What Matters in Enterprise's Access to Microcredit?

Gabriel S. Umoh*

. Abstract: This paper investigates factors, external and internal to enterprises, which affect their participation in credit market. Using data from 35 firms and 20 credit institutions collected through structured questionnaire, results reveal that more firms obtain loan from informal sources, and mqny do not apply for loan from formal institutions due to inadequate collateral, difficult processing procedures and high interest rate. Probit analysis indicates that income and educational level of firm owners and value of initial capital reduce the likelihood of firm's demand for credit. Credit institutions lending policies account for 81% (adjusted $R^2 = 0.81$) of the amount of loan advanced by institutions.

INTRODUCTION

Development in many growing economies depends on adequate investment which is expected to provide the fuel to drive the process through stages of growth. However, accumulation of capital (income, etc.), among others, are necessary for growth and consequently development. Unfortunately, in many developing nations (including Nigeria), the low level of income and savings, especially, among rural inhabitants, considerably limit the availability of adequate equity capital for fmancing investment, particularly, small-scale enterprises (Aryeetey, 1996). This problem stems partly from inadequatefunds from informal credit sources [rotating savings and credit association, (ROSCAs), money lenders, friends and relations]; unwillingness of the commercial banks to lend to micro-enterprises, particularly, agriculture due to their perceived risky nature and related high cost of transactions (Oshuntogun, 1973; Oshuntogun and Oludimu, 1981; Udry, 1994). Commercial banks have also failed to cater for the credit needs of micro-enterprises due to their lending terms and conditions. They require collateral which the small scale entrepreneurs find difficult to provide, prefer handling large loans than the small ones needed by the micro-entrepreneurs, and their loan

application procedures are too complex for poor small-scale entrepreneurs (Olomola, 1998). Therefore, the problem of providing production credit to micro-enterprises has taken up substantial financial and human resources in most developing countries.

In Nigeria, government responded to the financial demand of the small-scale enterprises by instituting micro-credit institutions/programmes and schemes. In addition to government efforts, non-governmental organisations (NGOs) have also tried to fill the niche in financial intermediation by expanding development finance flows to micro-enterprises for investment and working capital. Several Nigerian NGOs have adopted traditional practices and created dynamic community development finance programmes. They have also become increasingly important in assisting local groups to gain access to credit (Trager and Osinulu, 1990; Olawoye, 1991; Odejide, 1997). Due to the expected role of NGOs in micro-credit delivery, there has been significant flow of international funds channeled through them - approximately US$7 billion or the equivalent of 16% of total bilateral aid flows in 1990 (Clark, 1991).

In spite of the involvement of both governmental and non-governmental organisations in micro-credit delivery in Nigeria, there is yet to be empirical evidence that the credit needs of the entrepreneurs have been met. What factors determine accessibility of these institutions to

* Department of Agricultural Economics & Extension
University of Uyo, Nigeria

entrepreneurs? Most empirical literature on credit constraints focus on the consequences of credit constraint in a standard neo-classical investment model. However, the question is rarely asked whether there is direct evidence on the failure to participate in credit market on the part of the firms in question or more generally that the problems are indeed linked with problems in credit market functioning. The objectives of this paper therefore are:

i). To identify the lending activities/policies of the credit institutions/schemes which influence their accessibility by micro-entrepreneurs; and

ii).To examine the characteristics of micro-enterprises that determine their access to the above credit institutions and or schemes.

The paper is discussed in sections. The section that follows presents a brief review of micro-credit institutions and programmes in Nigeria. Section three provides the theoretical framework and literature review while section four is the methodology. The results are presented and discussed in section five and section six concludes the paper.

MICRO-CREDIT INSTITUTIONS IN NIGERIA[1]

As in most other countries, the fmancial system in Nigeria is dualised. There is the formal and informal financial system. The informal financial sector comprises those financial activities that operate outside the regulatory ambit of the monetary authorities and are thus usually unrecorded or under-reported in national statistics. These include the activities of savings and credit associations, money lenders, traders, friends and relatives, and daily collectors (mobile bankers). Formal financial markets on the other hand, are usually owned by the public sector and donor-supported. Their operations are usually documented with terms agreement clearly specified (Soyibo, *et al*, 1999). The formal financial instit:uctions are subject to the provisions of the banking laws and other specific regulations governing the financial sector. They include the Central Bank, public and private sector banks, specialized financial institutions such as savings banks and credit cooperatives as well as the capital markets. Among the formal and informal financial institutions are those owned by. the government (government finance institutions) while there are also registered non-governmental finance institutions performing similar function as the latter. Some of the institutions (particularly informal institutions) address the needs of only small-scale or micro enterprises. Others, particularly the commercial banks are concerned with the financial needs of large- and medium-scale entrepreneurs.

Official efforts to develop micro-credit in Nigeria did not start until the 1970s. Prior to this period, activities in this regard where coordinated by the regions. For instance, the Western Regional Government had agricultural credit cooperatives which advanced loans to cocoa, rice, maize and other crop producers and marketers.

It operated an "on-lending" scheme where loans were disbursed to the groups at 7.5% interest rate for onward disbursement to individuals at 15% interest to defray administrative costs (Miller, 1974). The period 1970-80 witnessed concerted national effort at developing the micro-finance sector of the economy. There were multiple policies, programmes/schemes and emergence of institutions. These schemes and programs are discussed below.

The Nigerian Agricultural Cooperative and Rural Development Bank (NACRBD)

The Nigerian Agricultural cooperative Bank (NACB) which was merged with the peoples Bank of Nigeria in 200AD and renamed Nigerian

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[1] Micro credit here is defined in terms of the smallness of the amount loaned to beneficiaries and not in tenns-cf innovativeness of their operations as cun-ently considered in the literature.

Agricultural Cooperative and Rural Development Bank (NACRBD) was established in 1973. Its objectives include among others granting loans and advances for agricultural production, assisting entrepreneurs in agriculture and agro-based enterprises. It has such schemes as on-lending, direct lending, smallholder direct loan scheme, a special smallholder loan scheme, workers and marketing loans. The smallholder direct loan scheme was designed to reach farmers directly. It includes loan activities with a ceiling not in excess of N. 25,000. The Bank also instituted a revolving loan fund specifically for rural women income generatin.g activities.

The Rural Banking Scheme

Due to over-concentration of banks in urban areas to the neglect of the rural areas, the government in 1977 directed commercial banks to open branches in the rural areas to mobilise funds and also extend credit to rural dwellers. Not less than 45% of the savings mobilised within the rural domain was to be loaned out to rural entrepreneurs. This was raised to above 50% in 1992. By 1994, the number of commercial banks rural branches was 746, total depositwas N. 8807.1 million while loans amounted to N8659.3 million (CBN,1996).

Agricultural Credit Guarantee Scheme (ACGS)

The ACGS, established in 1977 by the Federal Government was to encourage (by minimizing risk) bank lending to all potential or actual participants in "meaningful" agriculture. Under the scheme, the Central Bank of Nigeria guarantees up to 75% of the value of the principal and interest on loans granted to farmers by a commercial bank. In addition to the guarantee provision of the ACGS, the government also extends graduated tax-free allowance to commercial banks on interest earned from agricultural loans. From 1980s to date, several micro credit

programmes and schemes have also been introduced in Nigeria. These include the People's Bank of Njgeria (PBN), the Nigerian Agricultural Insurance Company (NAIC), the Community Bank (CB), and the Family Economic Advancement Programme (FEAP).

The People's Bank of Nigeria (PBN)

The PBN was established by the Federal Government of Nigeria in 1989 as a specialised development bank for the provision of financial services to the less privileged members of the Nigerian society. With its policy of providing banking services to the remote area of the country, the bank draws its customers primarily from the informal sector. The PBN had 745 branches and N. 2834.6 million deposits by 1995. However, the PBN was merged with the Nigerian Agricultural and Cooperative Bank (NACB) and re-christened Nigerian Agricultural and Rural Development Bank (NACRDB) in 2000 AD.

The Community Bank (CB)

To correct the anomalies of the specialised banks/ financial institutions which tended to ignore the rural/grassroot communities the Nigerian government, in 1990, encouraged communities to set up community banks in their localities. The community banks were to promote rural development through provision of financial and banking services, inculcating the habit of banking in rural people. They were also established to foster the spirit of community ownership, and generate credit within the communities. As at 1997, 1,368 CBs had been established. At the same period, 282 of them had their licenses withdrawn because they could not perform their function.

The Family Economic Advancement Programme (FEAP)

FEAP was established in 1997 as a poverty reduction programme by the Federal Govern-

ment. Its aim was to be achieved through the provision of loans directly to the people at the ward level, to enable them to set up and run cottage enterprises. Although the Federal Government provided the initial funds for the programme, subsequent funding was to involve the participation of states, local governments, the private sector, international agencies and organisations as well as ploughed back income earned by the FEAP. As at 1998, N. 5,176,809 had been allocated to FEAP while a N. 3,326,675 was disbursed. In.1999, the Board of FEAP was dissolved and FEAP merged with the Ministry of Agriculture and Natural Resources.

Nigerian Agricultural Insurance Scheme (NAIC)

The Nigerian Agricultural Insurance Scheme started in 1987 and is operated by the Nigerian Agricultural Insurance Company (NAIC). The scheme is designed to offer protection to participation from the effect of natural disasters. Farming activities under NAIC cover include maize and rice (crop), poultry and cattle (Livestock), t angible f ixed a ssets i ncluding machinery and equipment; farmers, farm labour/ employees and their dependants. The insurance cover is compulsory for farmers that benefit from any form of credit scheme operated by approved lending institutions or agencies for agricultural items covered under the scheme. Most transactions are made by or through the lending institutions. For these reasons, most NAIS clients are from commercial banks under the Agricultural Credit Guarantee Scheme, Agricultural Loans Board of the States M inistry of Agriculture, Nigeria Agricultural a nd Rural Development Bank, other government supported agricultural schemes, and few self-finance farmers.

Non-governmental Organizations

Savings and credit mobilisation has not been the concern of only the government or profit making enterprises (e.g. b anks). Non-governmental organisations (NGOs) also occupy a niche in financial intermediation in the country. Several Nigerian NGOs have adopted traditional practices and created dynamic community development finance programmes that complement the efforts of other fmancial institutions. The number of registered NGOs has grown from only 20 in the 1950s, up to 224 in 1995 (Table1). NGOs Like the Farmers Development Union (FADU) and the C ountry Women. Association of N igeria (COWAN) now have an almost national spread of micro-credit programmes while others such as Exchange Centre (DEC), Lift-Above Poverty Organization (LAPO) and Women's Health and Economic Development Association (WHEDA) cover a number of states within regions where they have comparative advantage. Some of the NGOs have become increasingly important in assisting local groups to gain access to credit and information (Trager and Osinulu, 1990; Olawoye, 1991)

It is evident from the foregoing that the micro-credit system in Nigeria has been very dynamic from a period of lack of government intervention to a period of active government involvement. It has also witnessed policy reversals, changes in the structure and approach and the active participation of non-governmental organisations (NGOs) with the active support of donor agencies. A variety of products are also offered by different operators in the micro-credit area. The question that remains is: are they effectively serving their purposes?

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

Analysis of entrepreneurs participation in credit markets has its base in the utility theory. In a given economic environment, an economic entity or an entrepreneur or household is assumed to make decisions so a s to m aximise its u tility. An entrepreneur, therefore, can be assumed to make rational choices in order to maximise his utility.

In the credit markets, different types of credit sources exist. However, the entrepreneur will only choose the one that maximises his utility under given conditions. If the credit sources are categorised into two types from which the entrepreneurs have to choose, then this can be considered as choice alternatives facing them. The choice to use credit and which source to use is a function of the perceived utility derivable from the source of choice which in turn depends on a number of factors. First, if there is constrained credit supply this will result in either loan size rationing where the size of the loan demanded exceeds the amount of loan supplied, or loan quantity rationing where potential borrowers are unable to get credit or both.

From the credit market perspective, the pioneering work of Stiglitz and Weiss (1981) explains credit rationing in credit markets, it points out that interest rates charged by a credit institution have a dual role of selecting potential borrowers (leading to adverse selection) and affecting the actions of borrowers (leading to the incentive effect). Lenders would like to identify borrowers most likely to repay their loans because of the expectation of the financial institutions that expected returns depend on the probability to repay (this leads to adverse selection). However, in an attempt to identify borrowers with high probability of repayment, financial institutions are likely to employ the interest rates that an entrepreneur is willing to pay as screening device. Borrowers willing to pay high interest rates may on the average be worse risks, thus as interest rate increases, the riskiness of those who borrow increases, reducing the financial institutions profitability. On the other hand, the incentive effect occurs because as interest rate and other terms of contract change, the behaviour of borrowers is likely to change since it affects the returns on their projects. As the financial institution is not able to control all actions of borrowers due to imperfect and costly information, it will formulate the terms of the loan contract to induce borrowers take actions in favour of the financial institution and attract low risk borrowers. This will result in an equilibrium rate of interest of which the demand for credit exceeds supply. The amount of loan, collateral and other terms of contract also affect the behaviour of the customers, the distribution as well as the returns to the financial institutions, these lead to credit rationing in the credit markets.

Empirical research on the use of credit by entrepreneurs tends to suggest that although it is not obvious that demand for credit far outweighs the supply, there are significant obstacles to the transformation of potential demand into revealed demand (Aryeetey, 1996). The absence of supply creates a lake of demand expressed in low revealed demand. Also, due to market failure in the credit market, the transaction costs involved in obtaining credit is considered greater than the utility, making entrepreneurs switch profits between activities as a way of financing working capital.

A study of cooperative movement and other credit institutions in Kenya (Atieno, 1994) shows that the lending policies employed, do not ensure efficient and profitable use of credit funds by farmers, and also result in a disparity between credit demand and supply.

According to Schmidt and Kropp (1987), access to financial services by small holders is known to be one of the factors limiting their benefits from credit facilities. In most cases, the access problem, particularly among financial institutions is one created by the institutions mainly through their lending policies. This is reflected in the form of complicated application procedures, prescribed minimum loan amounts and restricting credit for specific purposes. Schmidt and Kropp further argued that the type of financial institution and its policy often will determine the access problem. Where credit duration, terms of payment, required security and the provision of supplementary services do not fit the needs of the target group, potential borrowers will not

apply for credit even where it exists, and when they do, they will be denied access. Atieno's (1998) study of credit provision by financial institutions, non-governmental organisations, multilateral organisation, business associations and rotating savings and .credit associations in Kenya confirm that many financial institutions, especially, commercial banks rarely lend to small-scale enterprises due to the legal requirements for security.

Oluwasanmi and Alao (1964) observed that most beneficiaries were not happy at the procedures for granting loans in Nigeria. They were agrieved that despite stipulations in the guidelines that it should not be greater than 60 days before approval, some loan approvals still span over six months to one year after application.

Certainly, characteristics internal to the entrepreneur or enterprise can influence accessibility to credit. Bigsten *et al* (2000) identify them to include characteristics of owner or manager (this may be socio-economic characteristic), location, firm size, firm age, legal status and ownership structure. John and Adam (1999) also employed these firms characteristics in formulating a binary model to determine firms accessibility to credit in Uganda. Johnson (1981) noted that domestic credits have over the years occupied a special place in the overall African economic policy. Since it was seen to be in "short supply" welfare economics of credits to agricultural sector should be concerned with four fundamental issues like comparative advantage of institutions that supply the credits to the sector and the efficiency with which the credit is allocated among users. Considering credit as one of the inputs in the production function and that loanable funds have opportunity costs, he emphasised that a number of approaches will enhance credit supplies, especially to agricultural sector. These include evolution of specialised credit institutions, branch banking development, development of substitutes to traditional collateral assets, assurance of appropriate interest rate policy as well as selective credit control.

Recent studies on informal finance in Africa have identified the informal sector as a veritable source of credit for production and consumption both in the urban and rural areas (Tapsoba, 1981; Seibel, 1986; Hyuha *et al*, 1993 ;). Evidence from these studies point to the fact that the continued relevance of the sector depends on simplicity of lending procedures, the speed of operation and liberal conditions including waiver of collateral requirement.

METHOLOGY

Data Type, Sources and Collection Procedure

This study employed both primary and secondary data. The primary data was collected from individual entrepreneurs who receive credit from both NGOs and government credit institutions as well as those who do not. Well-structured questionnaires were used in collecting the primary data. The data was collected in Akwa Ibom State, Nigeria. The state has several micro-entrepreneurs and micro-credit institutions. A random selection of 35 entrepreneurs and 20 credit institutions was carried out. The institutions included governmental and non-governmental institutions involved in credit delivery. Secondary data was obtained from the records of the institutions.

Econometric Model

The decision of a micro-entrepreneur or household to use credit facilities and which credit sources to use, can be considered as a dichotomous choice between two mutually exclusive alternatives. This decision can be predicted using a qualitative response model, the discrete or binary model.

In specifying a binary decision model, a random variable, Y (dependent variable), takes the value of 1 if the event occurs and 0 if otherwise. In addition, the probability of an event

occurring depends on a vector of independent variables X_1, and a vector of unknown parameters v_i.

Due to the nature of the dependent variable, which in this study include borrowers as well as non-borrowers from two sources of credit (NGOs and government credit institutions), a probit model will be used to obtain efficient and consistent estimates. It is derived from the following relationship: The probability of an event occurring depends on an unobserved utility index I, which is determined by a number of independent variables (X_i) (Atieno, 1998). This is presented thus:

$$I_1 = b_0 + b_i X_i \tag{1}$$

The relationship between the unobserved utility index and the entrepreneur's decision is as follows:

Let $Y_i = 1$ if the entrepreneur uses credit from either NGOs or government financial institution

$Y_i = 0$ if otherwise.

We assume that for each enterprise, there is a minimum level of I, given as 1* below which the event will not occur, then:

$Y_i = 1$ if $I^* \geq 1$ and
$Y_i = 0$ if $1^* < 1$ $\tag{2}$

The only observable data are on Yi and Xi, therefore, the coefficient b_i will be estimated as follows:

$$1 = b_0 + b_i X_i + \mu_i \tag{3}$$

It follows that

$Y_i = b_0 + b_i X_i + \mu_i$ if $1 \geq 1^*$ $\tag{4}$
$Y_i = 0$ otherwise

The mathematical model to be employed is that specified by Maddala (1991) It is given as:
$Y_i = b_i X_i + \mu_i$ if $b_i X_i + \mu_i < O$ $\tag{5}$

$Y_i = 0$ otherwise

This can be written as

$$Y_i = b_0 + b_i X_i + \mu_i \tag{6}$$

Where $E(:_i) = O$.

Equation (5) states that the probability that the event Y_i will occur depends on a number of factors represented by X_i. Yi is defined as the entrepreneur's decision variable taking the values 1 and O._Given the type of letter at hand, the dependent variable is binary, thus, the parameter bi was estimated using the . probit method. The estimated function then becomes: :-
$$E(Y_i) = b_0 + b_i X_i + \mu_i \tag{7}$$

With both 0 and 1 values of Y_i used, and
$Y_i =$ the decision to use credit or not (from NGO or government credit institution, with
$Y_i = 1$ if credit is used,
$Y_i = 0$ if otherwise;
$b_i =$ the parameter to be estimated showing the probability that credit will be used,
$X_i =$ the vector of explanatory variables (namely, firm size; age of enterprise; type of enterprise; level of sales; value of initial capitals; income level, educational level, and household size of entrepreneur)
$\mu_i =$ The disturbance term.

The function therefore, estimates the probability that Y_i will take the value of one or zero given the predictor variables. We assume that entrepreneur's decision to use credit, access to credit facilities depends on the lending policies, and other factors internal to the individual enterprise. Thus, two functions are specified. The credit supply and demand functions. The demand function captures those factors internal to the enterprise, which affects it demand for credit.

Controls for transactions and opportunity of funds are included in the probit model. These are variables describing the legal status and ownership structure. Firm characteristics are

included to control for heterogeneity in credit demand. They can be seen as proxies for transactions costs in applying for loans, access to different sources of collateral and alternative sources of fmance. Dummies describing the size of the fmn are entered as well, effectively asking whether the other characteristics included sufficiently proxy for heterogeneity correlated to firm size.

Firms that have a demand for credit may either receive a loan or stay frustrated (either by being refused or by expecting to be refused a loan). Agency and enforcement problems are some of the reasons for credit to be refused and a cause of market imperfections. Ownership structure and the legal status of flfInS are bound to affect the credit institutions monitoring costs; they will affect the enforcement possibilities. Firm's age, and owners characteristics are included. They can facilitate monitoring or provide collateral substitutes.

The supply contains variables that determine the credit supply of an institution. The function is in the double log form. The explicit form of the function is:

$$L_nLA_i = b_0 + b_1L_nIR_i + b_2L_nCO_i +$$
$$b_3 L_nRR_i + b_4L_nRP_i + b_5L_nPP_i +$$
$$b_6L_nMA_i + b_7L_nMB_i + \mu_i \qquad (8)$$

Where

LA_i = Loan amount advanced by ith credit institution;

IR_i = Interest rate charged by ith institution;

CO_i = Collateral (Dummy: 1 = if collateral is required 0 = otherwise); RRj K Repayment rate required by ith institution;

RP_i = Repayment period allowed by ith institution;

PP_i = Loan processing period by ith institution;

MA_i = Maximum loan amount allowed by ith institution;

MB_i = Minimum balance allowed by ith institution;

μ_i = Stochastic error term to be estimated.

When running the data, we ignore the possible implications of the differences in the operational policies of the credit institutions. We assume that all the institutions extend loan on less stringentteffils compared to the c ommercial banks.

RESULTS

Firm's Characteristics and Credit Market

Evidence from empirical literature tends to suggest that besides credit institution's lending policies, firms characteristics may also be instrumental to firm's access or inaccess to credit (Bigsten *et. al.*, 2000; Umoh, 2001). In order to verify this position in our study, data on firm's characteristics and the type of credit institutions patronized were collected, firm's characteristics considered were the legal status of firm, nature of ownership of firm, firm size and age. The result (Table 1) reveal that the majority of the firms (61.3%) patronize informal credit sources, 26.7% combine both formal and informal institutions as their sources of credit and only 10% use only official credit sources. This may breed small size firms as it is abundantly documented in the literature that credit from informal sources are scarcely adequate for large scale business operations (Samuel, 1995; Umoh, 2001).

On the legal status of firms, sole proprietorship appears the most common (78.5% of the firms) showing that partnership is not a common business arrangement in the study area. Again, state private joint ownership firms were not among those studied. This does not mean that this is not obtainable at all in the study area. Actually there are a few government firms with core investor participation. About 76% of the firms employ less than 5 persons (small size) while the majority existed for not more than 10 years.

The characteristics of the firms tend to point to the existence of small sized, individually and privately-owned young firms. These characteristics no doubt can affect accessibility of the firms

Table 1: *Firm Characteristics and Credit Market*

Firm Characteristics	Credit Market Patronized			
	Formal	Informal	Both	All
1. Legal Status ofFiml				
Sole Proprietorship	5.3	47.9	25.3	78.5
Partnershi	4.7	13.4	3.4	21.5
	10	61.3	28.7	100
2. Nature of ownership of firm				
Private ownership	10	61.3	28.7	1 0 0
State-private joint ownership	0	0	0	0
3. Firm size (number of employees)				
1-5	2.6	6.5	14.2	23.3
5+	6.4	23.5	45.8	75.7
	10	61.3	28.7	100
4. Firm's Age (ycars)				
1-5	2.0	21.7	5.3	29
6-10	2.4	24.1	15.8	42.3
More than 10	5.6	15.5	7.6	28.7
	10	61.3	28.7	100

Source: Field data 2001

to credit. As a test case, we consider flfIn size and credit market participation. Following Bigsten *et al* (2000). We classify firms employing 1-5 persons as micro and 6 -25 as small. No firms among our sample employed more than 26 to qualify for large scale status. Of the 30% of the firms sampled which received loan the previous year, 27.4% are micro. Also, of the 50 firms studied, 61.3% are with informal sector and 49.5% are micro, only 10% are with formal financial institutions. More small firms are with formal institutions while m ore micro f irms are with informal institutions.

Credit Market Participation

Table 3, gives the distribution of firms applying for loans in the previous year. It reveals that 50% of the firms did not apply for loan. 20% applied and did not receive loan while only 30% applied and received a loan. That up to half of the firms sampled refused to apply for loan reflect the attitude of firms to credit in the study area. The large number of firms not applying does not mean that they are not credit constrained. Their refusal to apply for loan may be necessitated by the loan

conditions or their perception of the loan. For instance, they may not want to incur the transaction costs if they suspect they will not obtain any loans. 50% of the flnns are "unconstrained" in the credit market. They did not wish to obtain loan or were unable to obtain a loan. Those who applied and were refused are considered constrained. This in1plies potential "loan rationing".

Altogether, 70% of the firms did not receive loan. Given the various credit programmes by government, etc, this proportion is reasonably large as to raise concern. The situation may not be unconnected with the difficulties in obtaining credit.

Table 2: *Credit Market Partici ation and Firm Size*

	Micro (1-5)	Small (6-25)	All
Received Loan last year?	27.4	2.6	30
% firms with informal sector	49.5.	11.8	61.3
% of firms providing collateral (formal loans)	3.6	6.4	10.0
% of firms with both an informal sector	16.2	12.5	28.7

Source: Field data, 2001.

Table 3: *Formal Credit Participation (n = 50)*

Did not apply for Loan	50%
Applied and did not receive	20%
Applied and received and Loan	30%
	100%

Source: Field Data, 2001

Table 4 gives the distribution of why firms did not apply for loans in the previous year. Very few firms (10%) reported that they did not apply because they thought they would not get a loan. The main reason why they did not apply for loan seems to be inadequate collateral. This is followed by difficult loan processing and interest rate. The results obtained tend to support recent findings by Bigsten *et al* (2000) in their study of credit constraints in manufacturing enterprises in Africa. Even though very few large firms reported that they did not apply because they thought they would not get a loan, collateral was rarely cited as a reason. However, debt and difficulties with application process were relatively more important for the smaller firms. Collateral security is an important demand for formal credit in Nigeria. Similarly, interest rate is equally high reaching on all time high of over 30% in 2001.

These results seem to suggest that the constraints to small scale operator's access to credit have not been addressed, credit programmes and policies notwithstanding. The situation deserves some concern because, in the first place, government intervention in credit market was to reduce these constraints and make funds available to small scale operators who were considered rationed out of formal (particularly commercial bank), credit market. One may conclude from this that the small scale entrepreneurs are yet to have adequate access to credit.

Table 5 gives the results of the estimation using probit model. First, looking at the probability that a firm will demand credit, we find that level of sales, type of enterprise, value of initial capital and income level significantly increase the

likelihood of firms demanding credit. The first three are significant at 5% level while the third (income level of entrepreneur) is significant at 1% level. Expectedly, the value of initial capital and income and educational level of the entrepreneur are inversely related to the demand for credit. This means that a higher initial capital and entrepreneur's income increase in any of these variables, will reduce the likelihood of the firms demanding credit. An increase in the value of initial capital by 10% will likely reduce credit demand by 0.2. In the same vein an increase in the firm owner's income by 10% will reduce firm demand for credit by 0.6. the coefficients of household size, firm size and age of firms are not significantly different from zero. In other words, controlling for other firm and owners characteristics the demand for, or use of credit, is not likely to be affected by these factors.

Table 4: *Why Firms Did not Apply for Loan*

Inadequate collateral	30%
Don't want to incur debt	15%
Process too difficult	25%
Didn't think I'd get one	10%
Interest rate too high	20%
	100%

Source: Field Data, 2001.

Overall, the model is significant at 1% level (A^2 = 20440.939). The supply side of the credit situation was investigated by looking at what determines the amount of loan advanced by credit institutions. Our concern was on lending policies of the credit institutions. Results presented in table 6 reveal that coefficients of interest rate, collateral and minimum balance requirement are significantly different from zero. Interest rate is significant at 5% while collateral and minimum balance requirements are significant at 1% level. The three variables are inversely related to the volume of loan advanced by the institutions. The coefficient of repayment rate, repayment period

and loan processing period are not significantly different from zero. It is to be noted that although loan processing period is not significant and does not deserve further discussion, it is negatively signed. All factors considered account for about 81 % of the variations in the volume of loan advanced by the cred.it institution studied.

Table 5: Result from Probit Analysis

Parameters	Coefficient	Standard error	t-statistics
Household size	0.081	0.074	1.095
Level of sales	0.035	0.013	2.692**
Firm size	0.053	0.087	0.609
Age of enterprise	0.012	0.026	0.462
Type of enterprise	0.989	0.381	2.596**
Value of initial capital	-0.0201	0.010	-2.010**
Educational Level of entrepreneur	-0.022	0.032	0.687
Income level	-0.067	0.012	-5.583***
Constant	-2.107	0.673	-3.132***

Observations 35
$X^2(26) = 20440.39$ ***

*** Significant at 1 % level, ** significant at 5% level

Table 6: *Result from Regression Model (double log)*

Parameters	Coefficient	Standard Error	t-statistics
Interest rate	-1.040	0.443	-2.348**
Collateral	-2.354	0.342	-6.883***
Repayment rate	0.296	0.297	0.996
Repayment period	0.207	02.98	0.693
Loan processing period	-0.202	0.144	-1.404
.Maxilnunl credit	-0.142	0.096	-1.484
Minimum balance	-2.041	0.383	-5.334***
Constant term	15.420	2.302	6.700***

$R^2 = .807$
S.E. = .7320
F-value =12373***

*** significant at 1% level; ** significant at 5% level;
* significant 10% level.

CONCLUSION

We investigated those factors which influence access of small flnnS to micro credit Nigeria. To achieve our objective, we obtained data from 35 firms and 20 fmancial institutions including NGOs (excluding commercial banks) using structured questionnaire and the records of the institutions. This was to enable us investigate both factors internal to the frm as well as the credit institutions lending policies (the supply side).

We find that more firms obtain loan from informal sources and many firms did not apply for loans from formal credit institutions because of inadequate collateral, difficult loan processing procedure and high interest rate. Probit analysis shows that income level of firm-owner and the value of initial capital reduce the likelihood of firms demanding credit while the type of enterprise (private or private-government) and level of sales increase the likelihood of firms demanding credit. Regression .analysis reveals that interest rates, collateral and minimum balance requirements are inversely related to the volume of loan advanced by credit institutions. All the institutions' lending policies account for 81 % of the variation in loan amount advanced to firms.

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