operate with these institutions as their conditions for credit are soft, coupled with faster administration of loans with low interest rate compared to Formal Financial Institutions (Yelwa, Obansa and Awe, 2014).

Furthermore, North Central Nigeria consists of the seven states (Kwara, Kogi, Nasarawa, Niger, Benue, Plateau and Federal Capital Territory) situated geographically in the middle belt region of the country, spanning from the west, around the confluence of the River Niger and the River Benue. The region itself is rich in natural land features, and boasts some of Nigeria's most exciting scenery. The region is also home to many historical and colonial relics. However, this study focuses on only three states among the North Central states which include Kogi, Niger and FCT which were chosen because of the high familiarity with these states and also the availability of data.

However, the area does have formal banking system, but most people depend on informal financial institutions existing in the area for their financial transactions such as savings and loans. This study is therefore aimed at determining the contribution of informal financial institutions on the growth of small scale enterprises in North central states of Nigeria.

LITERATURE REVIEW

Concept of Informal Financial Institutions

In Africa, the vast majority of financial transactions occur outside the boundaries of the regulated banking sector (Aryeetey and Udry, 2007). It is estimated that 55 percent of the money supply in Nigeria is for instance outside the formal banking sector (Okezie, 2009). Informal lenders provide more credits and attract a larger volume of savings than the formal sector in sub-Saharan Africa (Nissanke and Aryeetey, 2013).

It is important to understand how the Informal Financial Sector works for effective policy making. Three types of informal units have been identified in Africa; including savings mobilization units with little or no lending; lending units that do not engage in any savings; and savings mobilization and lending units (Obadan, 2014).

The Informal Financial Sector is an unregulated market and hence highly flexible with respect to structuring credit arrangements. It is therefore not guided by stringent rules and regulations such as the formal sector. The informal sector is characterized by a strong working relationship between borrowers and lenders, and is more responsive to market conditions. It is also common to see individuals and businesses participating in both the formal and informal sectors. This is particularly true among enterprises, a number of which are controlled and managed by families, friends and relatives with full access to formal sector capital markets.

Berko (2010) noted that the earliest but most primitive means of Informal Financing Institutions were the slavery, forced human labour, child marriage and the practice of *"Iwaga"* in Yoruba area in which a borrower uses his own wife or daughter as collateral for the loan. According to him, these inhumanizing of human race practices had been phased out in Nigeria because of Christianity and civilization.

Umebali (2012) sees informal credit institutions to include all classes of credit, savings associations and markets operating outside the formal financial system guidelines. They gained their popularity as a result of non-cooperative attitudes of some conventional banks and other non-banking financial institutions in giving loans to the less privileged or poor. These institutions are often made up of heterogeneous savers and lenders.

According to Osuntogun and Adeyemo (2015), the informal financial market is an indigenous system of saving in varying forms which can be broadly summarized as a situation in which a group of people come together, contribute fixed amount at fixed intervals and assign the total amount contributed to an individual member on rotational basis or offer credit to members and share their accumulated savings at

Furthermore, Robinson (2001) defined microfinance as the supply of loans, savings and other basic financial services to the poor. IFI evolved as an economic development approach intended to benefit the low-income part of a given society, both men and women (Irobi, 2008). According to World Bank (2007), the term refers to provision of financial services (including saving and credit) to the poor.

Concept of Poverty in Nigeria

Central to the quest for policies and programmes that will reduce poverty is the issue of the conceptualization of poverty. Conceptually, three dominant views are identified as the meaning of poverty in the literature. The first view sees poverty as a severe deprivation of some basic human needs at the individual or household level, (Obadan, 2009). Put differently, poverty is a material deprivation and this can be assessed in monetary terms. (Aliyu, 2012).

The second view defines poverty as the failure to achieve basic capabilities such as being adequately nourished, living a healthy life, possession of skills to participate in economic and social life, permission to take part in community activities to mention a few. This conceptualization forms the basis for the belief that ‘poverty is multi–dimensional’ (Senn, 2009).

The third conceptualization of poverty came into limelight in the 1990s and has a fundamentally different approach to the understanding of poverty: subjective poverty assessments. The core of this view of poverty is that poverty must be defined by the poor themselves or by the communities that poor people live in. (Streeten, 2008).

Concept of Small, Micro and Medium scale Enterprises

As outlined by allbusiness.com (2010), the traditional definition in Germany sees Small and Medium Scale Enterprises as enterprise that is not more than two hundred and fifty employees while in Belgium, sees is as enterprise with not more than one hundred (100) personnels. In the latest development by the European Union, the concept ‘micro’ has been categorized as enterprises with less than ten (10) employees, ‘small’ as those with less than fifty (50) employees and ‘medium; as those with less than two hundred and fifty (250) employees. In the USA, ‘small’ is classified as enterprise or business with less than one hundred (100) employees while medium scale business identifies as business with fewer than five hundred (500) employees.

European Union (2013) sees medium-sized business as an enterprise that the number of employees is not more than two hundred and fifty persons and whose annual turnover is not more than EUR 50 million or whose annual balance-sheet total will not exceed EUR 43 million. A small enterprise is described as an enterprise which employs fewer than 50 persons and whose annual turnover or balance sheet total will not exceed EUR 10 million. While a micro enterprise is viewed as an enterprise which employs below 10 persons and whose annual returns and/or annual balance sheet total is not more than EUR 2 million (Ifedulova, 2013).

Micro and Small Enterprises play significant role from the overall industrial economy in India. It is estimated that with regards to value, the sector accounts for approximately 39 percent of the manufacturing output and about 33 percent with the total exports of the nation. In South Africa, the word Small, Medium and Micro Enterprises (SMMEs) plays a significant role in their economy while in Nigeria the word Small and Medium Scale Enterprises (SMEs) is used. Based on these analyses, it is concluded that Small and Medium Scale Enterprises are enterprises that can employ at most five hundred (500) employees at any given point in time and it has been proved to be the backbone of every economic system. However, the brain behind every prosperous Small and Medium Scale Enterprise is entrepreneurship which plays crucial roles in managing the small and medium scale enterprises. Entrepreneurial skill is a pillar to which SMEs survives (Yelwa et al. 2012).

Empirical Review

Yelwa, et al. (2012), carried out a research on the relationship between Informal Financial Sector and Financing of the Small and Medium scale Enterprises in Nigeria using Niger state as a case study. He concluded that Informal Financial market operators in Minna, Suleja, Bida and Kontagora have contributed largely to investment, job creation, income generation, easy accessibility to credit facilities and supports the production and distribution of goods and services to the people of the towns.

Osuagwu (2012), found that the following four factors determine investment: The expected rate, the supply of funds, Absorptive capacity and the government policies. Based on the study, he concludes that the inadequacy of investment in the economy supply was caused by government policies, limited supply of investment fund i.e. micro- credit and slow rate of expansion of the absorptive capacity due to lack of innovation in the technological development.

Fowowe and Abidoye (2011) examine the effect of financial development as measured by private credit on the growth of poverty and inequality in Sub-Saharan African countries. Their findings show that private credit has no significant influence on poverty in these countries. However, empirical results show that macroeconomic variables such as low inflation and trade openness engender reduction of poverty.

Geda, J. A., Newbold, J. P and Whitford, D. T. (2014) use the rich household panel data of urban and rural Ethiopia that covers the period from 1994 to 2010, the authors attempted to establish the link between finance and poverty in Ethiopia. Their results show that access to finance is an important factor in consumption smoothing and hence poverty reduction.

Rama (2013), in his study of the theoretical and empirical determinants of investment in developing countries identifies macroeconomic and institutional factors, such as financial repression, foreign exchange shortage, lack of infrastructure, economic instability, aggregate demand, public investment, relative factor price and credit availability as important variables that explain private investment. Here, credit availability among other factors was stressed.

SMEs Growth, Investment and Employment Generation in Nigeria

The baseline economic survey of Small and Medium Industries (SMIs) in Nigeria conducted in 2004 indicated that the 6,498 industries covered currently employ a little over one million workers. Considering the fact that about 18.5 million (28% of the available work force) Nigerians are unemployed, the employment objective/role of the SMIs is far from being reached (CBN 2005). One of the hallmarks of the National Economic Empowerment and Development Strategy (NEEDS) is the empowerment of the poor and the private sector, through the provision of needed financial services, to enable them engage or expand their present scope of economic activities and generate employment. Delivering needed services as contained in the Strategy would be remarkably enhanced through additional channels which the microfinance bank framework would provide. It would also assist the SMIs in raising their productive capacity and level of employment generation.

As at December, 2010, only N8.5 billion (29.5%) of the N28.8 billion Small and Medium Enterprises Equity Investment Scheme (SMEEIS) fund had been utilized. Moreover, 10% of the fund meant for micro credit had not been utilized due to lack of an appropriate framework and confidence in the existing institutions that would have served the purpose. This policy provides an appropriate vehicle that would enhance the utilization of the fund (FAO, 2009; Olaitan, 2011; Yaron, I; Woller, G. and Parsons, R. 2008; Zeller and Sharma, 2008).

Ariyo, (2010), brought out the need to embark on SMEs development by pointing out the significance of Small and Medium scale enterprises on the economy of Nigeria. He posited that more than 50 percent of businesses in Nigeria are classified as small and medium scale. However, since most businesses are in this category, it is therefore necessary for the government to initiate policies and programmes that will promote the activities of the SMEs since it will have a positive impact on the overall economy such as job creation, improved standard of living, reduces prostitution and violence among youths.

Khandker (2008), in his studies using statistical method on assessment of impact of informal finance among three Bangladesi programs found that every additional takas lent to a woman for investment purpose adds extra 0.18 taka to annual household expenditure.

In the work of Berry, J. S., Manchflower D.G and Meyer S.O. (2012), in a study conducted in Ghana and South Africa, SMEs takes a large proportion of businesses in the developing nations. He posits that SMEs represents about 72 percent of businesses in Ghana, contribute 70 percent of the nation's Gross Domestic Product (GDP) and 80 percent of employment generation in the same country. He also revealed that South Africa is accounted for 91 percent of businesses, contributing 55 percent of Gross Domestic Product (GDP) and 61 percent employment opportunities.

Dunn and Arhucle (2011), used an analysis of covariance to examine loans to micro entrepreneurs with regard to 305 households in Peru. The analysis uses data at two points over time and looked at changes in borrowers in accordance with control group who have certainly not received micro-credit. 'The study suggests there are significant differences between the borrowers and the control of group with regards to enterprise revenue, productivity, fixed assets and employment creation for others.

Poverty and Economic Growth

The relationship between poverty and economic growth is that they are empirically needed in growth comparison: A nation without poverty or a reduced level of poverty is definitely having a consistent and reliable economic growth. Nigeria without economic growth and development cannot increase the welfare of the people and would definitely bring about the prevalence of extreme poverty.

Mwakapui, (2012) sees Economic growth as an increase in a country's productive capacity, identifiable by a sustained rise in real national income over a period of years. A country's annual growth, can be measured by taking the average percentage increase in national income over a long period of time, say five or ten years.

A growing labour supply enables a community to produce bigger combination of goods and services and so bring about an outward shift in it production possibly frontier. This in turn leads to an increase output per head and hence a potential improvement of the social welfare of citizenry. An expansion of a country capital stock through net investment, just like an expansion of its labour forces, increase the country Stock of productive resources and so represent another possible source of economic growth. (Tonge, 2013).

Theoretical Framework

The theoretical framework for this study is rooted on the work of Mc Kinnon (1973) and Shaw (1973) in Financial Repression Theory, who propounded that Informal Financial Institution came into existence because of excessive regulation of the formal sector with the use of policies of direct control such as interest rate ceilings and prescribed credit allocation to government and its parastatals.

This led to distortions in the economy resulting in crowding out of the financial needs of the informal sector by the formal financial institutions. In addition, the effective cost of funds to small and medium scale enterprises became excessively high. However, the imposition of interest ceiling often below market interest rates usually induces excess demand for loanable funds, thus leading to credit rationing by banks and other financial institutions and the existence of parallel financial markets with higher market clearing interest rates.

METHODOLOGY

Study Area

The study was conducted in the North Central, Nigeria. These areas consist of the selected three states situated geographically in the middle belt region of the country, spanning from the west, around the confluence of the River Niger and the River Benue. The region is made up of the following states: Benue, Kogi, Kwara, Nasarawa, Niger and Federal Capital Territory (Abuja).The region itself is rich in natural land features, and boasts some of Nigeria's most exciting scenery. The region is also home to many historical and colonial relics.

The selection of these states was based on the growing SMEs in these states because of their growing population. For instance, FCT used to be known as businesses headquarters, but recently, because of the growing population in the region with about 6 million people, the growth of SMEs have been on a high side. The same apply to Kogi and Niger state because of their proximity to the FCT.

Nature and sources of Data

This study relied on primary data. The primary data consisting of 850 questionnaires distributed which was determined by Krejcie and Morgan (1970); while 700 returned and valid was used for the analysis.

Analytical Framework

Logit Model

The ordered logit model in its modern form was proposed by McElvey and Zavoina (1969) for the analysis of ordered, categorical, non-quantitative choices, outcomes and responses. The model is used to describe the data generating process for a random outcome that takes one of a set of discrete, ordered outcome. Ordered choice models are appropriate for a wide variety of settings in the Social and Biological Sciences Dunn, & Archucle, (2011).

Since the variables for this study is based on the ordered Likert scale of “Strongly Disagree”, “Disagree”, “Unsure”, ”Agree” and “Strongly Agree”, the ordinal logit regression model is appropriate in analyzing and testing the hypotheses of the study:
The logit regression is based on the logistic model given by:

$$Y = \quad + \beta X + \mu ------------------ (3.1)$$

$$E\left(\frac{1}{\overline{X}}\right) = \alpha + \beta X = Pi -------------- (3.2)$$

$$P = \frac{1}{1 + e^{-\alpha + \beta X + \mu}} -------------$$

$-(3.3)$

The above equation (3.3) is a cumulative logistic distribution function and the probability ranges between 0 and 1.

Let Z be $\alpha + \ X + \ \mu$---(3.4)

$$P = \frac{1}{1 + e^{-Z}} ------------------(3.5)$$

$$1 - P = 1 - \left(\frac{1}{1 + e^{-Z}}\right) ----------------- (3.6)$$

$$P = \frac{1}{1 + e^{-Z}} = \frac{e^{Z}}{e^{Z} + 1} ---------------(3.7)$$

$$\frac{pi}{1 - pi} = e^{Z} = Odd\ Ratio ------------- (3.8)$$

Since Logit = Log of odd ratio

Therefore, $Log[\frac{pi}{1-pi}] = Log\ e^{Z} ------------- (3.9)$

$Log[\frac{pi}{1-p_i}] = Z\ Log\ e\ \ but\ Loge = 1 ---------- (3.10)$

Therefore, $Log[\frac{pi}{1-pi}] = Z ---------------- (3.11)$

$Log[\frac{pi}{1-p_i}] = L = \alpha + \ X + \ \mu --------------(3.12)$

Equation (3.12) is the Logit model framework.

3.4 Model specification

The models will be specified based on the hypothesis as follows:

H_{o2}: There is no significant contribution of IFIs in accessing credit facilities in north central states-Nigeria which is specified as:

$Log\ (\frac{\ }{1-P}) = L = \beta_0 + \beta_1\ INV + \beta_2\ REPL + \mu$-------------------------(3.13)

Where:

L= P=1, If IFIs promotes growth in Nigeria; (1-P), if otherwise.

INV = Investment

REPL = Repayment plan

Measurement of Variables

Table 3.1

S/N	Variable	Measurement	Expe cted Sign on impact	A prio
	POV = Alleviat t Informal oa Dependent Variable	1, if Informal loan poverty, 0, if otherwise.	$\pm$	[illegible] > ([illegible] < 0
	Inde pe nde nt Variables O wner's Characteristi			
1.	INVESTMENT	1, if experienced increase in the number of employees;	+ / Based on Ayodele, (2015) and Hossain,	[illegible] > 9
2.	REPL	1, if the repayment plan is convenience in terms of the number of years	+ / based on the st udy carried out by Balogun, (2004),	[illegible] > 7 0

Source: Author's compilation, 2017

Sample Size Determination

The cross sectional data for this study was obtained using questionnaires. Based on the Krejcie and Morgan, (1970) table with a deterministic model as:

$$S = \frac{X^2 \; N(1-P)}{d^2 \; (N-1)+X^2 \; P(1-P)}$$

Where:

S = Sample size $\quad$ X^2 = Value of Chi-square $\quad$ N = Population size

P = Population proportion $\quad$ d = Degree of accuracy

Based on this proposition by Krejcie and Morgan, (1970), a sample size of 850 questionnaires was recommended using 95% confidence interval. In addition, the minimum sample size would be determined on the basis of 30 cases per variable/item for an accurate representation of the first canonical root (Stevens, 2001). The Bowley's model of deriving objective, valid and reliable sample was used which reduced the chances of error.

Methods of Data Analysis

The Maximum Likelihood (ML) method is used to obtain estimates for the specified binomial Logit probability model. The justification for using ML method is due to the fact that neither the ordinary least squares (OLS) nor the weighted least square (WLS) is helpful or adequate for estimating the Logit model. Moreover, that the Logit model is a nonlinear model. The parameter estimates of the specified Logit model are not directly interpretable with respect to magnitudes of effect but only interpretable with respect to the direction of effect on probability (Patrick, A; Leonard S; Patricia M.Y and Ernest T; 1996).

Distribution of Questionnaires and Response rate

A total of eight hundred and fifty (850) copies of the questionnaire were administered across the two States and the FCT in the North Central covered by the study. The basis of distribution of the copies of the questionnaire was based on the population from each region which is in line with Krejcie and Morgan (1970). The details of the questionnaire distribution and response rate are shown in Table 3.2 below:

Table 3.2 Questionnaire Distribution / Response Rate of Micro & Small Enterprise Operator

	I	II	III	IV	V
States in Nort h Cent	**No. of Register ed SMEs**	**Percentage of the population (%)**	**No. of Q uestion n aire**	**No. of que stionna ires**	**Rate of Respo nse (%)**
Abuja FCT	6000	48.8	415	342	49.0
Kogi	3800	30.9	263	216	30.9
Niger	2500	20.3	172	142	20.1
	12300	**100**	**850**	**700**	**100**

Source: Researcher’s Analysis of Field Survey, 2017

As mentioned earlier, Table 3.2 shows the questionnaire distribution and response rate across the three regions in the North Central geopolitical zone. A total of 415 copies of the questionnaires, representing 48.8% of the total sample size were administered in Abuja, FCT. In Kogi State, a total of 263 copies of the questionnaire were distributed, representing 30.9% of the sample size. In Niger, 172 questionnaires representing 20.3% were distributed of the total sample size.

According to Saunders, Thornhill, & Lewis (2007), there are two methods of calculating a response rate: one is total number of responses divided by total number in the sample minus ineligible; the other active response rate, is total number of responses divided by the total number in the sample minus ineligible plus unreachable. Method one was used in this study. Out of the 415 copies of the questionnaire distributed in FCT area, 342 copies were adequately completed and returned. This represents 49.0% response rate. In Kogi State, 216 copies of the questionnaire were returned and that represents 30.9% response rate. In Niger state, 142 copies of the questionnaire were adequately completed and returned; these represent 20.1% response rate respectively.

In all, a total of 700 copies of the questionnaire were returned from the two States and the FCT out of 850 copies administered. This represents a total response rate of 82.4%. The high return rate achieved from the field survey can be attributed to the support received from the credit/field officers in the areas.

DATA ANALYSIS

Characteristics of Respondents

Table 4.1 Utilization of loan accessed from IFIs

RESPONSE	NO. OF RESPONDENTS	PERCENTAGE (%)
Invest	442	63.1
Educational Fees	26	3.71
Health bill	18	2.57
Build House	32	4.57
Farming	182	26
Total	**700**	**100**

Source: Field Survey, 2017.

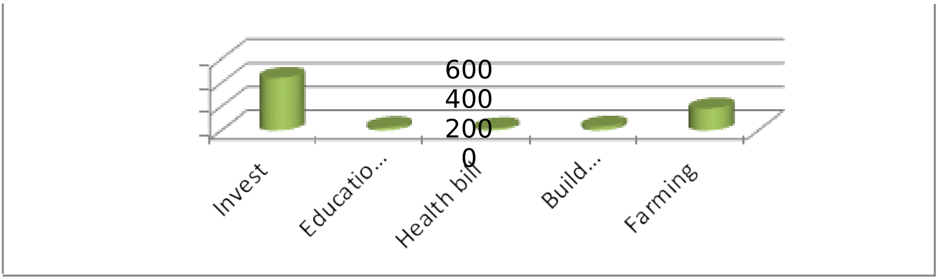

FIG 4.1: Utilization of loan accessed from IFIs

Source: Field Survey, 2017.

Table 4.6 shows that 442 respondents representing 63.1% used the loan for business purpose, 26 respondents representing 3.71% used it to pay school fees, 18 respondents representing 2.57% used it for health bills, 32 respondents representing 4.57% used the loan to build house while 182 respondents representing 26% used it for farming purpose. This shows that majority of respondents used the loan to investment in business.

Table: 4.2: Mode of Repayment for SMEs operators

REPAYMENT PLAN	**NO.**	**PERCENTAGE (%)**
YES	558	79.71
NO	142	20.29
Total	700	100

Source: Field Survey, 2017.

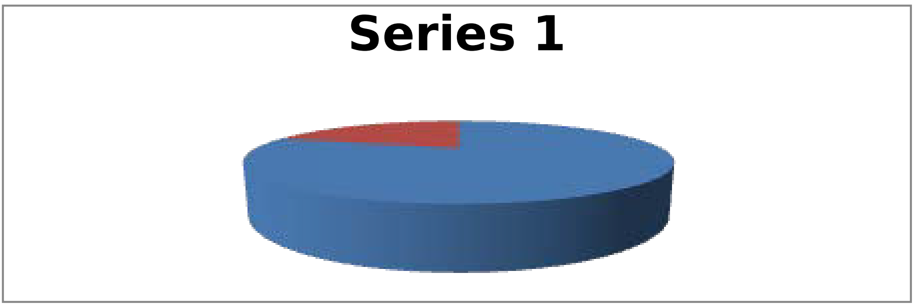

FIG 4.2: Mode of Repayment for SMEs operators

Source: Field Survey, 2017.

Table 4.4 shows the conveniences of payment by the respondents. 558 respondents representing (79.71%) agreed to convenience repayment while 142 respondents representing (20.29%) disagreed. This show that majority of the respondents agreed that IFI loan repayment is convenient.

Test of Hypothesis

Step One: Restatement of Hypothesis in Null Form

H_{o3}: Informal Financial Institutions has no significant relationship with Investment generation in north central states of Nigeria.

The binomial logit model is specified below:

$$Log\left(\frac{\;}{1-P}\right) = L = \beta_0 + \beta_1 \text{ INV} + \beta_2 \text{ REPL} + \mu \text{------------------------} (4.3)$$

Step Two: Presentation of Regression Results

The multiple regressions is to be estimated, where the coefficients $\beta_{1,}$ and $\beta_{2,}$ to be estimated, are used to measure the contribution of independent variables to dependent variable.

The binomial logit model is stated below:

$$Log\left(\frac{\;}{1-P}\right) = L = \beta_0 + \beta_1 \text{ INV} + \beta_2 \text{ REPL} + \mu$$

A binomial linear Lobit regression method of estimation was applied to our earlier outlined methods. The overall results are expressed below.

Dependent Variable: L
Method: ML - Binary Logit (Quadratic hill climbing)
Date: 03/27/17 Time: 21:25
Sample: 1 700
Included observations: 675
Convergenceachieved after 9 iterations
Covariance matrix computed using second derivatives

Variable	Coefficie nt	Std. Error	z-Statistic	Pro b.
C	-	1.496397	-	0.00
INV	0.7948	0.876195	0.90711	0.00
REPL	0.4173 57	0.902232	0.46258 3	0.00 31

McFadden R-squared	0.2363	Mean dependent	0.8120
S.D. dependent var	0.3919	S.E. of regression	0.2891
Akaike info criterion	0.6579	Sum squared resid	11.875
Schwarz criterion	0.7990	Log likelihood	42.017
Hannan-Quinn criter.	0.7152	Deviance	84.035
Restr. Deviance	143.99	Restr. log	71.995
LR statistic	59.955	Avg. log	0.2819
Prob(LR statistic)	0.0000 00		

Obs with Dep=0	198	Total obs	6
Obs with Dep=1	477		

Source: Author’s Computation, 2017

Table 4.3: Regression results-dependent variable, IFIs in alleviating poverty

IFIs in alleviating	O DD RATIO	S.E	P-VALUE
INV	2.21**	0.8762	0.0043
REPL	1.52**	0.9022	0.0031

*** 1% significance level, ** 5% significance level, * 10% significance level

$P = -1.437809 + 0.794806INV + 0.417357REPL$ $Z = (-0.960847)$ (0.907111) (0.462583)

$McFadden\ R^2 = 0.236385$

$S.E = 0.289188$

Step Three: Interpretation of Result

The regression above shows that the two explanatory variables (Investment and Repayment plan) are statistically significant at 5 percent. However, the result shows that the odds ratio of Investment against the IFIs chance of alleviate poverty is 2.21. This means that about 63 percent of respondents used the loan for business purpose hence, investment; while only 37 percent used the loan for personal use. The working hypothesis is that Investment has a significant positive effect on IFIs in alleviating poverty.
However, the result also shows that the odds ratio of repayment plan (REPL) against the IFIs chance of alleviating poverty is 1.52. This also means that about 80 percent of respondents agreed that the repayment plan of IFIs' loan was convenience; while only 20 percent disagreed. This is significant at 5 percent level of significance.

The finding agrees with the outcome of Yelwa et al. (2012) who noted that Informal Financial Market operators in Minna, Suleja, Bida and Kontagora have contributed largely to investment, job creation and income generation in the area. The result also agrees with the findings of Khandker, (2008) that every tekas lent to a woman in Bangladash for investment purpose generates extra 0.18 tekas to annual household expenditure.

The McFadden R-squared value of 0.236385 implies that about 24 percent of the change in the dependent variable was explained by the explanatory variables of the model. There is tendency to assume that the model has poor fit, but according to Byrne, A. Duflo, E. Glennerster, R. and Kinnan, C. (1996), the R^2 associated with linear model dominated by dummy variables commonly comes out poor in this manner.

Step Four: Decision

Based on the positive and significant relationship that exists between Investment and the chance of being able to alleviate poverty, we therefore reject the null hypothesis and **accept** the alternative hypothesis meaning that there is significant contribution of IFIs in investment generation in north central states-Nigeria.

CONCLUSION AND RECOMMENDATIONS

The findings revealed that informal financial institutions are an integral part of rural economic life and an alternative source of credit for rural people. Their existence in the north central states-Nigeria has contributed significantly towards poverty reduction through the disbursement of micro loans to their members for productive investment. Given the failure of most Nigerian government rural financial intervention programmes, the researchers therefore recommended that there is the need for the government to utilize Informal Financial Institutions in its poverty reduction programmes, since about 75 percent of the Small and Medium scale Enterprises (SMEs) could assess credit for investment through them. This will go a long way in promoting inclusive growth in the country.

REFERENCES

Aliyu A. (2012), Implementation progress report, background, structure achievement and problems, A paper presented at a one day special presidential retreat for permanent secretaries.

Allbusiness.com, (2010). Nigeria Economy. [Online] Available

Ariyo, S.O., (2010). Determining the poor against the background of local situation and circumstances. A Paper Presented at Organizational Workshop of National Poverty Eradication Programme at Benue Hotel Makurdi, Nigeria

Aryeetey, E., & Udry, C. (2007), "The Characteristics of Informal Financial Markets in Sub-Saharan Africa", Journal of African Economies, Supplement Vol. 6 (1), 1997: 161–203

Berry, J. S., Manchflower D.G and Meyer S.O. (2012), "Self employment in OECD countries, Labour Economics" VOL.7, 471-505.

Berkor, M. (2010), Microfinance: An Emerging Market within the Emerging Markets. Washington DC, Inter-American Development Bank.

Byrne, A. Duflo, E. Glennerster, R. and Kinnan, C. (2006) "The Miracle of Microfinance? Evidence from a Randomised Evaluation" Department of Economics, Massachusetts Institute of Technology (MIT) Working Paper, May.

CBN, (2005) Annual Report and Statement of Account: Central Bank of Nigeria, Abuja.

Dunn, A, & Archucle, R. (2011) Financial System and Development; what role for formal and informal sector? Paris, OECD.

European Union, (2013). Human Development Reports, CIA World Factbook; World Bank, pages 1-2; December 2003.

FAO, (2009). The survey handbook, Thousand Oaks, CA: Sage Publications

Fowowe, B.and Abidoye, O. (2011); “policy framework and linkages to sources of finance, market opportunities and technical support”; Abuja journal of business

Frank, A. (2010), Client Exist Surveys: A Tool for Understanding Client Drop-out. Journal of Microfinance 2(1)

Geda, J. A., Newbold, J. P and Whitford, D. T. (2014). Predicting Bankruptcy: If Cash Flow's Not the Bottom Line, What Is It?. Financial Analysts Journal, 41(5), 47- 56.

Gulong, L.K. (2012). Frontiers of Entrepreneurship Research”. Retrieved on 18th February, 2016 from the website: www.babson.edu/entrep/fer/papers

Ifedulova, I. (2013), “Analysis of credit on SMEs development” European Union Publications.

IFAD (2001), Poverty Reduction through Enhance Access to Financial Service: Case study of Botswana. Kenya and Namibia. Occasional paper No. 010/2001.

Irobi, N.C. (2008), Microfinance and Poverty Alleviation: A case study of Obazu Progressive Women Association Mbieri, Imo State- Nigeria. Uppsala: Department of Economics

Khandker, S. (2005),” Micro-finance and Poverty: Evidence Using Panel Data from Bangladesh”. World Bank Economic Review

Krejcie, J. and Morgan, P. (1970), “Developing Sample Size for Research Activities”, Education and Psychological Measurement, H30, pp. 607-610

Mckinnon, R.I. (1973): Money and Capital in Economic Development”. Washington D.C.; Institution.

McElvey, O., and Zavoina, J., (1969). The Financial Performance of Non-farm Microenterprises in Ghana. World Development, 36(12), 2733–2762.

Mwakapui, S. (2012). The Impact of Microcredit Programs on Self-Employment Profits: Do Noncredit Program Aspects Matter? The Review of Economics and Statistics, 84(1), 93-115.

Nissanke, M.K. and E. Aryeetey, (2013), Financial Integration and Development. Liberalization and Reform in Sub-Saharan Africa, Routledge, London

Obadan, M.I. (2009a) "Analytical Framework for poverty Reduction: Issue of Economic Growth versus Other Strategies", Proceedings of the 1996 Annual Conference of the Nigeria Economic Society (Ibadan: NES).

Obadan, M. I. (2014) "Poverty in Nigeria: Characteristics, Alleviation Strategies and Programmes", NCEMA Analysis Series, Vol. 2, No. 2.

Okezie, A. (2009) "Isusu Groups and their Performance in Mobilizing Credits for Micro Businesses" Nigeria Journal of Economics, 49 (2), 112-148

Olaitan, J. (2011). The Nigerian Maladapted Financial Systems: Reforming Tasks and Development Dilema, CIBN Press Ltd, Lagos, 229-342.

Osuntogun O. I and Adeyemo, P. O. (2015). Microcredit and microenterprise development: An analysis of some rural based enterprises in Nigeria. Nigeria Journal of Economics and Social Studies, 49(1), 95 – 113.

Osuagwu, C. (2012) Rotating Saving and Credit Associations in Jamaica: Some Empirical Findings on Partner. Social and Economic Studies 45(2&3): 195– 224.

Patrick, A; Leonard S; Patricia M.Y and Ernest T; (1996), "Microfinance, rural
livelihoods, and women's empowerment in Uganda" African Studies Centre Research Report 85 / 1996

Rama, M. (2013) Money, Interest and Banking in Economic Development. John Hopkins University Press: Baltimore.

Robinson, M. (2001), The Microfinance Revolution: Sustainable Finance for the Poor. World Bank, Washington

Saunder, J; Thornhill, D. and Lewis, R (2007). The Characteristics and Strategies of High Growth SMEs. International Journal of Entrepreneurial Behaviour and Research, 1(3), 44-79

Senn, A.K. (2009). The Standard of Living. Cambridge, Cambridge University Press. The World Bank, (1992). Poverty Reduction Handbook. Washington D.C., U.S.A.

Shaw, E.S. (1973): “Financial Deepening in Economic Development” New York: Oxford University Press.

Stevens, H. (2001). "New Business Ventures and the Entrepreneur", Homewood, Irwin.

Streeten, P. (2008). Does rural location matter? The significance of a rural setting for small businesses. Journal of Developmental Entrepreneurship, 10(1), 49–63.

Tonge, A., Greer, L., Lawton, A. (2013). The Enron story: You can fool some of the people some of the time ---- Business Ethics: An European Review, 12/1, 4-22.

Umebali, F. N. (2012). Survey of Small and Medium Scale Industries and Their Potentials in Nigeria. Small and Medium Industries Equity Investment Scheme (SMIEIS) Seminar. CBN Training Centre, Lagos.

Yaron, I; Woller, G. and Parsons, R. (2008). Assessing the community economic impact of microfinance Institutions. Journal of Developmental Entrepreneurship, 7, 133-150.

Yelwa, M., Hussainat S. and Mohammed P. (2012), Informal Financial Sector and Financing of Small and Medium scale Enterprises (SMEs) in Nigeria.

Zeller, S. and Sharma, H. (1988) “The Micro and Small Enterprises Sector in Ethiopia: An over view” in W. Gebeyehu and D. Assefa. (eds), The Role of Micro and Small Enterprises in the Economic Development of Ethiopia. Addis Ababa: FEMSEDA