THE EFFECT OF MICRO ENTERPRISE FINANCING ON FARMERS WELFARE IN ABIA STATE, NIGERIA

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ABSTRACT
This study was on the effect of micro enterprise financing on farmers welfare in Abia State, Nigeria. Both primary and secondary data were used for the study. Primary data were collected using well structured questionnaire and interview schedules while secondary data were from texts, journals and other relevant reports and documents. Micro enterprise farmers used for the study included crop, livestock, poultry and fish farmers. A multi-stage random sampling technique was employed in the selection of the farmers used for the study. Data collected were analyzed using multiple regression analysis and Chow's test. Result of the study revealed that microloan, physical assets, farm size, age and education were the significant determinants of the welfare of the farmers with micro loan, while for the farmers without microloan, physical assets, household size and education were the significant factors affecting their welfare. The pooled sample result revealed the significant factors affecting the farmers' welfare to be micro credit, physical assets, farm size, household size and education. The chow's test revealed a significant difference between the welfare of the farmers with micro loan and those without micro credit. Micro enterprise farmers who obtained micro credit to finance their business had better welfare status that those that did not.

Key words: Micro Enterprise, Financing, Welfare, Abia State,

INTRODUCTION

Micro enterprise financing is the provision of financial services to the poor who are not served by the more conventional financial institutions (CBN, 2006). Micro finance on the other hand can be viewed as a cash or credit used in financing the business activities of micro enterprises which could be in form of credit facilities like bank credits, travel credits or discounts, etc or could be in form of physical cash (Anugwom, 2002). Micro finance has three features that distinguished it from other financial products, viz, smallness of loan advanced or savings mobilized and the absence of asset-based collateral and the simplicity of operations.Robust economic growth can not be achieved without putting in place well focused programmes to reduce poverty through empowering the people by increasing their access to factors of production especially credit. Okumadewa (1998) noted that poverty in Nigeria is synonymous with rural farmers with 14.2 million of the extremely poor farmers being from the rural areas. This is made up of small-scale farmers, food processors, informal traders and other micro enterprises, which account for about two-third of the population living in poverty. Rhyme and Otero (1992) noted that financially sustainable micro finance institutions (MFIS) with high outreach have a greater likelihood of having positive effect on poverty alleviation because they guarantee sustained access to micro credit by the farmers. Outreach is defined as the ability of micro finance institutions to provide high quality financial services to a large number of clients (Youssoufou, 2002). Sustainability on the other hand requires MFIS to meet all the transaction costs, including loan, losses, financial cost, administrative cost, etc with some return on equity, which will all ensure renewal and self sustenance (Anyanwu, 2004)However, the most pertinent issue is how the financing of micro enterprises affects the welfare of the farmers. Welfare in this regard can be viewed as a situation of sustained secular improvement in the material wellbeing, which may be reflected in the increased flow of goods and services. This concept is supposed to address the farmers' problems of having access to fund, education, productive resources and other necessities of earning a living.

The establishment of micro finance institutions has become more necessary as a recent study by CBN (2006) indicated that the formal financial institutions provide services to about 35 percent of the economically active population, while the remaining 65 percent are excluded. According to the report, the 65 percent that are excluded are often served by the informal financial sector, through non-governmental organizations (NGOs), micro finance institutions, money lenders, friends, relatives and credit unions. Farmers fall into this later category.

According to Zeller and Sharma (1998), access to credit positively affects household welfare through the reduction of financial constraints faced by the farmers on agricultural inputs, food and essential non-feed items incurred during the planting and vegetative growth period of crops. Since returns are received after the crop might have been

harvested, most households show negative cash flow during the planting season. Hence the productive inputs of the farm households are either financed through savings or credit.

Micro finance provide stable and sustainable source of income that enable clients including poor farmers to climb steadily out of poverty, while providing better living conditions and opportunities for their household. For some farm households, it may mean better nutrition while for others it means having money to finally send their children to school (Daily Champion, 2006). Burkley (1997) argued that improvement in access to microfinance and market will not be sufficient without accompanying changes in the undertakings themselves. While Burga (1989) noted that micro credit tend to stabilize rather than create jobs, Zeller and Sharma (1998) noted that micro credit help to establish and expand family enterprises.

Balogun and Olu (1991) argued that the factor militating against the effectiveness of microfinance policies include lack of viable technologies and defective production environment. Farmers with access to micro credit will adopt innovations more rapidly than those without access to micro credit. Thus, the importance of microfinance cannot b e over emphasized. The adoption of innovations for increase in resource productivity and the process of adoption of innovation require farmers to increase expenditure on production input, equipment and machines to enhance the techniques of farming, thereby increasing the level of agricultural production and well being of the farmers. For the above reasons, Olomola (1998) noted that there is the need to strengthen the financial capacity of farmers. This could be done through micro enterprise financing.

According to CBN (2006) document on microfinance policy, regulatory and supervisory framework for Nigeria, microfinance is about providing financial services to the poor who are traditionally not served by the conventional financial institutions. Funding of micro enterprises could ensure the flow of funds to the rural poor who have ideas of what to do to earn a decent living but are hindered by lack of money. The conversion of community banks to micro finance banks is a shift of focus towards ensuring that such institutions are equipped for their roles (Daily Champion, 2007); and they cold only play the desired roles if a new direction is charted for them.

The above scenario has made it very necessary and indeed imperative to assess the effect of micro enterprise financing on farmers welfare in Abia state of Nigeria. This forms the thrust of this paper. It ascertained whether there were significant differences in the welfare of farmers with micro credit those without micro credit.

METHODOLOGY

This study was conducted in Abia State of Nigeria. Abia state has a land mass of 6,320 square kilometers, a population of 4,222,476 people and a gross domestic product (GDP) of $8.69 billion and per capita of $3,003 (C-GIDD, 2008). The State lies approximately between latitude $4^{o}\ 40^{I}$ and $6^{o}\ 14^{I}$ North and longitude $7^{o}\ 10^{I}$ and 8^{o} East. It shares common boundaries to the north with Ebonyi State; to the south and southwest with Rivers State; and to the east and southeast with Cross River and Akwa Ibom States respectively. To the west is Imo State and to the northwest is Anambara State. Abia State is made of 17 Local Government Areas (LGAs) and 3 Agricultural Zones. The Zones are Ohafia, Umuahia and Aba; with 5, 5 and 7 LGAs respectively.

Both primary and secondary data were use for the study. Primary data were collected using well-structured questionnaire and interview schedules while secondary data were from texts, journals and other relevant reports and documents. Micro enterprise farmers used for the study included crop, livestock, poultry and fish farmers.

A multi-stage random sampling technique was employed in the selection of the respondents used for the study. The first phase involved the selection of one Agricultural Zone out of the 3 Agricultural Zones in the State. The second phase involved the selection of 2 Local Government Areas (LGAs) from the Zone. The selection of 5 communities from each LGA formed the third phase. At the fourth phase, 5 farmers were selected each from 2 villages in each community. This yielded a sample size of 100 respondents. The respondents were made up of 50 farmers who received micro credit and 50 who do not receive micro credit.

Data collected were analyzed using multiple regression analysis and Chow's test. The implicit model of the welfare function is given by:

$W = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8)$ …(1)
Where: W = welfare (expenditure on food, education and other consumables)
X_1 = micro credit (amount of loan received by farmers in naira)
X_2 = household income (in naira)
X_3 = physical assets of the farm, equipment, real value of livestock and crop and non farm assets (in naira)
X_4 = farm size (hectare)
X_5 = household size (number of persons in the household)
X_6 = labour (mandays)
X_7 = age of household head (in years)
X_8 = years of formal education

Four functional forms (linear, exponential, semi-log and double log) were fitted and the best fit was chosen as the lead equation based on the number of significant variables, the conformity of the sign borne by the variables to *a priori* expectations and the magnitude of the coefficient of multiple determination.

The Chow's test involved testing the equality of coefficients obtained from different samples in 2 regressions. The 2 samples to be tested here for equality are the welfare of farmers with micro loan and those without micro loan. The test is given by:

$$F^* = \frac{[\Sigma e^2_3 - (\Sigma e^2_1 + \Sigma e^2_2)] / [k_3 - k_1 - k_2]}{(\Sigma e^2_1 + \Sigma e^2_2) / (k_1 + k_2)} \quad (2)$$

Where in (2):

Σe^2_3 and k_3 = the error sum of square and degree of freedom respectively of the pooled data
Σe^2_1 and k_1 = error sum of square and degree of freedom respectively of the sample of migrant remittance receiving household
Σe^2_2 and k_2 = error sum of square and degree of freedom respectively of the sample of non-remittance receiving household

The decision rule is to reject the null hypothesis which state that there is no significant difference between the welfare of the farmers with micro loan and those without micro loan, if $F^* > F_{0.05}, V_1, V_2$ degrees of freedom; otherwise accept.

RESULTS AND DISCUSSION

The result of the regression analysis with micro loan as one of the explanatory variable is presented in Table 1. From Table 1, the exponential function was chosen as the lead equation based on the criteria
outlined earlier. The coefficient of multiple determination was 0.868 which implies that 86.8 percent of the variations in the welfare of the farmers were accounted for by the variables included in the model. The F-ratio is significant at 1 percent level, which attests that the data fits the model.

Micro credit or loan, physical assets, farm size, age and education were the significant determinants of the welfare of the farmers. Specifically, micro credit/loan has a positive significant effect on welfare of the farmers. This implies that the more the amount of loan received by the farmer, the more improved his welfare would be. This result is consistent the findings of Zeller and Sharma (1998). They noted that micro loan positively affects household welfare through reduction of financial constraints faced by the farmers on agricultural inputs, food and other essential non-food items incurred during the planting and vegetative growth period of crops. Kabber (2001), Pitt and Khandker (1995) and Rahman (1986) noted that the positive impact of micro credit goes beyond economic empowerment. Using other impact assessment criteria, they concluded that micro credit had positive impact on the recipients' asset ownership, political awareness and joint decision making. Both the economic and non-economic positive impact of micro credit contributes to theenhancement of the recipients' welfare

Table 1: Welfare with micro loan as an explanatory variable

Variable	Linear	Double log	Semi log	Exponential +
Constant	3.969	0.925	3.350***	-56.270
	(0.229)	(0.437)	(6.716)	(-1.187)
X_1 (Micro loan)	0.394***	0.331*	1.113E-02***	11.840***
	(2.941)	(1.918)	(2.948)	(3.060)
X_2 (Household income)	-0.205**	3.783E-02	-5.640E-03*	-0.282
	(-1.680)	(0.227)	(-1.610)	(-0.075)
X_3 (Physical asset)	1.330**	7.679E-02	1.866E-02	4.871**
	(2.046)	(0.731)	(0.999)	(2.068)
X_4 (Farm size)	-8.006	-0.180	-0.299	-3.641*
	(-0.535)	(-1.488)	(0.694)	(-1.544)
X_5 (Household size)	0.321	2.388 E-03	-3.200 E-02	8.512
	(0.151)	(0.070)	(-0.525)	(1.034)
X_6 (Labour)	0.481*	-1.310 E-02	1.020 E-02	0.482
	(1.504)	(-0.051)	(1.110)	(0.840)
X_7 (Age)	0.145	0.745	-6.800 E-04	16.077*
	(0.630)	(1.411)	(-0.103)	(1.760)
X_8 (Education)	0.549	0.245	1.270 E-02	10.300*
	(0.960)	(1.223)	(0.786)	(1.566)
R^2	0.574	0.754	0.492	0.868
F-ratio	4.789***	3.840***	3.466***	6.964***

Source: Survey data, 2007
*****, **, * indicate 1%, 5%, and 10% significance levels respectively**
+ = Lead equation

Physical assets have a positive and significant effect on welfare. This implies that farmers with greater asset endowment have better welfare. This agrees with Quartey (2006). He noted that Physical asset endowment influences household welfare positively and that farmers or households with larger livestock units have higher income which bears a direct effect on welfare.

Farm size has a negative effect on welfare which implies that the greater the hecterage cultivated, the less the welfare of the farmer. This however does not conform to *a priori* expectation. The negative relationship might be as a result of the unproductiveness of the land cultivated by the farmers or for reasons of crop failure, which reduced output and income of the farmer.

Age of household head has a positive significant effect on welfare. The result implies that household welfare increases as the age composition of the household increases. This is consistent with Ukoha *et al.* (2007) and the life cycle hypothesis, which postulates that demographic variables affect consumption and welfare (Ando and Modigliani, 1963). Also, education has a positive effect on the welfare of the farmers. This is consistent with *a priori* expectations. The higher the educational attainment, the more efficient the person is in resource use, less risk averse and the more readily innovations (use of micro loan) are accepted. Consequently, this increases their productivity and income level thereby improving their welfare status.

The result of the factors affecting the welfare status of the farmers without micro loan is shown in Table 2. The exponential functional form was chosen as the lead equation. Physical assets, household size and education were the significant factors affecting the welfare of the farmers. Physical assets was negatively and significantly related to welfare at 5 percent level of significant. This implies that as the farmers acquire more assets, the welfare status decreases. This does not conform to *a priori* expectations. This could be because as a result of low level of acquisition of assets in the absence of micro credit.

Table 2: Welfare without micro loan as an explanatory variable

Variable	Linear	Double log	Semi log	Exponential +
Constant	2.835	0.972	2.594***	-76.685*
	(0.224)	(0.759)	(7.257)	(-1583)
X_2 (Household income)	-0.204	0.136	-1.480 E-03	3.597
	(-1.109)	(1.378)	(-0.285)	(0.962)
X_3 (Physical asset)	-0.375*	-5.690 E-02	-8.66 E-03	-3.188*
	(-1.566)	(1.077)	(-1.280)	(-1.594)
X_4 (Farm size)	-0.874	1.596	2.43 E-03	0.599
	(-0.146)	(0.988)	(0.014)	(1.012)
X_5 (Household size)	1.241	0.425*	6.533 E-02	12.944**
	(0.690)	(1.818)	(1.286)	(2.034)
X_6 (Labour cost)	0.883***	0.200**	1.648 E-02***	9.831***
	(4.042)	(1.964)	(2.672)	(2.517)
X_7 (Age)	0.113	7.466 E-02	7.849 E-04	8.385
	(0.520)	(0.258)	(0.128)	(0.865)
X_8 (Education)	-1.942 E-02	-565.024*	-0.647**	10361.887*
	(-1.683)	(-1.798)	(-2.276)	(1.747)
R^2	0.401	0.315	0.310	0.336
F-ratio	4.102***	3.673***	2.750***	4.040***

Source: Survey data, 2007
*****,**, * indicate 1%, 5%, and 10% significance levels respectively**
+ = Lead equation

Labour has a positive and significant effect on welfare. This could be as a result of sourcing of labour from the family rather than hiring, thereby increasing the savings ability of the farmers, which will improve the welfare status. This result is consistent with Ukoha *et al.,* (2007)

Table 3: Pooled welfare with micro loan as an explanatory variable

Variable	Exponential	Linear	Double log	Semi log +
Constant	10.135***	23730.558***	8.614***	-72787.864*
	(37.952)	(3.264)	(3.633)	(-1.470)
X_1 (Micro credit)	6.377 E-06***	0.136*	0.323***	10094.645***
	(2.503)	(1.960)	(2.406)	(3.607)
X_2 (Household income)	7.542 E-07	3.362 E-02	0.107	1911.626
	(0.216)	(0.345)	(0.749)	(0.640)
X_3 (Physical asset)	6.538 E-07	0.113*	1.911 E-02	3133.960**
	(0.306)	(1.933)	(0.290)	(2.281)
X_4 (Farm size)	-0.377	-23125.855*	-0.119*	2256.231*
	(-0.535)	(-1.488)	(0.694)	(1.544)
X_5 (Household size)	8.133**	3123.513***	0.143	13302.710**
	(2.151)	(3.039)	(0.476)	(2.129)
X_6 (Labour)	-9.492 E-07	0.438***	-0.256	-5024.702
	(-0.182)	(3.090)	(-1.381)	(-1.254)
X_7 (Age)	-2.570 E-02	-179.427*	0.232	2967.925
	(-0.607)	(1.557)	(0.732)	(1.360)
X_8 (Education)	-1.942 E-02*	565.024*	-0.647**	10361.887*
	(-1.683)	(1.557)	(-2.276)	(1.747)
R^2	0.121	0.239	0.631	0.793
F-ratio	2.770**	6.361***	6.635***	14.828***

Source: Survey data, 2007
*****, **, * indicate 1%, 5%, and 10% significance levels respectively**
+ = Lead equation

Education, just like in Table 1, has a positive effect on the welfare of the farmers. This is consistent with *a priori* expectations. The higher the educational attainment, the more efficient the person is in resource use, less risk averse and the more readily innovations (use of micro loan) are accepted. Consequently, this increases their productivity and income level thereby improving their welfare status.

The result of the factors affecting the welfare of the pooled sample is presented in Table 3. The semi log functional form was chosen as the lead equation in Table 3. From the Table, the R^2 value was 0.793, which means the 79.3 percent of the variations in the welfare of the entire farmers were explained by the variable included in the model.

Micro credit, physical assets, farm size, household size and education were the significant factors affecting the welfare of the farmers. Again, these significant variables had the expected signs. They were all positively related to the welfare of the farmers, which entails that their increase will lead to increase in the welfare of the farmers.

The Chow's test result revealed the calculated value, F*, to be 35.84 while the tabulated value, $F_{0.05, 9, 82}$, to be 2.25. Therefore, since the calculated value is greater than the tabulated value, we conclude that the farmers who could gain access to micro loan had better welfare status than those who could not.

CONCLUSION

From the results of this study, it can be concluded that micro enterprise is very essential in enhancing welfare of farmers. It has a positive significant effect on the farmers' welfare. Also, micro loan receiving farmers have better welfare status than the non-receivers. Owing to the present economic nature of the rural populace, it was recommended that micro enterprise farmers should as much as possible embrace the use of agricultural credit for increased purchase of inputs, and improved technological systems for subsequent increase in production which will help break the vicious cycle of poverty mostly experienced the rural area and enhance their welfare status. Also all barriers to the acquiring micro loans should be removed.

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