Rural Economics and Development

Rural Households' Access to Microcredit and Poverty status in Obafemi- Owode Local Government Area of Ogun State, Nigeria

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Abstract

This study examined the effect of access to micro-credit on poverty status of rural households in Obafemi-Owode LGA in Ogun state, employing data collected from 94 randomly selected households in the study area. Data were analysed with the aid of FGT poverty index and the Logit regression model. The results of descriptive analysis reveal that majority of the poor households in the study area were large sized, male headed with no formal education and no access to credit. The head count poverty index also reveals that about 35 percent of households in the study area were poor, subsisting below the poverty line of 6,279.33 naira per capita per month. The econometric analysis shows that age, household size, secondary and tertiary education of household head, access to credit and sector of primary occupation of the household head were the significant factors that determine poverty status in the study area. The study concludes that poverty reduction in the rural areas requires effective targeting with educational programmes and most importantly, availability and accessibility of rural households to credit facilities in order to improve their income earning opportunities thereby enhancing their welfare.

Keywords: *Micro-credit, Poverty, Rural households, Ogun State,*

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Introduction

Poverty is prevalent, deep and severe in large parts of the world. As a result, poverty reduction strategies have been at the centre stage of development programmes and policies globally (Kijima *et al,* 2006). Recognizing the potential that the poverty menace poses to human existence, the member states of the United Nations at the millennium summit in 2000, decided to combat global poverty by halving the number of poor people by 2015. However, the progress towards this global target has been very slow especially in sub-Saharan Africa where the number of people living in abject poverty continues to grow (Mondal, 2009). Concerned with the slow achievement thus far in Sub-Saharan Africa, governments, donor agencies and researchers, have been trying to identify the means to achieving the world's Millennium Development Goals (MDGs).

In Nigeria, 54.4% of the population is below the poverty line, out of which 36.6 % of the total population is living in extreme poverty (NBS, 2005). In other words, 76.6 million Nigerians are in poverty out of an estimated population of 140 million. Also, 67 % or two-thirds of Nigeria's rural population are poor compared to 57.9 per cent in urban areas (CWIQ, 2006). With only five years away from the target date for achieving the MDG goal on the reduction of poverty and hunger, the rural poverty situation is still overwhelming because rather than declining, there has been an increase in poverty incidence over the past decade. The rate of poverty reduction achieved, if any, is far below what is required to achieve the MDG poverty reduction goal. The truth of the Nigerian situation is that the benefits of development have bypassed large segments of the rural society which have been neglected in a country that is vastly rich in oil and other mineral resources and yet is home to extremely poor people (Okoronkwo, 2007).

One of the most critical problems of development in the rural areas is the lack of access to rural credit facilities from the formal financial institutions. This may be due to the lengthy appraisal of applications for formal credit and requests for collateral made by the financial institutions which is practically nonexistent for the poor. On the other hand, credit facilities, from the informal sectors although timely, are often accompanied with high interest rates which make them unprofitable for the poor small holders (Fasoranti, 2010). In view of these problems, various government in Nigeria have attempted several micro-credit programs such as Agricultural Development Programs (ADPs), Rural Banking Scheme, Family Support Programme among others, to alleviate poverty. All the programs were directed at improving the productive base for sustainable growth. However, most of the efforts at purveying micro credit to alleviate poverty were largely irrelevant, urban structured from the standpoint of the realities of understanding the poor (Akanji, 2001).

Micro-credit is a system of credit delivery and savings mobilizing scheme especially designed to meet the unique financial requirement and improve the welfare status of the poor. This is through access to additional capital without collateral and by instantaneously creating self-employment and generating income (Morduch, 2000). Micro-credit provides the poor with the ability to take advantage of opportunities that will, otherwise, would have been impossible. It also helps the poor to protect themselves against risks of crises and uncertainties whenever they occur (Akanji, 2001). In other words, access to microcredit in the rural areas, where most of the poor reside, is crucial as a potent poverty reduction tool. This is because it translates to increased production level, increased income, improved household welfare and consequently, reduced poverty level. Also, availability of and accessibility to credit could help the poor in smoothening consumption during periods of income shortfalls and hence hasten development among the rural populace. This study therefore seeks to establish the importance of availability and accessibility of microcredit to the poor and thereby contributes to the empirical literature on access to rural credit facilities as an effective poverty alleviation tool in Nigeria.

2. Methodology

2.1. Study area

This study was carried out in Obafemi-Owode Local Government Area of Ogun State which has an area of 1,410 km² and a population of 228,851 according to the 2006 National Population census. Notable food crops cultivated in the area include cassava, maize and yam. Off farm activities of the households include trading, carpentry, bricklaying and processing of agricultural produce.

2.2. Data

The study employed a multistage sampling procedure in selecting the representative households. The first stage was the random selection of Obafemi-owode LGA as the study area. The second stage involved a random selection of four wards from the twelve wards in Obafemi-owode LGA. In the final stage, 25 households were selected each from the four wards to make a total of 100 respondents. Primary data were collected from the representative households with the aid of well structured questionnaire. However, only data from 94 respondents were utilized for the study due to incomplete information from 6 of the households. Information was obtained on socio-economic characteristics such as household size, age of household head, marital status, household expenditure on food and non-food items, access to credit and income. Information was also extracted from secondary sources to complement the data.

2.3. Analytical method

The data were analyzed using simple descriptive statistics, Foster, Greer and Thorbecke (FGT) Poverty Index and the Logit regression method.

In line with most poverty studies (Dercon and Krishnan, 2000; Goh *et al.*, 2001; Haddad and Ahmed, 2003; Gahia *et al.*, 2007), per capita household consumption expenditure was used as a proxy for per capita household income in this study. In Nigeria as in most developing countries, it is easier for households to give information on their consumption than their earnings. Per capita household expenditures were calculated as the sum of per capita household cash expenditures on food and non food items and the value of own produced consumption based on local market prices. Thus, a relative poverty line was constructed based on the mean per capita household expenditure (MPCHHE) of the sampled respondents. Poverty categories were then established using the relative poverty lines for each of the periods as in Baulch and Mcculloch (1998); Gamba and Mghenyi (2004) and Gaiha *et al.*, (2007). Those who spent less than two-thirds of their MPCHHE were classified as poor (moderately) while non-poor are those who spent two-thirds or more of their MPCHHE (NBS, 2005). The poverty measure that was used in this analysis is the class of decomposable poverty measures by Foster, Greer and Thorbecke (FGT). They are widely used because they are consistent and additively decomposable (Foster *et al.*, 1984). The FGT index is given by:

$$P_\alpha = \frac{1}{n}\sum_{i=1}^{q}\left(\frac{z-y_i}{z}\right)^\alpha \qquad (1)$$

Where z is the poverty line defined as two-third of the Mean Per Capita Household Expenditure (MPCHHE); y_i is the value of poverty indicator/welfare index per capita in this case per capita expenditure in increasing order for all households; q is the number of poor people in the population of size n, and α is the

poverty aversion parameter that takes values of zero, one or two. By setting the value of α to zero, one, two respectively, the FGT poverty measure formula delivers a set of poverty indices. Logit model was used to analyze the effect of access to microcredit and other socio-economic characteristics on the poverty status of households. The logit model postulates that the probability (P_1) of being poor is a function of an index (Z_i), where (Z_i) is an inverse of the standard logistic cumulative function of P_i i.e. $P_i(y) = f(Z_i)$ and given by:

$$P_i = \frac{1}{1+e^{-(\beta_1+\beta_2 X_i)}} \qquad (2)$$

For ease of expression we can rewrite equation 1 as:

$$P_i = \frac{1}{1+e^{-Z_i}} = \frac{e^{z_i}}{1+e^{Z_i}} \qquad (3)$$

Where $Z_i = \beta_1 + \beta_2 X_i$; and if (1-Pi) be the probability of not being poor given by:

$$1-P_i = \frac{1}{1+e^{-Z_i}} \qquad (4)$$

then equation 4 can be re-expressed by:

$$\frac{P_i}{1-P} = \frac{1+e^{Z_i}}{1+e^{-Z_i}} = e^{Z_i} \qquad (5)$$

Taking the natural log of equation 5 we obtain the following:

$$L_i = In\left(\frac{P_i}{1-P_i}\right) = Z_i = \beta_1 + \beta_2 X_1 + \text{---}$$
$$\beta_k X_k + u_i \qquad (6)$$

The logistic function is useful because it can take as an input any value from negative infinity to positive infinity, whereas the output is confined to values between 0 and 1. The variable *Z* represents the exposure to some set of risk factors, while *f*(*z*) represents the probability of a particular outcome, given that set of risk factors. The variable *z* is a measure of the total contribution of all the risk factors used in the model and is known as the logit. The β's are called the "regression coefficients" of while the intercept is the value of *z* when the value of all risk factors is zero. Each of the regression coefficients describes the size of the contribution of that risk factor. A positive regression coefficient means that, the risk factor increases the probability of the outcome, while a negative regression coefficient means that, the risk factor decreases the probability of that outcome; a large regression coefficient means that the risk factor strongly influences the probability of that outcome; while a near-zero regression coefficient means that that risk factor has little influence on the probability of that outcome.

3. Results and discussion

3.1. Socio-economic summary

The summary of the socio-economic characteristics of households in Obafemi-Owode LGA of Ogun state, is shown in Table 1. The table reveals that majority of the respondents were males (74.5%) and between the ages of 40 and 60 (70.2%). The average age of the respondents stood at 48.8±15.3 years while household heads aged 48 were the most common in the study area. This is suggestive of rural-urban drift in the study area. Most of the respondents are married (60.7%), with household size ranging from between 1 to 25 persons. However, the average household size of the respondents stood at 5±3.29 with a larger proportion (49.0%) of the

Table 1: Socio-economic characteristics of respondents

Variables	Frequency	Percentage
Gender		
Male	70	74.5
Female	24	25.5
Age		
≤ 29	4	4.3
30 – 39	10	10.6
40 – 49	37	39.4
50 – 60	29	30.8
Above 60	14	14.9
Marital Status		
Single	7	7.5
Married	57	60.7
Widowed	15	15.9
Divorced	15	15.9
Household size		
1-5	46	49.0
6-10	38	40.4
11 and above	10	10.6
Educational status		
No formal education	30	31.9
Primary education	21	22.3
Secondary education	23	24.5
Tertiary education	20	21.3
Occupation		
Farming	39	41.1
Private/public paid employee	29	31.2
Artisans	25	26.9
Credit		
Access to credit	23	24.5
No access to credit	71	75.5
Land Ownership		
Own land	64	68.1
Do not own	30	31.9

households falling between household sizes of 1-5 (Table 1).

A greater percentage of the respondents as had no formal education (31.9%), while highlights of the occupation analysis showed that most of the households (41.9%) were engaged in farming activities as their major source of income as shown in the table. The distribution of household heads by access to credit facilities in Table 1 shows that majority of the respondents (75.5 %)have no access to credit. This implies that they may not be able to obtain necessary inputs for the expansion of their income generating activities and are likely to be poor, while 24.5 percent had access to credit. Households that owned land also constituted the majority (68.1%) in the study area.

3.2. Poverty profile

The mean per capita household expenditure (MPCHHE) for the respondents stood at ₦9419.08 while the two-thirds MPCHHE amounted to ₦6279.33. Hence households were classified as being moderately poor if their mean per capita expenditure was below ₦6279.33. The head count poverty indices of the respondents showed that most (64.9 %) of the respondents were poor, indicating that 61 households were below the poverty threshold (Table 2).

Table 2: Poverty status of respondents

Poverty Status	Frequency	Percentage
Poor	61	64.9
Non-poor	33	25.1
Total	94	100

A further decomposition of poverty status of respondents by access to credit (Table 3) revealed that majority of the respondents without access to microcredit (57.5 percent) were moderately poor while of those that had access to credit, majority (17 percent) were non poor. This is an indication that a strong financial base for rural households might be a strong policy tool for poverty alleviation in Nigeria as access to microcredit is expected to enhance the development of small and medium scale enterprises (SMES) in the rural areas, increase household income and consequently reduce poverty. The poverty profile of respondents in the study area as shown in Table 4 indicates that households with heads older than 60 years were found to be the poorest also female-headed households were found to be poorer compared to their male counterparts. With respect to household size, households with more than eleven persons were the poorest. That is, poverty decreased with reduction in household size. Although, household size tends to reduce per capita expenditure, it can also enhance it depending on the distribution of household members between adult and children, and whether such adults are working. This means that having a family which includes more incoming earning members thus a lower dependency ratio reduces poverty.

The educational status distribution revealed that poverty decreased with increase in educational attainment of the household head while households where the respondents were married and living with their spouses (especially if both of them are working) were found to be less poor than households where the household heads are either single or widowed. This is because the husband and wife are expected to jointly cater for household needs. Highlights of the occupational analysis revealed that

Table 3: Poverty status of respondents by access to microcredit

Access to microcredit	Moderately Poor		Non-poor	
	Frequency	Percentage	Frequency	Percentage
Yes	7	7.4	16	17.0
No	54	57.5	17	18.1
Total	61	64.9	33	35.1

households engaged in farming as their primary occupation were poorer than those engaged in other income generating activities (e.g. trading, salaried job and artisans) as their primary source of income. This is expected because for many households in Nigeria especially in the rural areas, agriculture is the predominant occupation. It also confirms the results of previous and current analyses of poverty, that poverty is disproportionately concentrated among households whose primary livelihood lie in agriculture (FOS, 1999; NBS, 2005). This can be attributed to the fact that farming is highly prone to natural hazards like drought, flood, pest and disease infestation and so on. These factors and many more (low prices during peak of harvesting, poor infrastructural facilities) contribute to a reduction in the returns that can be reaped from farming and invariably leads to a sizeable reduction in income of the individuals belonging to these households. Further, household heads without access to microcredit were found to be poorer than those with access to credit. This could be attributed to the fact that credit is a measure of financial capital needed for acquisition of inputs to improve livelihood activities. Access to credit therefore translates to increased production level, increased income, improved household welfare and consequently, reduced poverty level. Also, availability of and accessibility to credit could help the poor in smoothening consumption during periods of income shortfalls.

3.3. Empirical result

Table 5 presents the logit regression results. The statistically significant value of chi-square of 511.76 is an indication that the data set fits the model. The significant factors influencing poverty status in the study area include: age of household head, access to credit, secondary and tertiary education of household head, household size and primary occupation of the household head. While age, household size, primary occupation of household head (farming) increased the likelihood of being poor, access to micro-credit, secondary and tertiary education of household head decreased the likelihood of poverty in the study area. The marginal effects of each of the variables are presented in Table 5.With respect to the age of the household head, the positive coefficient implies that a year increase in the age of the household head increased the likelihood of poverty by 0.016. This could be attributed to the fact that as household heads get older, they become economically inactive which in turn affects their productivity, income and

Table 4: Poverty profile of respondents

Variable	P_o	P_1	P_2
Sex			
Male	0.20	0.34	0.16
Female	0.38	0.46	0.24
Educational status			
No formal	0.47	0.48	0.28
Primary	0.45	0.41	0.26
Secondary	0.30	0.44	0.21
Tertiary	0.18	0.32	0.16
Access to credit			
Yes	0.07	0.10	0.13
No	0.58	0.47	0.21
Age (years)			
Less than 30	0.20	0.15	0.12
30 – 39	0.30	0.27	0.23
40 – 49	0.10	0.18	0.13
50 – 60	0.27	0.21	0.24
Above 60	0.58	0.47	0.38
Household size			
1-5	0.25	0.43	0.22
6-10	0.32	0.42	0.20
11 and above	0.39	0.61	0.36
Primary			
Farming	0.45	0.32	0.23
Non-Farming	0.29	0.26	0.12
Marital			
Single	0.48	0.40	0.28
Married	0.34	0.42	0.21
Widowed	0.59	0.49	0.35

subsequently increase their poverty. This result corroborates the findings of Haddad and Ahmed (2003). The size of the household was also found to be a strong factor affecting poverty in the study area. Results showed that poverty increased with increase in household size (Swanepoel, 2005). Specifically, an additional member of household increased the likelihood of poverty by 0.116. The impact of large family size as earlier discussed is such that it reduces the per capita expenditure of the family, thereby aggravating poverty in the household.

The positive and significant coefficient of the dummy of primary occupation (that is whether households were primarily engaged in farming activities) connotes that household heads engaged in farming as their primary occupation have a higher likelihood of being poor than those engaged in other income generating activities (Omonona, 2001). This can be attributed to the fact that agriculture can be adversely affected by weather related shocks which can generate substantial income variability and ultimately translate into consumption short falls. The regression coefficient for credit access was negative and significant at one percent indicating that access to credit decreased poverty in the study area. Access to credit is a very powerful tool which empowers the poor to break the vicious cycle of poverty by creating self-employment and improving both individual and household welfare through building of assets. These assets may include; financial assets (income generation, savings and investments), human assets (individual skills, knowledge and ability to do work), physical assets (housing, land acquisition) and social assets (networks, acceptance and

increased access to society and social institutions. Access to credit also promotes and finances investment in human capital like education as well as access to good services. At the farmers level, access to credit promote high yield and productivity through the acquisition of improved qualities of inputs such as seeds, fertilizer and so on, leading to increased profitability, income and farmers' welfare. Although, poverty decreased with increase in educational attainment, the coefficient of primary education was not significant and was positively correlated with poverty. In this instance, a household head with primary education increased the likelihood of being poor. Expectedly, the sign of the coefficients of secondary and tertiary education dummies were negative and significant. This is an indication that increased educational attainment of the household head strongly affects poverty. This could be through assisting household heads in getting good jobs and taking opportunities which otherwise would not have been possible. The overall effect of this is increased income which translates to increased per capita expenditure and consequently improved welfare and standard of living of household members. This result supports the findings of Gaiha *et al.* (2007) and Imai *et al.* (2009).

4. Conclusion

This paper examined the effect of access to microcredit on households' poverty status in Obafemi-Owode local Government area of Ogun state. The study shows that majority of the poor households in the study area are male-headed with no formal education or

Table 8: Logistic regression marginal effects results

Variable	Coefficient	Standard error	z-value
Primary edu.	0.080	0.056	1.38
Secondary edu.	-0.158	0.060	-2.29**
Tertiary. Edu.	-0.283	0.032	-3.88***
Married	2.940	2.056	1.43
Widow	-0.029	0.062	-0.48
Age	0.163	0.091	1.75*
Household size	0.116	0.016	7.89***
Access to microcredit	-0.135	0.047	-2.63***
Ownland	0.013	0.019	0.69
Landsize	-2.287	2.264	-1.01
Primary Occupation	0.164	0.082	1.92*
Farm experience	0.241	0.174	1.38

Log likelihood -425.46

Chi ^{2} 511.76 Prob > Chi^2 = 0000

**** Significant at 1% , ** at 5%, * at 10%*

access to credit while the econometric analysis shows that age, secondary and tertiary education of household head, access to credit, household size and primary occupation of household head are the significant variables or factors that determine poverty status in the study area.

Based on the foregoing, there is a need for Government to invest in human capital in the rural areas, educate and create awareness on the benefits of small family size (for instance, through enlightenment campaigns) and establish micro-credit institutions effectively targeted towards meeting the financial needs of the rural populace. It is suggested that credit/loan facilities should be made available and accessible to target households at moderate interest rates to reduce the impact of income risks. Government could also assist through relaxation of any stringent guidelines in securing formal credit.

References

Akanji, O.O. (2001) Micro-finance As a Strategy For Poverty Reduction: *CBN Economic and Financial Review*, Vol.39 NO. 4.

Baulch, B. and McCulloch, N. (1998) "Being Poor and Becoming Poor: Poverty Status and Poverty Transitions in Rural Pakistan." *IDS Working Paper No. 79*. Institute for Development Studies: Sussex.

Core Welfare Indicator Questionnaire Survey Report (2006) National Bureau of Statistics, Abuja, Nigeria

Dercon, S. and Krishnan, P (2000) "Vulnerability, Seasonality and Poverty in Ethiopia", *Journal of Development Studies*, Vol. 36 (6) .

Fasoranti, M. M. (2010) The Influence of Micro-credit on Poverty Alleviation among rural dwellers: A Case Study of Akoko North West Local Government Area of Ondo State. African Journal of Business and Management, Vol.4 (8) pp.1438-1446.

FOS Poverty Profile for Nigeria (1999) A Statistical Analysis of 1996/97 National Consumer Survey. Federal Office of Statistics, Nigeria.

Foster, J. Greer, J. and Thorbecke, E. (1984) "A Class of Decomposable Poverty Measures" *Econometrica* 52(1).

Gaiha, R., Imai, K. and Woojun, K. (2007) Vulnerability and Poverty Dynamics in Vietnam. *Economics Discussion paper* No 0708.

Gamba, P. and Mghenyi, E. (2004) Rural Poverty Dynamics, Agricultural Productivity and Access to Resources, *Working Paper 21*, Tegemeo Institute of Agricultural Policy and Development, Kenya.

Goh, C., Bourguignon, F. and Kim, D.(2001) Estimating Individual Vulnerability Using Pseudo-Panel Data, *World Bank Policy Research Working Paper* 3375.

Haddad, L. and Ahmed, A. (2003) "Chronic and Transitory Poverty: Evidence from Egypt, 1997–99". *World Development* 31: 71–85.

Imai, K., Wang, X. & Kang, W. (2009). Poverty and Vulnerability in Rural China: effects of taxation. *Chronic Poverty Research Centre Working paper*, Nos. 156

Kijima, Y., Matsumoto, T. and Yamano, T.(2006) Nonfarm employment, agricultural shocks, and poverty dynamics: evidence from rural Uganda. *Agric. Econ. 35* (Suppl),459 – 467.

Mondal, W.I (2009) Poverty Alleviation and Microcredit in Sub-Saharan Africa. *International Business & Economics Research Journal* Vol. 8, Nos. 1.

Morduch, J. (2000) The Microfinance Schism, *World Development*, 28: (4), 617-29 .

National Bureau of Statistics (2005)"Poverty Profile for Nigeria". NBS Office, Abuja, Nigeria.

Okoronkwo, N.(2009) Rural Poverty: a cog in the development Wheel? Retrieved June 16, 2009 from http://media 21 geneva.org/index.php.

Omonona, B. T. (2001). The Determinants of Poverty among Farming Households in Kogi State, Nigeria Unpublished PhD Thesis, University of Ibadan, Ibadan.

Swanepoel, C. (2005). "Poverty and Poverty Dynamics in Rural Ethiopia", *Stellenbosch Economic Working Papers* 3/ 2005, University of Stellenbosc.