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Determinants of Microfinance Sources by Micro and Small Enterprise (MSEs) Clusters in South-East Nigeria

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Abstract

The source of microfinance is important and at the centre of every enterprise survival, profitability and growth that can trigger achievement of the expected roles and objectives. The main thrust of this study, therefore, is to understand the determinants of the choice of microfinance sources and level of support from funds providers. The study employed multi-stage sampling technique in identifying clusters from three cities (Onitsha, Aba and Nnewi) of the South East, Nigeria and generated relevant data through instruments such as questionnaire, personal interviews and Focused Group Discussions (FGDs). Using logit regression, the study found that interest rate, repayment period, amount or volume of capital and proximity to enterprises as the major determinants of the choice of microfinance source used by MSEs in South East, Nigeria. The study concluded that microfinance providers should be located closer to MSEs' location for quicker response to their financing needs to the extent of taking advantage of social capital existing within the clusters as a possible cushion for the physical collaterals and documentations often requested for loan approvals. The study recommends that microfinance policy framework and interventions should encourage providers to locate closer to the enterprise clusters with the appropriate regulatory guarantee for operators.

Keywords

microfinance, Micro and Small Enterprises (MSEs), determinants, industrial cluster, South-East, Nigeria

1. Introduction

Micro and Small Enterprises (MSEs) have been referred to as the arm of the industry that could be used to reach out to relatively low scale investors and develop the home industries. The roles of micro enterprises cannot be overemphasized in economic development. Micro and Small Enterprises (MSEs) are globally acknowledged as a potentially critical economic sector. They contribute about 30 per cent of global Gross Domestic Product (GDP) and account for about 58 per cent of global working population (Kushnir, Mirmulstein, & Ramalho, 2010). They are numerically dominant, providing the majority of employment and are the prime sources of new jobs.

They play a critical role as safety net for the bulk of the population in developing economies including Nigeria. In addition, they provide amenable avenue for creating new jobs in the economy. From the cluster development programme in Eastern Nigeria, that is, administrative and infrastructure costs' survey of the manufacturing sector (Abia and Anambra States), prepared by Skoup and Company Ltd for the International Finance Corporation and the World Bank in February 2003, Nigeria envisions MSEs sector that can deliver maximum benefits of employment generation, wealth creation, poverty reduction and sustainable economic growth. Towards realizing this goal, the Nigeria's Vision 20:2020 advocates measures to enhance the ability of MSEs to compete effectively in local, regional and global markets, through increased productivity, greater technological efficiency and reduced cost of doing business. In this context, growth and competitiveness of MSEs are, therefore, the key objects of the national policy on MSEs. In the same vein, the national policy seeks to enhance MSEs' contribution to GDP and employment and realize its potentials as a principal determinant of the prospects for the growth and sustainability of Nigeria's non-oil economy.

Micro enterprises have been described as an engine of economic empowerment and growth. MSEs are not just job creators but creators of wealth in the society. While it has been argued that a small business can only make a minor contribution to the economy as a result of its size, many micro enterprises can make substantial contributions collectively. For example, according to data from the European Observatory (CBN 2008), SMEs employing up to 250 people accounted for 68 million jobs in the European Union in 1995. Again, available data from some African countries shows that in 2003, small enterprises in Kenya employed 3.2 million people, accounting for 18% of the national GDP. In Nigeria, according to Manufacturers Association of Nigeria (MAN), small enterprises are the backbone of the economy; they account for 95% of formal manufacturing activities and 70% of Industrial jobs.

Though lack of capacity, inadequate coordination and synergy, poor networking, isolation, lack of detailed articulation of stakeholders' roles in the sector operations and policy shortfalls have been identified as major problems of the sector, at the center of it all is lack of access to formal credits. According to CBN (2008), less than 5 per cent of total credits to the private sector were allocated to micro and small-scale enterprises. It is therefore evident that MSEs do not have adequate access to formal credit facilities and this situation had restricted the sector to informal financing through traditional credit supports like *Isusu*, trade credits, cooperative societies, market associations, Non-Governmental Organizations (NGOs), government grants and interventions, etc. The inadequacies in these forms of credit facilities like reliability volume, training, standards, spread and repayments have limited the performance of such enterprises and hence, their poor contributions to the economic growth and development of the industrial clusters in the South East and the nation as a whole.

The introduction of micro finance banks by CBN in 2005, associated microfinance institutions, microfinance institutions and development finance institutions have not bridged this gap of inequality in credit accessibility in Nigeria after a decade of their operations. It becomes imperative to evaluate the effectiveness of both the formal and informal sources of microfinance to Micro and Small Enterprises (MSEs), especially in the South East of Nigeria where majority of these MSEs abound. It is therefore believed that understanding these micro credit problems and providing practical solutions for them would be the right step towards making micro and small enterprises contribute effectively towards growth and development of the industrial cluster in South East, Nigeria and the nation as a whole, like their counterparts in other countries.

Can we authoritatively say that these interventions have resulted into some progress among these MSEs in the South-East Nigeria, following the various pronouncements by the governments? Among the group of people in South-Eastern Nigeria are the artisans, petty-traders, subsistence farmers, fishermen, traders, local textile producers, intra-city transporters, cobblers, etc. These people in the South East, Nigeria region are found within the industrial or enterprise clusters of Nnewi, Onitsha, Aba and other emerging locations in the region. Interestingly, these clusters have the advantage of proximity to several industrial raw materials which makes it possible to produce associated semi-finished or finished goods cheaply. Thus, this study was set to find what the determinants of where MSEs source their capital are and how effective these microfinance from both formal and informal sources affect the profitability of these MSEs. Also, the study tested a research hypothesis in a null form that says "There exist no significant determinants (i.e., amount, interest, extent of protocols including collateral availability, relationship with the provider) of the choice of microfinance sources by enterprise clusters in South East, Nigeria".

The study further helped to ascertain the contributions of various stakeholders, and their levels of commitment in terms of relationship and willingness in ensuring that the goals and objectives of the micro credit supports for the development of industrial and enterprise clusters in Nigeria, particularly in the South East are actualized. Informal micro financing sources focused in the study include: Esusu; Self Help Group Contribution (SHGC); Trust Fund Model (TFM); Family and friends; and microfinance from Non-Governmental Organizations (NGOs).

2. Methods

2.1 Sampling Design

The research design for this study was essentially survey research method with the use of structured questionnaire administered to selected enterprise clusters in three cities of South East Nigeria viz. Onitsha, Nnewi and Aba with existing clusters. The generated data was tabulated for statistical and econometric analyses to obtain results and test appropriate hypothesis. Therefore, the source of data for this study was mainly from primary sources generated through questionnaire and personal interviews.

A three-stage cluster sampling was adopted in this study. A sample of primary unit was selected from different clusters, existing in South-East and that gave rise to the selected three cities. The second stage was the selection of sample of secondary units which were chosen from each selected primary unit. This stage resulted in the choice of the following: A.M.E Shoe Makers Cluster for production, Omenma Traders Cluster for trade and Global Systems Mobile Network (GSM) and Allied Components Cluster, Aba Central for services, Nnewi Technology Incubation centre for production, Nnewi Automobile spare parts cluster for trade, and GSM and Allied Components Cluster in Nnewi, as well as Tinkers Dealers Cluster for production, Building Materials Cluster for trade; and GSM and Allied Components Cluster in Onitsha. Finally, a sample of tertiary unit was selected from each selected secondary unit (nine selected clusters) from the three cities with the help of a sample frame from the National Association of Small and Medium Enterprises (NASME).

It is noteworthy that with a three-stage sampling, covering a large city may be impossible. Therefore, such city can be sub-divided into administrative units. The total number of enterprises located within the city can be determined by first, selecting a sample of administrative units, then, choosing a sample location within the selected administrative units and finally, interviewing/administering a sample of firms/enterprises at the selected location. Details of estimated number of enterprises across the nine clusters in the three cities are presented in the Table 1 below:

Table 1. Estimated Number of Enterprises across Selected Clusters in South-East

S/No	Town/City/State	Estimated Number of enterprises	Sample Size
1	Aba	658	178
2	Nnewi	456	124
3	Onitsha	880	238
	Total	**1994**	**540**

Source: Enterprise Directory, National Association NASME 2015 and Authors'.

2.2 Modelling for the Determinants of the Choice of Microfinance Source

The concept of enterprise demand for credit refers to the variations in the quantities of credit that an enterprise is expected to demand for, at specified (interest rate) and time period assuming that all other pertinent factors remain constant. To analyse the determinants of an enterprise operating in a cluster demand for credit, the starting point is the theory of consumer behaviour. In this study, demand for credit is defined as the probability that an enterprise answered "yes" to the question "Did you apply for credit before?" The level of credit demanded is then defined as the amount in Naira of credit demanded by the enterprise. Total utility function can be expressed as:

$$U = U\left(X_1, X_2 \ldots\ldots X_n\right) \tag{1}$$

Where, U represents the total individual/enterprise utility.

X_1 represents enterprise demand for credit, i=1, 2, …, n.

If we let int_1, int_2 … int_n represent the interest rate.

Let f_1 represent credit demand by an enterprise, such that $f_1 = f_1\left(C\right)$, and let i represent the price of credit. Then, $fD_i = rf_i$ represents demand for credit, subject to enterprise characteristics. The demand for credit can be stated thus:

$$fD_i = f(Y, H, V, Q) \tag{2}$$

Where, fD_i is the demand function for credit;

Y is enterprise credit amount;
H is a vector representing enterprise characteristics including sex, age and level of education;
V represents the credit variables for example: interest rate charge on loan and credit distance; and Q is the social capital dimensions.
In order to translate (2) into an expression suitable for econometric analysis, the study adopted an explicit functional form model with second-order transcendental logarithmic ("translog") form which therefore becomes:
Model 3:

$$LnD_i = \alpha + \beta_1 LnC + \beta_2 LnG + \beta_3 LnAGE + \beta_4 EDYU + \beta_5 LnINT + \beta_6 LnDS + \beta_7 LnREL + \beta_8 LnTRAN + \beta_9 LnPROT + \beta_{10} LnSEC + \beta_{11} LnLEN + \beta_{12} LnSOC + \varepsilon_{it} \tag{3}$$

Where LnD_i represents log of demand for credit;

LnC stands for log of credit amount;
LnG stands for log of gender of the enterprise manager;
LnAGE stands for log of the age of the enterprise;
lnEDU stands for log of education level of the head of the enterprise;
LnDS stands for log of the distance to the microcredit facility(ies);
LnREL stands for relationship with the source of microfinance;
LnTRAN stands for training;
LnPROT stands for extent of protocol including collateral requirement;
LnSEC stands for different sector effects (production, trade and services);
LnLEN stands for length of repayment period offered;
LnSOC stands for log of the social capital dimension (membership of different cluster groups that embark on cash contributions hence somewhat give financial assistance); and

ε_{it} is the standard disturbance with mean zero and variance; $\delta_{\eta}^{2}.\varepsilon_{it}$ is the residual or part of the log of credit demand not explained by enterprise or cluster specific characteristics, credit variables and social capital dimension. Because of the nature of the dependent variable (binary with 0 and 1), Logit Regression analysis is used in determining the above equation (3), i.e., factors affecting demand for credit among enterprises in these clusters instead of the multiple regression analysis. The model is used as adopted by Mpuga (2004) and Mpuga (2008). The various sources of credit (formal and informal) from which enterprises could access credit are classified as the dependent variables. Since this involves multinomial logit regressions, its interpretations can only be the same as multiple regressions when marginal odds are computed. The calculation of odds ratio of response categories is done relative to the base line, that is, the coefficient of probabilities. Positive coefficient implies the probability of respondent falling in numerator category or odds are greater than the probability of falling in base category. Chi-square distributions is used to test overall model adequacy at specific significant level. Likelihood ratio also helps to determine whether the overall Logit model is perfect for policy making.
It is noteworthy that Logit model is used to analyse data sets to reflect a dichotomous category; in this case to ascertain the determinants of formal vs informal sources. The general logit functional form according to Gujarati (2004) is stated thus:

$$\text{Logitp}_x=\log\left[\frac{P(Y=1)}{1-P(Y=1)}\right] =\sum_{k=1}^{k} \alpha_k X_k \quad (4)$$

The estimates of the above equation therefore, show the determinants of the choice of the micro finance providers they most often go to (whether formal or informal). The significant variables are therefore considered as the main determinants of the choice of the microfinance source by enterprise clusters.

3. Results

3.1 Summary Statistics

Listed in Table 2 are the mean, standard deviation, minimum and maximum values of selected enterprise characteristics such as average age of the enterprises, average number of employees that are administrators, average number of employees that are in operations, average annual sales, average profit, average savings, average capital, and average micro finance received.

Table 2. Summary of Enterprises Characteristics

Variable	Mean	Std. Deviation	Minimum	Maximum
Age of the Enterprise	11.3	6.5	1.0	33.0
Approximate number of employees (Administrators)	3.0	2.8	1.0	14.0
Approximate number of employees (Operations)	5.0	5.0	1.0	27.0
Average annual sales (N)	4,371,180.0	9,672,194.0	1,000.0	50,000,000.0
Average Profit (N)	1,834,141.0	4,396,383.0	35,000.0	30,000,000.0
Average savings (N)	412,742.1	1,206,031.0	1,000.0	10,000,000.0
Capital (N)	4,411,885.0	12,400,000.0	50,000.0	100,000,000.0
Average Micro financing (N)	514,984.0	14.7	10,000.0	10,000,000.0
Interest on loan (%)	23.3	376,494.7	5.0	40.0
Value of training Received	329,682.5	376,494.7	-	100,000.0

Source: Author's.

Other indicators include average interest on loan and the monetary value of the training received. From the table above, the minimum age of the enterprise surveyed is about 11-year-old with the minimum and maximum standing at 1 year and 33 years of existence respectively. The average age of 11.3 shows that most of these enterprises have had the experience and may have had the need to borrow from either formal or informal sources. The average number of employees that are administrators is just 2.45, given that administrators are usually not many, though the maximum stands at 14.

However, the average number of operatives of the enterprises is approximately 5 with a minimum of 1 and a maximum of 27. This shows that while some of these enterprises are small scale with only 1 or 2 employees, others are large with up to 27 operatives. This therefore, offers a good variation of enterprise as the study examines their credit behavior and access the way it affects enterprise performance which is measured in this study by profitability.

The enterprises sampled across the three cities equally have huge variations in their sales, profit, average savings and capital accumulation as deduced from their standard deviations. The standard deviations are relatively high with capital being the highest. This emphasizes on the high inequality that exists among micro and small enterprises in the study area. While the mean average sales is N4,371,180, the mean average profit is N1,834,141 just as the mean average savings is N412,742.1 with the mean average capital as N4,411,885. In the same light, the maximum value for sales is N50,000,000 while the maximum value for profit was N30,000,000 but for savings, is N10,000,000 and N100,000,000 for capital. Also, the mean average micro financing is given as N514,984 with a maximum of N10,000,000 which is far lower than the maximum capital in the study. The mean interest on loan is 23.33%; while the mean value of training received in the form of micro financing support is N329,682.5 in monetary terms.

In terms of highest education attended by the enterprise heads (respondents), the distribution shows 1% with no formal education, 4.6% with primary education, 47% with secondary education and interestingly, 44% and 3.4% with tertiary education and post graduate studies respectively. In summary, over 90% of the sampled enterprise heads have either secondary or tertiary education while less than 7% have either primary or non-formal education. Indicators from the general characteristics of micro and small enterprises sampled reveals that over 95% of the enterprise heads own the enterprises solely while less than 4% of these enterprises are jointly owned. This means that about 97% of the enterprises own their

businesses single-handedly, bearing the risk and enjoying the profit. Though some of these enterprises have expanded with many employees, they remain the sole risk bearers and managers of the business.

Looking at sectoral compositions of sampled enterprises, though majority are sole proprietors, they are equally distributed into different sectors of production that are classified into three groups namely, production, trade and services. While 61% of these sampled enterprises are under the trade sector, 11% and 37.2% are under production and services sectors respectively. It is also observed that some of the enterprises in the production sector are equally in the trading sector and/or the service sector. It is therefore evident that more than half of the enterprises are interested in trading, while the production and service sectors are not much exploited.

Similarly, the distribution in terms of specific activities involved suggests that based on the type of activity practiced, a greater percentage of the enterprises are somehow involved in trading only (about 45%), with the next most exploited sector being the textiles with about 14%, followed by Automobile and furniture and wood work by 9% each. On the other hand, only 1% of the enterprises are in the chemicals and plastics sector as well as the wood/paper and pulp industry while 2% are involved in plants and machineries. However, the survey covers other types of activities like the shoes and leather products, constituting 5% of the study, foundries, metals/fabrication is 5%, food is 6% as well as several other types of activities.

It was also observed that though these enterprises are from different sectors of production and economic activities, they all face the need to borrow and have had different types of assistance from formal micro financial operatives. Credit assistance constitutes 67%, technical support 8%, being a financial guarantor 16.4% while financial advisory services assistance constitutes 1.2%. It is therefore evident that micro financial institutions are more convenient with giving out credit than any of the other forms of financial assistance. Looking at the extent at which the credit source is generally perceived to be reliable, it is revealed that only 7% believe that their credit source is reliable to a very low extent and 19% to a low extent. Also 18% of the respondents from the sampled enterprises perceives that credit source is reliable to a high extent while 16% perceives such reliability to a very high extent. On the average, the study concludes based on this finding (average) that the respondents generally agree that their various credit sources are reliable.

In terms of distribution of the enterprises that have received credit from formal, informal and from both sources, the frequency reveals that more enterprises patronize the informal sources of financing by about 55% while enterprises who received credit from formal Micro Finance Institutions (MFIs) are about 34%. About 11% of the respondents receive credit from both formal and informal sources.

Challenges faced by these enterprises in terms of borrowing include request for the loan, requirement, protocol/procedure, interest on the loan and the tenure for payment. However, it is worth noting that the type and magnitude vary between the formal and informal sources of finance. Details of such challenges faced by enterprises while accessing credit as observed during the Focused Group Discussion (FGD) are presented in Table 3 below.

Table 3. Perceived Challenges Faced by Enterprises in Accessing Microfinance

Formal		Informal	
Challenges	% age of the sample	Challenges	% age of the sample
Borrowing is costly	83	Can't afford large credits	66
Request of collateral	76.8	Not reliable	32.3
Request of surety	33.4	So many phone calls	26
High interest rates	72	Takes time to build trust	37.6
Protocol	58.4	Short repayment periods	71
Not straight forward/corny	27	Lack of confidentiality	43.3
Time taking	47	The owner can easily request at anytime	27

Source: Author's.

Analysis of the above table suggests that borrowing credit from formal financial institutions generally has its advantages and disadvantages from the borrowers' experience. The challenge faced by the entrepreneurs as highlighted by the respondents during the Focused Group Discussion (FGD) is that borrowing from formal institutions is costly with 83% supporting this. Also, 76.8% of the respondents that receive formal credit show that the collateral requested by formal institutions is the greatest challenge faced. In addition, the request for surety is a major challenge and set back to borrowing from formal institutions. 72% of the respondents that receive credit from formal institutions agree that high interest rate is equally a challenge. Other constraints include protocol at 58%, being corny and time constraints to finally get the loan. The study therefore, notes the most predominant ones to be the cost of borrowing, collateral, high interest rates and protocol, wherein more than half of the respondents that receive credit from formal institutions perceive these as challenges.

On the other hand, the greatest challenge faced by informal micro financial institutions is the short repayment period. About 71% of the respondents perceive that informal institutions usually give them a very short repayment period that is usually not even enough to make profits from the loan. The next challenge is the inability to lend huge sums of money or give out large credits as 66% of them see it as a challenge. Closely followed, is the lack of confidentiality as most of these informal financial institutions are the lender's circle of friends and made known to everyone, all the financial transactions that have been made. Other challenges include the time it takes to build trust and reliability, the impromptu request for credit and its interest and close monitoring to ascertain proper usage of the credit.

3.2 Determinants of the Choice of the Microfinance Source by Enterprise Clusters in South East of Nigeria

To ascertain the determinants of choice of microfinance source, the study employs two methods; first, by estimating multinomial logit regression that investigates the determinants of the choice of the microfinance provider, and second, by analyzing the perception of determinants of the choice of the microfinance source. The logit regression uses binary dependent variable due to the qualitative nature of the study. The dependent variable is a categorical variable and is designed such that 1 represents enterprises that receive (proxy for choice) formal credit while 0 represents informal credit. The significant determinants of profitability include amount of credit needed, gender of the enterprise head, age of the enterprise head, level of education of the enterprise head, interest rate, reliability, training, protocol extent, discrimination of sectors, and length of repayment period offered. Indicators of social

capital and sector are regressors to the regressand, that is, the choice of the micro financial provider. The logit estimation results are presented Table in 4 below.

Table 4. Determinants of the Choice of Micro Financial Sources for Enterprises

Dependent variables	Marginal effects	Odds ratio
LnC	-0.6464	1.98000
	(5.58)***	
LnG	0.2447	1.2773
	(0.46)	
LnAGE	0.4004	1.4924
	(2.25)**	
LnEDU	0.0292	1.0380
	(0.67)	
LnINT	0.1353	1.1449
	(4.35)***	
LnDS	0.1366	1.1463
	(0.308)***	
LnREL	1.3368	3.8071
	(2.88)**	
LntRAIN	-0.03209	0.9684
	(-0.31)	
LnPROT	0.9998	2.717
	(3.66)***	
TRADE	2.0435	4.70076
	(3.35)***	
SERVICES	3.08779	1.01485
	(3.98)***	
LnLEN	0.8031	2.232561
	(3.87)***	
LnSOC	0.0138	2.98628
	(-4.11)***	
_cons	-18.1842	
	(-4.03)***	
Sample size s	539	
Pseudo R2	0.6311 (0.0012)	
Chi-square	214.15 (0.0027)	
Log likelihood	-308.564	

Note. Absolute value of z statistics in parentheses, * significant at 10%, ** significant at 5% and *** significant at 1%. Omitted categories in the dependent variables are the (comparison enterprises who did not borrow credit).

Source: Author's.

Estimation results in the above table show an overall significance given by the probability of chi-square to be 0.0000 which is less than 0.05 hence, significant at 5% significant level. This is evident as the probability chi-square calculated (214.15) is greater than the probability of chi-square tabulated (4.574) with 11 degrees of freedom. The Pseudo R^2 in this non-linear model is often considered to be usually low and it constrains this model for that characteristics. However, the Pseudo R^2 of the model estimated above is still relatively high at 0.6311.

Significant determinants for the choice of the microfinance source as shown in the table above include amount or volume of credit needed, age of enterprise head, distance to microfinance facility, relationship with the microfinance provider, problematic extent of protocols, interest rate, length of repayment period offered, sector discrimination and the social capital component. On the other hand, the non-significant determinants include gender of the enterprise head, training offered by the provider and level of education. Nevertheless, the positive determinants are the age of enterprise head, reliability of the provider, problem extent of protocol, interest rate, length of repayment period offered, cluster advantage and social capital while the negative determinants are amount or volume of credit needed and training, though training was not significant.

Given the complicated and unfriendly nature of the marginal effect, the study estimates odds ratio of the logit model that is equally presented in the above table. The odds ratio is, however, the antilog of the logit and is less than 1 when the marginal effect is negative and, greater than 1 when the marginal effect is positive. For a unit increase in the amount or volume of credit needed by the entrepreneurs, the odds in favour of choosing informal sources over formal sources decrease by 0.6464 or 36.4%. This variable is statistically significant given its probability value in terms of the amount or volume of credit needed. However, enterprises prefer formal sources.

The relationship with the credit provider equally and significantly determines the choice of the credit source. The positive coefficient suggests that a unit increase in the extent of relationship with the credit provider increases the odds in favour of choosing an informal credit source. Training is not a significant determinant of the choice of credit source, though units increase on the training received decreases the odds in favour of choosing an informal source by 0.9684 (3.2%). Therefore, the odds in favour of choosing formal sources also increased, though not significantly.

The extent of protocol as a problem is equally a significant determinant of the choice of credit source among enterprises in the South East of Nigeria. The absolute z-value is 3.66 which is greater than 1.96 hence, a unit increase in the extent of protocol as a problem increases the odds in favour of an individual choosing an informal credit provider. This is expected *a priori* given that; there exist more protocol in the formal sector than in the informal sector. The extent to which the credit providers discriminate on specific sectors of activities does not significantly determine the choice of the credit source, though the odds are in favour of choosing formal sectors by 0.319 or 68.1%.

Interest rate and the length of repayment period are both significant determinants of the choice of credit source by the entrepreneurs. A unit increase in the extent to which the respondents perceive interest rate as a problem increases the odds in favour of choosing a credit provider by 1.1449 while a unit increase of length of repayment period increases the odds in favour of choosing an informal source for credit provision.

Social capital component is equally a significant and positive determinant of the choice of the credit provider, and the odds in favour of choosing an informal credit source is on the increase. The fact that an enterprise enjoys such cluster advantage due to the location of the firm significantly affects the choice of the credit source. And such positive sign of the cluster advantage shows that the odds increase in favour

of choosing the informal sector for every unit increase for those with a cluster advantage. This is expected, given that social capital component are more predominant in the informal sector, and more importantly, it improves the confidence the provider has in the borrower.

Surprisingly, education is not a significant determinant of the choice of the credit provider. This suggests that it is not on the basis of education that the enterprises choose where to get credit from. A unit increase in the educational level, however, reduces the odds in favour of choosing an informal source by 6.2%. Sector is considered as a categorical variable and so the production sector is omitted and used as a reference category for trade and services. The result for both categories is significant and positive, suggesting that the odds in favour of choosing a provider increases for enterprises in the trade and service sectors when compared to the production sector. In other words, there exist significant determinants of the choice of microfinance sources by enterprise clusters in South East, Nigeria and, these determinants include: the amount or volume of credit needed, relationship with the microfinance provider, problematic extent of protocols, interest rate, length of repayment period offered, social capital component including cluster advantage.

It is equally noteworthy that factors such as age of the enterprise, interest rate, relationship with the microfinance provider, extent of protocol including collateral availability, being engaged in trade and services, the length of repayment period and the social capital dimension (membership of different cluster groups that embark on cash contributions hence somewhat give financial assistance) have odds ratio that are higher than one (1). This implies that these are the main factors that affect enterprises in the selected clusters from moving from formal to informal microfinance sources. The likelihood of moving from formal to informal are highest with enterprises engaged in trade as well as relationship with the microfinance provider, social capital and extent of protocols.

3.3 Tests of Hypothesis and Decision Rule

The study recalls the research hypothesis as presented in their null form thus: “There exist no significant determinants (i.e., amount, interest, extent of protocols including collateral availability, relationship with the provider) of the choice of microfinance sources by enterprise clusters in South East, Nigeria”. The stated hypothesis was tested at 0.05 level of significance. The null hypothesis is rejected if the probability (p-value) at which the z-value is significantly less than the chosen level of significance, otherwise, the alternative hypothesis will be accepted. In other words: If the calculated z-value for the variable coefficient for hypotheses 3 is >1.96, the study does not accept the null hypothesis, and accept the alternative hypothesis.

The hypothesis of the study states that, there exist no significant determinants (i.e., amount, interest, extent of protocols including collateral availability, relationship with the provider) of the choice of microfinance sources by enterprise clusters in South East, Nigeria. From the study findings, the amount or volume of credit needed (5.58), relationship with the microfinance provider (2.88), problematic extent of protocols including collateral requirement (3.66), interest rate (4.35), length of repayment period offered (3.87), social capital component including cluster advantage (-4.03) are clearly significant determinants of the choice of microfinance sources by enterprise clusters in South East, Nigeria. This is because these variables all have the absolute value of their z-value >1,96 hence, the null hypothesis of the study is equally rejected. In other words, the study concludes that, there exist significant determinants of the choice of microfinance sources by enterprise clusters in South East, Nigeria and, these determinants include: the amount or volume of credit needed, relationship with the microfinance provider, problematic extent of protocols, interest rate, length of repayment period offered, social capital component including cluster advantage.

4. Discussion

In assessing the third objective, the study finds that the significant determinants for the choice of micro financial sources as shown in Table 4 above are: the amount or volume of credit needed, relationship with the credit provider, problematic extent of protocols, interest rate, length of repayment period, the cluster advantage (social capital component) and the categories of the sectors. The non-significant determinants are: training offered by the provider, discrimination on sectors, gender and education. Most of the significant variables are expected *a priori* as is evident in other empirical and theoretical literature.

An example is seen in Olowe et al. (2013) who investigated the impact of microfinance on MSEs growth in Ibadan metropolis of Nigeria. The results showed that high interest rate, collateral security and frequency of loan repayment could cripple the expansion of MSEs in Nigeria. These are also the challenges that were noted in accessing credit in the South East, especially in accessing credit from formal channels. The present study, therefore, notes that the most predominant ones are the cost of borrowing, collateral, high interest rates and protocol, wherein more than half of the respondents receiving credit from formal institutions perceive these as challenges. On the other hand, short repayment periods, inability to lend huge sums of money, lack of confidentiality, much time to build trust, unreliability, impromptu request for credit and its interest and then so many phone calls are the challenges faced in accessing credit from the informal sector.

The amount or volume of credit is in favour of formal institutions given that, they are in the best position to give out large loans. So, the higher the amount or volume of the credit needed, the greater the odds in favour of choosing a formal credit provider. The relationship with the microfinance provider and the extent to which the protocol and interest rates are problematic are both positive and significant. It implies that the odds in favour of choosing formal sources increase with their units increase. This is because the burdensome protocol/bureaucracy and high interest rates have plagued formal institutions for a long period of time and have become one of the reasons for which some small-scale enterprises choose informal institutions over formal institutions.

Also, the extent to which the length of the repayment period is offered is equally a positive and significant variable. Hence, it increases the odds in favour of choosing the informal source over the formal source, given that it is a challenge for both the formal and informal institutions. However, it apparently affects the formal institutions more than the informal institutions. The trade and service categories of the sectors of activity are positive and significant relative to the production sector. Hence, they equally increase the odds in favour of choosing from the informal sector. This could be explained by the fact that, most entrepreneurs in the trade and service sector need smaller amounts or credits more frequently, thus, they patronize informal credit providers, unlike the production sector.

The results of the logit regression of this study depict that the significant determinants for the choice of the microfinance sources are the amount or volume of credit needed, relationship with the microfinance provider, problematic extent of protocols, interest rate, length of repayment period offered, the cluster advantage (social capital) and the trade and service categories of the sectors. On the other hand, the non-significant determinants are gender, training offered by the provider, discrimination on sectors and education. Essien et al. (2015), which examined both formal and informal credit sources and the role of social capital to small scale agro-based enterprise in the Niger Delta region of Nigeria, is the closest to the present study. Their results reveal that gender, age, and social capital are significant determinants of informal credit while gender, education, age, size and collateral are significant determinants of formal credit. While this study examines the determinants of choosing between formal and informal credit, Essien et al. (2015) investigate the independent determinants of formal and informal credit. Though the

results are different, Essien et al. (2015) suggest that education is a determinant for both formal and informal credit which is not the case in this study.

4.1 Policy Implications and Recommendations

Specific policy issues from the first two objectives is that formal microfinance sources significantly and positively affected the profitability of its recipients but not as much as the informal sources for enterprise clusters in South East of Nigeria. This is expected *a priori* as credit taken is usually intended to expand the business and so, should ordinarily reflect on the profit of the enterprise. Other determinants crucial for policy is the high impact of social capital including cluster advantage. There is the need for policy direction to tap from such social capital including cluster advantage. It is equally necessary for microfinance banks to begin to come closer to their clients as the study found that relationship with credit providers and the cluster advantage (social capital) are not significant determinants of the enterprise profit when such enterprise is using the formal microfinance source and vice versa.

Another policy question from the finding is why has Nnewi performed better than Onitsha and Aba? Are there inherent qualities and strategies that need to be harnessed in order for Aba and Onistha to measure up with Nnewi? The study also found that the amount or volume of credit needed, relationship with the service provider, problematic extent of protocols, interest rate, length of repayment period, the cluster advantage (social capital component) and the categories of the sectors are all determinants for choosing a particular source. It is equally important to note that any positive improvement on the part of policy makers on any of these variables sway enterprise from informal sources to formal sources and vice versa. Also, the extent to which the length of the repayment period is offered is equally a positive and significant variable. Hence, it increases the odds in favour of choosing the informal source over the formal source, given that it is a challenge for both the formal and informal institutions. However, it apparently affects the formal institutions more than the informal institutions. The trade and service categories of the sectors of activity are positive and significant relative to the production sector. Hence, they equally increase the odds in favour of choosing from the informal sector.

The findings of this study have, to a large extent, revealed what most Micro and Small Enterprises (MSEs) face and equally provided empirical evidence to help inform policies that address their situation. Some of these include; The main weaknesses of accessing formal credit are the amount or volume of credit, interest rate and its tenure. These can only be bridged by the Central Bank of Nigeria and development institutions through interventions such as grants, donors, and/or soft loans. The recent N220 billion for micro and small-scale enterprises by the CBN should be focused on the micro enterprises as was originally designed. Accessing credit in the formal sector is equally seriously plagued by documentation and burdensome protocol in an effort to reduce the number of bad loans and divergence of credit given. This challenge can be minimized if banks empower their branches to move closer to the sectors and clusters in order to exploit better, the social capitals that exist amongst these clusters. By this policy, specific credit could be granted to micro and small enterprise within the sector using their social capital dynamics as collateral.

The study equally recommends that, as the microfinance banks are relocating to these sectors and clusters using the cluster advantage, they should be supported in any form from the regulatory authorities. This is consistent with the objectives of the rural banking scheme of the 1970s that is no longer in operation. The scheme provided that, a minimum of 45% of total deposit liabilities of bank branches located in local areas be given to the location as credit facilities. Credits can therefore be given on the basis of social capital and group dynamics to the informal sectors that act as the backup for securities. Once the fear for physical and tangible security is not there, it would encourage enterprises to borrow and create more

confidence in formal financial credit providers.

Formal microfinance providers should develop products with less emphasis on physical and tangible securities as collateral and should rely more on their social dynamics, discipline and trust, to avail them credit facilities within their locations. The study recommends that Microfinance banks should move closer to the clusters in order to exploit the social capital and group dynamics that exist, and should be supported always by the regulatory authorities. This study was motivated by the slow state of manufacturing as it was deduced to be caused by the inability of domestic enterprises to thrive and grow into manufacturing giants. This led the study to evaluate the effectiveness of the microfinance sources on the profitability of enterprise clusters in South East, Nigeria, paying particular attention to Onitsha, Aba and Nnewi industrial clusters. Amongst several findings, the results showed that formal and informal credits were significant determinants of firm profitability in South East, Nigeria. While the results of the logit regression suggested that, the significant determinants for the choice of the microfinance sources are the amount or volume of credit needed, reliability, problematic extent of protocols including collateral availability, interest rate, length of repayment period offered, relationship with the credit provider including cluster advantage (social capital) and concentration on the trade and service categories of the sectors.

The findings further showed that the respondents perceived that, the main factor for their choice of micro financing is the credit provider who provided loans quickly. This was followed by the interest rate, reliability and the relationship with the provider (social capital). And finally, the study used descriptive analysis to show that, though both the formal and informal credit providers supported the firm at least averagely and the credits generally expanded the enterprises averagely, formal credits supported the enterprise recipients much more than the informal credits. Therefore, within the limits of the scope and coverage of the study, the findings were consistent with the objectives of the study. The study is confident that the research is an interesting and worthy exercise and, thereby presents the report as a contribution to the knowledge base on the subject matter.

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