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Constraints to Linkages Between Formal and Informal Financial Institutions in South Eastern Nigeria

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Abstract
The study determined major constraints to linkages between formal and informal financial institutions in South Eastern Nigeria. Multistage random sampling procedure was used to get 36 formal and 38 informal financial institutions for the study. Two sets of structured questionnaire were employed to generate data. The study was guided by one null hypothesis. Data generated were analyzed using descriptive statistics and probit regression. Formal financial institutions had 4 major constraints in linking with the informal viz: poor legal and regulatory systems, lack of confidence, problem of communication and poor capacity building in the informal sector. Similarly the informal financial institutions' major constraints in linking with the formal were: institutional rigidities, poor capacity building and inadequacies of regulatory systems. Based on the constraints to linkages, the following recommendations were made; providing effective judicial system for protecting property rights and facilitating networking of all informal financial; institutions.

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Introduction

Business exploitation, expansion and modernization depend on capital investment, given good management. Most business people in developing nations are poor and so require credit. Providing credit to poor borrowers has remained a challenge; as credit markets in these regions are faced with the problem of enforcement and imperfect information among others (Seibel, 2001). Government intervention in the form of ownership of banks, regulation and subsidization of credit has equally failed to allocate credit to poor borrowers (Udry, 1994). Institutional problems such as the lending conditions which limit access of investors to credit facilities have not been adequately addressed (Vargese, 2005). The fragmented structures of financial institutions where formal and informal sectors operate almost independent of each other is inimical to the growth of a strong and sustainable financial system. The formal financial institutions have extensive infrastructure and system, strong management capacity, access to funds, yet they are further removed from rural investors making obtaining adequate information and enforcing contracts imperfect and costly (Bagachwa, 1995).

In contrast, informal financial institution which operate close to rural borrowers possess enforcement mechanisms, have acceptable credit programmes, low cost of transaction ,cheap outreach and good information about borrowers, but they do not provide enough credit to investors, neither have they linked borrowers to the mainstream financial sector (Yaron, 1994). Linkage arrangement will help address the information asymmetries, resolve enforcement problems, reduce cost of transaction, improve financial service delivery and hence facilitates economic development.

The study therefore seeks for linkages as strategy that will help expand formal credit to informal lenders, in the hope that this will improve loan terms for borrowers who are shut out of the formal sectors.

1.3 Objectives of the study

The broad objectives of this work is to examine the linkages between formal and informal financial institutions is South Eastern Nigeria.

The specific objectives of the study are to:
(i) Determine major constraints to linkages between formal and informal financial institutions;
(ii) Make recommendation for policy and further research based on findings.

1.4 Research Hypotheses

One null hypothesis was tested:
The opinions of the formal and informal financial institutions on constraints to linkages are not statistically different.

Methodology

The study area

The study area is Southern Nigeria. The area comprises, Abia, Amanbra, Ebonyi, Enugu and Imo State, Southeastern Nigeria lies between latitude 4^0 5^0'N to 7^0 10'N and longitudes 6^0 40'E to 8^0 30'E.

Multi-Stage random sampling procedure was employed in selecting respondents for the study. Southeastern Nigeria is made up of 5 states and out of these 3 were randomly selected. Secondly, from each of the 3 selected sates, 3 Local Government Areas each were randomly selected. All informal financial institutions in each of the 3 LGAs were identified. 5 informal financial institutions were selected from each L.G.A; giving a total of 45 informal financial institutions for the study.

Twelve formal financial institutions from each of the 3 states were enlisted and the bank managers/Accountants provided data for the study.

Data Collection

Secondary data were sourced from records of both the formal and informal financial institutions as well as from published sources.

Data Analysis

The two objectives of the study were realized using factor analysis. Both mean score and exploratory factor (principal component) analysis were employed. First, to identify constraints to linkages as perceived by the respondents, a five point Likert scale rating with a decision mean of 3 was used. Respondents mean score was obtained for each response item such that any response mean higher or equal to 3 will be regarded as a "constraint". To group the identified constraints, principal component analysis with varimax rotation was used. The cut off point for factor loading was 0.40 that is' 10% overlapping variance. Therefore, factor loading less than 0.40 or variable that loaded in more than one factor was discarded.

Principal Component Mode Specification

The principal component mode used in achieving objective 1 is given thus:

$$
\begin{array}{lllll}
P_1 & = & a_{11} X_1 + & a_{12} X_2 + \dots & + a_{1k} X_k \\
P_2 & = & a_{21} X_1 + & a_{22} X_2 + \dots & + a_{2k} X_k \\
* & & * & * & * \\
* & & * & * & * \\
* & & * & * & * \\
P_K & = & a_{k1} X_1 + & a_{k2} X_2 + * \ * & + a_{kk} X_k
\end{array}
$$

Where:

$P_1, P_2 \dots P_k$: = Principal component or major constraints to linkages

a_2 - a_k = Factor loadings or correlation coefficients

$X_1, X_2 \dots X_k$: = Independent variables (constraints) to linkage between the financial institutions such as:

X_1 = Poor regulatory environment for protecting property rights
X_2 = inadequate law that permit wide range of security interest
X_3 = poor response of sectors to government reforms policies
X_4 = poor implementation of regulatory policies by government
X_5 = Inefficient second-tier regulatory authority
X_6 = non provision of forms legal status for formal sector
X_7 = poorly defined property right
X_8 = lack of interest in linkages
X_9 = Lack of permanence of the informal sector
X_{10} = Poor asset base of the informal sector
X_{11} = non availability of acceptable collateral.
X_{12} = Non provision of annual audited balance sheet
X_{13} = Irregular saving activities by the formal sector
X_{14} = Rules of viable sustainable financial system are not observed
X_{15} = Political instability
X_{16} = Identifying reliable auditing firms
X_{17} = poor reporting operations of the informal sector
X_{18} = poor record keeping
X_{19} = poor information management system.
X_{20} = Poor registration of informal sector
X_{21} = Networking among informal sector not facilitated
X_{22} = Non provision of consultancy services to informal sector
X_{23} = Lack of organizational upgrading
X_{24} = Poor operational upgrading
X_{25} = Lack of Umbrella Organization (Union).
X_{26} = Low quality of administrative staff of informal sector
X_{27} = Low are of expansion of banks to rural areas
X_{28} = Poor adaptation of banks to socio-cultural environments of informal sector

X_{29} = Non adoption of the accounting system of informal financial institutions
X_{30} = low grading of informal financial sector
X_{31} = Poor business dealings with informal financial institutions.

Model for testing hypothesis

The null hypothesis was tested using Z-test.

The Z statistic used in testing hypothesis is calculated as:

$$Z = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

Where:

Z = The value by which the statistical significance of the mean difference were judged.

X_1 = Mean responses of operators of formal financial institutions as regards constraints and strategies to linkages.

X_2 = Mean Responses of operators of informal financial institutions as regards constraints and strategies to linkages.

S12 = Variance of constraints and strategies of operators of formal institutions.
S22 = Variance of constraints and strategies of operators of informal institutions
N1 = Number of operators of formal institutions
N1 = Number of operators of informal institutions

Decision Rule:

Reject the null hypothesis if $Z_{cal} < Z_{tab}$
Accept the null hypothesis if $Z_{cal} < Z_{tab}$
(Olayemi, 1998).

Result and Discussion

Table 1.1 Mean and standard deviation of formal and informal and informal financial institutions on constraints to linkages.

S/N	Possible Constraints	Formal	Informal	Decision
1	Poor regulatory environment for Protecting property rights	4.09(1.056)	3.53(1.370)	A
2	Inadequate laws for collateral Security	3.74(1.163)	3.97(1.241)	A
3	Poor response of sector to Government reforms policies	3.71(1.244)	3.42(1.287)	A
4	Poor implementation of regulatory Policies by government.	3.71(1.142)	3.24(1.304)	A
5	Ineffective second-tier regulatory Authority	3.50(1.237)	3.38(1.361)	A
6	Non provision of form of legal status for the informal sector	3.65(1.098)	3.32(1.317)	A
7	Poorly defined property right	3.74(1.109)	3.68(1.029)	A
8	Lack of interest in Linkages	3.33(0.595)	3.63(0.589)	A
9	Lack of permanence of the informal Sector	4.09(1.056)	3.53(1.370)	A
10	Poor asset base of the informal Sector	3.76(1.251)	3.16(1.424)	A
11	Non availability of acceptable Collateral	3.21 (1.200)	3.00(1.336)	A
12	Non provision of annual audited Balance sheet	3.59(1.234)	3.08(1.282)	A
13	Irregular saving activities by the Informal	4.08(1.056)	3.53(1.370)	A
14	Rules of viable/sustainable financial System are not observed.	3.30 (1.223)	3.61(1.385)	A
15	Political instability	3.90 (1.043)	3.50(1.466)	A
16	Problem of identifying reliable auditing firms	3.74(1.136)	3.55(1.389)	A
17	Poor reporting of operations of the Informal sector	3.70 (1.015)	3.16(1.191)	A
18	Poor record keeping	3.85(1.034)	3.05(1.384)	A
19	Poor information management System	3.76(1.232)	3.02(1.343)	A
20	Poor registration of information Sector	3.59 (1.184)	3.01(1.394)	A
21	Networking of informal sector	3.50 (1.108)	3.47(1.330)	A

Figures in brackets are standard deviation
A = Agree
D = Disagree
Source: Field Survey Data, 2008.

The results (mean and standard deviation) of the opinion of the operators of formal and informal financial sectors on constraints to linkages are shown in table1 above. Both operators (formal and informal) accepted all the 31 variables as constraints to linkages.

In general, two (2) constraint items: poor regulatory environment for protecting property rights and lack of permanence of the informal sectors scored the highest means of 4.09 each among the formal sector operators, while the lowest mean (3.21) was recorded in their opinion to the statement that non availability of acceptable collateral was constraint to linkage with the informal financial sector.

For the informal operators, the item (27) which states that low rate of expansion of bank branches to the rural areas constitutes constraint to linkage with the formal sector had the highest mean (4.03), while item (11) which states that non availability of acceptable collateral recorded the lowest mean (3.21).

Major Constraints to Linkages between Formal and Informal Financial Institutions

For policy relevance, the 31 individual constraints agreed upon by both financial institutions as constraints, were further grouped into major constraints using the exploratory factor analysis (principal components). The result of the rotated component matrix showing the extract components based on the responses of these institutions are shown in table 1.2 and 1.3 below.

Table 1.2: **Results of varimax rotated constraints to linkages by formal financial institutions.**

Factor 1: Inadequacies of Regulatory Framework		**Factor 2:** Communication problems		**Factor 3** Lack of confidence		**Factor 4.** poor capacity building	
Item No	Loading	Item No	Loading	Item No	Loading	Item No	Loading
1	785	23	.426	9	539	23	426
2	.791	24	.675	10	.636	24	675
3	.822	25	.830	11	.684	25	.830
4	.681	26	796	12	.770	26	.796
5	.722	21	.561	13	.708		
6	.867			14	735		
7	.775						

Source: Computed Field Survey data, 2008.

Based on the clustering of loadings (component validity), the forma sector's major constraints in linking with the informal sector were: inadequacies of regulatory framework (component 2), Lack of confidence (component 3) and poor capacity building (component 4).

Extract of the various components and constraint items substantially loaded on them showed that component 1 had 7 items; component 2 had 5 items, component 3 had 6 items while component 4 recorded 4 items.

The loading (eigen value)under inadequacies of regulatory framework were: poor regulatory environment for protecting property right (.785), inadequate laws that permit a wider range of security interest (.791), poor response of sectors to government reform policies (.822), poor regulatory policy implementation by the government (.681), ineffective second-tier regulatory authority (.722), non-provision of form of legal status for the informal sector (.867) and poorly defined property rights (.775).

Constraint items that loaded high under poor capacity building (component 4) include: lack of organizational upgrading. (.426), poor operational upgrading (.675), lack of umbrella organization (union) (.830) and low quality of administrative staff of informal sector (796).

Table 1.3 Results of varimax rotated constraints to linkages by informal financial institutions.

Factor 1: Institutional Rigidity		**Factor 2:** Poor Capacity Building		**Factor 3** Inadequacies of Regulatory Framework	
Item No	Loading	Item No	Loading	Item No	Loading
27	.464	23	.770	1	.625
28	.654	24	.608	2	.584
29	.822	25	.830	3	.665
30	.794	26	.745	4	.724
31	.606		.461	5	.415

Source: Computed Field Survey data, 2008.

On the basis of component validity or clustering of loadings, the informal sector's major constraints in linking with the formal were grouped into 3 principal components: Institutional rigidity (Component 1), Poor capacity building (component 2) and inadequacies of regulatory framework (component 3).

Extract of the various components of the constraint items substantially loaded on them showed that components 1 and 3 had 5 items each, while component 2 had 4 items.

The loadings under institutional rigidities (component 1) were low rate of expansion of bank branches to rural areas (.464). Poor adaptation of banks to socio-cultural environment of the informal sector (.654), non adoption of the accounting system of informal financial institutions (.464) and poor business dealings with informal financial institution (.606).

The informal sector's second major constraint in linking with the formal was again, their own problem of poor capacity building (component 2). The items that loaded were: Lack of (.745) and low quality of administrative staff of informal sector (.461).

The loadings under inadequacies of regulatory system were: poor regulatory environment for protecting property rights (.625), inadequate laws that permit wider range of security interest (.584), poor response of sectors to government reform policies (.665), poor regulatory policy implementation by government (.724), and inefficient second-tier regulatory authority (.415).

This finding is highly revealing as the informal sector accepted their own problems, confirming earlier reports that the formal sector do not have confidence in linking with the informal sector. In the absence of confidence on the informal sector's ability to repay loans, forma sector shy away from Linkages (Aryeetey, 1996).

Difference between formal and informal Financial Institutions on Constraints to Linkages

In order to test hypothesis 2, the opinions of the operators of formal and informal financial institutions on constraints to linkages were compared using t-test of means. The result is presented in Table 4.3.

Table 1.3 Result of test of difference between formal and informal financial institutions on constraints to linkages.

S/N	Constraints	Formal	Informal	t-cal	Decision
1	Poor regulatory environment for Protecting property rights	3.59(1.184)	3.00(1.394)	1.927	NS
2	Inadequate laws for collateral Security	3.74(1.163)	3.97(1.241)	0.812	NS
3	Poor response of sector to Government reforms policies	3.71(1.244)	3.42(1.287)	3.256	NS
4	Poor implementation of regulatory Policies by government.	3.71(1.142)	3.24(1.304)	1.630	NS
5	Ineffective second-tier regulatory Authority	3.50(1.237)	3.38(1.361)		NS
6	Non provision of form of legal status for the informal sector	3.50(1.237)	3.38(1.361)	0.389	NS
7	Poorly defined property right	3.74(1.109)	3.68(1.029)	0.233	NS
8	Lack of interest in Linkages	3.33(0.595)	3.63(0.589)	2.131	NS
9	Lack of permanence of the informal Sector	4.09(1.056)	3.53(1.370)	1.955	NS
10	Poor asset base of the informal Sector	3.76(1.251)	3.16(1.424)	1.890	NS
11	Non availability of acceptable Collateral	3.21 (1.200)	3.00(1.336)	0.703	**A**
12	Non provision of annual audited Balance sheet	3.59(1.234)	3.08(1.282)	1.719	**A**
13	Irregular saving activities by the Informal	4.09(1.056)	3.53(1.370)	1.955	**A**

Source: Computed field survey data, 2008.
*Figures in brackets are standard deviation
* $P < 0.05$; df = 72 (t = 1.951).
NS = Not significant; $P < 0.05$
S = Significant; $P < 0.05$

The results (table 1.3) show significant difference between the opinion of operators of formal and informal financial institutions on.

There were however, no significant different in the opinions of these operators on the other 24 constraint items.

The hypothesis that there will be no significant difference in the opinions of operators of formal and informal financial institutions on these constraints to linkages was therefore upheld.

Conclusion and Recommendations

The following policy recommendations based on the major constraints to linkages arise from the study:

1. The use of fiscal policy to provide incentives such as tax relief on profits granted to banks that allocated credit through informal sectors which could be recovered by imposing higher taxes on banks that fail to do so.
2. Improving the ability of banks to reduce loan losses through the use of local sanction to enforce repayment.

3. Adoption of efficient second-tier regulating authority for all informal institution be adopted; changed with the duties of registration, supervision or regulation of all informal sectors.

Conclusion

This study has determined the constraints in facilitating linkages between formal informal financial institutions in South Eastern Nigeria.

Results have shown that the financial industry has remained fragmented with little or no integration or overlaps due to distrust, poor legal/regulatory framework, poor capacity building, institutional rigidity, among other things. Since each of these sectors has its advantages and disadvantages, under separate existence, the industry cannot render sustainable services to the economy. In line with the nation's financial sector reforms therefore, it is the conclusion of the study that policy that will promote overlaps or integration between these sectors be adopted.

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