

**POVERTY REDUCTION, GENDER EQUALITY AND
MICRO-CREDIT ADMINISTRATION IN NIGERIA: THE CASE OF
THE FARMERS DEVELOPMENT UNION**

Adeolu B. Ayanwale,* Simeon A. Bamire and Taiwo Alimi

*Department of Agricultural Economics, Obafemi Awolowo University,
Ile-Ife, Nigeria. E-mail: aayanwa@oauife.edu.ng

ABSTRACT

Recent poverty studies in Nigeria indicate an increasing incidence with rural women being the most vulnerable. The situation is attributable to poor access to productive resources, most especially credit to women. Governments' inability to meet the demands for credit fully has resulted in the emergence of Non-Governmental Organisations (NGOs) such as the Farmers Development Union (FADU) that complement ongoing efforts. This paper has resulted from a study on FADU's micro-credit administration with the view to determining factors influencing its choice of micro-credit beneficiaries. The study entailed the use of a multi-stage random sampling procedure to select 200 beneficiaries in Ibadan in the Oyo State. Results reveal a conscious attempt to gender balance micro-credit administration in FADU. Most of the facility was short term (less than a production season of 9 months), and more than 90 percent of the loan requests were granted. The reported income obtained by men was more than that obtained by women; however, the income obtained by both was more than their income before joining the program. Furthermore, the average income obtained by the beneficiaries was more than the acknowledged threshold income of \$1.00 per day. In other words, the micro-credit enabled the beneficiaries to move out of the income poverty line. The use of a probit analysis revealed that farming experience, savings and total number of people in the household were key determinants in the selection of beneficiaries. The analysis revealed a 1.2 percent likelihood that micro-credit facility would be extended to women, compared to men, who have more years of experience.

KEY WORDS: Micro-credit, Poverty Alleviation, Gender, Non-Governmental Organizations, income poverty

INTRODUCTION

It is widely acknowledged that the incidence of poverty in Nigeria is rising, in spite of ongoing poverty alleviation measures and programmes (UNDP-Nigeria, 1998; FOS, 1999; World Bank, 1999). Although the poverty level declined from 46.3 percent in 1985 to 42.7 percent in 1992, it rose sharply to 65.6 percent of the population in 1996 (FOS 1999).

Poverty in Nigeria is largely a rural phenomenon, attributable to the agrarian economies of rural peoples. Studies in 1996 reveal that 69.8 percent of rural populations were poor compared to 58.2 percent of urban population (FOS 1999). Usually, the major source of income (of the poor) is agriculture and poverty is more prevalent among smallholder farmers (Schubert 1994). The poverty level of the agricultural sector in Nigeria was estimated at 71.0 percent in 1997 (UNCCA 2001).

Research reports and official documents show that poor people in Nigeria tend to be concentrated in communities that lack the benefits of modern development. Rural areas and urban fringes have a slightly higher concentration of poor people. For instance, the World Bank (1990) noted that more than 80 percent of all poor in Africa live in rural areas.

Another attribute of Nigeria's poverty is its gender bias. Findings from a poverty and development study conducted by the World Bank and DFID in Nigeria using a Participatory Poverty Assessment Method, indicates a gender bias. It revealed that women were more likelihood to have very limited coping strategies and safety nets, and were constantly living with a sense of insecurity (World Bank, 1999).

Other studies show that there is unequal gender access to productive resources such as land, labour and capital at the farm level (Ajetomobi, 1995; Ajao, 2000). In 1997, a sample survey conducted in five states of Nigeria showed that fewer women, compared to men farmers, had access to credit facilities. Furthermore, female compared to males were more likely to be granted smaller amounts of credit (UNDP, 1997). In Lagos State, where the best gender equality ratio was obtained, 9.1 percent of women obtained credit access compared to 14.8 percent of men. In Kano State, only 1.7 percent of women obtained such facility. This analysis is important because credit is one way of increasing the productive capacity of smallholder farmers.

Iniodu and Ukpak (1996) identified finance as an indispensable tool of development. A poorly developed financial system is an obstacle to the development of wealth, enhancement of socioeconomic welfare and promotion of human capacity. Agriculture requires a vast amount of capital for successful operation. Capital is necessary for procuring vital inputs and services that would yield outputs that meet the needs of the farmer and the nation.

In fact, one key area of government intervention in agricultural growth and economic development is credit delivery. Unfortunately, the efforts of the Nigerian government in this area through formal credit institutions have not been effective. Many credit institutions have not been able to make a significant impact due to operational deficiencies including inadequacies in staffing, organization and management as well as poor loan recovery performance (Olomola, 1994).

Micro-credit programmes extend small loans to poor people for self-employment projects that generate income, allowing them to care for themselves and their fami-

lies. Such programmes, as anti-poverty tools, have great potential for empowering poor people, especially women, toward ending poverty (Odejide, 1997). Micro-credit programmes are important institutional devices for providing small credit to the rural poor in order to alleviate poverty (Latif, 2001). Available statistics reveal that micro-credit programmes have positive impact on household savings (Khan & Chowdhury, 1995; Proshika, 1995)

The liberalization of the economy, since the introduction of the Structural Adjustment Programme (SAP) in 1986, has tended to exacerbate the financial problems of rural people. Loanable funds from government sources have dwindled considerably. The cost of borrowing has escalated substantially and the financial outlay for business enterprises has multiplied several folds, irrespective of the scale of operation. In the face of glaring inability of formal source(s) of finance to meet the needs of rural poor farmers, informal sources took up the challenge. This has been in the form of the participation of non- governmental organizations (NGOs) in agricultural sector credit delivery.

NGOs are notable in the area of micro-finance, which is a "major anti—poverty strategy," supported by several international organizations. While the rapid multiplication of these NGOs are appreciated, the extent to which these bodies have been able to overcome the inherent challenges of traditional credit administration practices while creating effective community development finance programmes are yet to be documented properly. Several NGOs are in operation now but notable among them are the Farmers Development Union (FADU), Lift Above Poverty Organisation (LAPO), Community Development Foundation (CDF), Community Women and Development (COWAD).

FADU is a leading NGO micro credit administrator. It was founded in 1989 as a federation of six low-income rural producers associations devoted to the enterprise development of grassroots organizations. Currently, FADU has 108 rural offices in 29 states of Nigeria with a membership of over 500,000. It's headquarters is in Ibadan, the Oyo state capital. FADU is acclaimed for its significant role in the use of innovative approaches to micro finance and credit delivery. The clients of FADU are mostly low-income earners with an income of \$1.00 per day. Micro finance NGOs operate within the informal sector since they are not affected by the regulatory authority of the Central Bank of Nigeria (CBN). Their focus is to ensure that less privileged individuals who have no link with the formal financial system are not left behind in the development process.

Given these premises, our study raised the following questions: What is the extent to which less privileged women are considered in FADU's micro credit administration? Is FADU gender sensitive in the process? What is the likelihood that a poor woman will benefit from FADU's micro credit facility? It attempts to answer these questions through a gender analysis of FADU's operations.

OPERATIONS OF FADU

FADU's programme focuses on micro-enterprise development among poor Nigerians. The programme targets the very poor, who live on less than N20,000 or \$260 per annum. FADU's operations are rooted in the belief that the informal sector is the most effective way to reduce poverty and attain broad-based growth at the grassroots. FADU's credit programme includes grassroots institutional support and services that reach over 500,000 rural Nigerians. The credit scheme offers members opportunities for participating in programmes on literacy, environment, water and sanitation, health and self-help infrastructural development.

FADU's credit scheme is group-based. Members belong to groups, groups belong to societies, while societies belong to districts and districts to zones. For members to enjoy the loan facility, they must save with the group while the group must save with the society.

A group must consist of at least five people and a society must consist of two groups while a district must consist of at least ten societies. Districts have the responsibility of guaranteeing micro-credit facilities to members. The district and zonal offices exercise influence on micro-credit administration and other development projects of the Union. Hence, this paper will ascertain the extent to which this arrangement takes care of women; the most vulnerable among rural poor.

The essence of micro-credit as a useful tool for poverty alleviation cannot be overemphasized. Accessibility to credit can substantially promote the economic activities of the poor, engender employment of resources and raise income levels. An acknowledged impact of micro-credit organizations is the alleviation of poverty and promotion of gender equity. Consequently, this paper seeks to ascertain the underlying factors leading to the choice of micro-credit beneficiary in FADU.

METHODOLOGY

The study involved the use of primary data from FADU assisted smallholder farmers in Ibadan, Oyo State. A multistage random sample of 200 beneficiaries of FADU loan scheme participated in interviews. Cross-sectional data covering the farm year 2001 were solicited from the farmers using structured questionnaire. The amount of loan requested, amount granted, size of farm, family size, use of fertilizer, ease of obtaining farm input, sources of credit and other questions were raised with the farmers.

The multistage random sampling technique was utilized to ascertain any gender bias in the administration of the micro-credit scheme. It was expected that the multistage random selection of the beneficiaries should reflect their demographic structure in terms of gender and other parameters. A list of the beneficiaries was obtained from union officials where a random selection of twenty districts was made. Ten benefi-

aries from each of these districts were then randomly selected resulting in 200 respondents. However, at the end of the survey, only 164 questionnaires were found useful for analysis.

The data collected were processed and analysed using simple statistical tools; namely, difference between two means and students t-test. In order to ascertain the propensity for gender sensitivity in the administration of the micro-credit facility, a maximum likelihood probit estimation was utilised.

The application of qualitative choice models in explaining different socio-economic phenomenon is not new (Akinola 1987). In fact, probit and logit models have been used extensively to investigate farmer adoption decisions (Nkamleu & Adesina, 2000; Hayes et. al., 1997). These models specify a fundamental relation between the probability of adoption-choice and various explanatory variables.

The two estimating techniques most frequently used are the maximum likelihood estimator and the minimum X^2 estimator. The MLE can be used in the case of a few observations per cell or many observations per cell but the minimum X^2 estimator can only be used effectively when there are many observations per cell. This is what informed the use of the MLE estimation method.

The probit regression is of the form:

$$\text{Pr } o(y \neq 0 / x_j) = \phi(X_j \beta)$$

where

$$\phi = s \tan \text{ dardcumulativenorml}$$

Specifically, the probit regression is of the form:

$$y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon_i$$

y = sex of the respondent (male =1; female = 0)

X_1 = age of the respondent in years;

X_2 = marital status (married=1 single=0);

X_3 = Total Household number;

X_4 = farming experience in years;

X_5 = Total amount saved in Naira

The STATA software was used in the analysis. In order to capture the rate of change in gender resulting from infinitesimal change in the independent variable, the dprobit option of STATA was also used and the result reported.

The dependent variable is gender of the loan beneficiary, in which male is given a value of one and female zero. The socio-cultural environment of the study area suggests that men will likely be preferred in the administration of the micro-credit facility. Hence, the regression coefficients were expected to bear positive signs.

The age variable measures the age of the beneficiary in years. We expected older farmers to be better organized and more able to command respect in the community and therefore able to obtain a credit facility. Hence, a positive sign was expected of the age coefficient.

Marital Status is a dummy variable, which indexes the marital status of the beneficiary and takes the value of one if married and zero if not. We expected married people to earn more respect in the community with attendant ability to attract micro-credit. We expected a positive sign on this variable because men were seen to be better able to repay.

The total household number measures the family size at the time of the survey. Generally, because men are usually the household heads with wife/wives, we expected men to have more people in their households and therefore able to attract micro-credit better. We expected the variable to bear a positive sign also.

Farming Experience measured in years estimates the maturity of the beneficiary in the business. More experienced farmers will be better able to cope with the adversities of the business than new comers. Hence, more experienced farmers were assumed more able to repay the micro-credit facility. Men compared to women were assumed more experienced farmers, therefore, we expected a positive sign.

The FADU ties its micro-credit facility to savings. The potential beneficiaries of the facility must save with the organisation before their application is considered. Latif (2001) found that participation in micro-credit programmes had a statistically significant and quantitatively important influence on household savings. Men are usually assumed to have more income and therefore better able to save. Hence, we expected the ability to save variable to bear a positive sign. The results presented were valid to the extent that year 2001 was typical and representative of the system being studied.

RESULTS OF DATA ANALYSIS

Socio-economic Characteristics

Results of the salient socioeconomic characteristics of the respondents are presented in Table 1 below. Most (48.44 percent) of the respondents fall in the age range 41-50 years, while about 70 percent fall between 31 and 50 years of age. The recipients are relatively young and in their active productive years. The gender distribution is almost equal since a simple random sample produces an almost equal number of male and female. Thus, we observe that FADU loan scheme is gender sensitive regarding number of beneficiaries.

Most of the respondents (39.0 percent) have a family size of between five and eight people, with the average family size of 10 people. The average number of years spent in formal institution is three and a half years. Most of the respondents (34.37 percent) completed their secondary school education, while only (14.06 percent) had no formal education. Also, most (32.81 percent) of the respondents have less than 10 years of farming experience.

Table 1: Socio-economic Characteristics of Respondents

Variable	Age (years)	Frequency	Percentage	Mean
	21-30	5	3.05	
	31-40	36	21.95	
	41-50	79	48.17	
	51-60	41	25.00	
	>60	3	1.83	
	Total	164	100.00	46.28
Sex				
	Male	89	54.27	
	Female	75	45.73	
	Total	164		
Family size				
	1 - 4	10	6.10	
	5 - 8	64	39.02	
	9 - 12	54	32.93	
	13 - 16	26	15.85	
	>17	10	6.10	
	Total	164	100.0	10.0
Education Level				
	No formal education	23	14.02	
	Primary School completed	36	15.85	
	Primary school not completed	8	4.88	
	Secondary school completed	56	34.15	
	Secondary school not completed	18	10.98	
	Tertiary	23	14.02	
	Total	164	100.0	3.52
Farming Experience				
	<10	54	32.93	
	11-20	49	29.88	
	21-30	41	25.00	
	31-40	15	9.15	
	>40	5	3.05	
	Total	164	100.0	19

Source: Field Survey, 2002

The implication of these socio-economic characteristics is that FADU beneficiaries are educated, young and have an average family size of ten. The fact that they are educated suggests they should be able to keep farm records, since education enables farmers to keep production and farm records to facilitate the analysis of benefits, feasibility and profitability.

FADU encourages all beneficiaries to save. Table 2 shows the savings patterns of the respondents. Many (32.81 percent) respondents save between N1000 and 2000 per annum. Altogether, about 60 percent of the respondents save between N11000 and N30000 per annum. The average amount of savings is N27,530.00, which compares favorably with the mean amount of loan requested, which was N40,250.00.

Table 2 : Resource Availability of the Respondents

Savings	Frequency	Percentage	Mean
None	13	7.93	27,530.00
≤10,000	23	14.02	
11-2000	53	32.32	
21-3000	44	26.83	
31-4000	8	4.88	
41-5000	10	6.10	
>50,000	13	7.93	
	164		
Amount of loan requested			40,245.00
<30,000	75	45.73	
31-60,000	75	45.73	
>60,000	14	8.54	
	164		
Amount of loan granted			38,000
<10,000	46	28.04	
11,000- 20,000	16	9.76	
21,000 – 30,000	75	45.73	
31,000 – 40,000	19	11.59	
>40,000	8	4.88	
	164		

Source: Field data, 2002.

Most (45.90 percent) respondents have been granted between N21000 and N30000 as loans out of the amount requested. Since the beneficiaries are compelled to save to obtain credit, both the lender and the borrower will benefit from the scheme. Being stakeholders ensures success of the venture.

At 2002, the average amount of loan granted was N38,000, which forms 94.44 percent of the average amount of loan requested. FADU loans are short term and repayable within one production season. This is evident in Table 3, which shows that most (65.57 percent) of the loan obtained is repayable between four to six months.

Table 3: Loan repayment time

Repayment time (Months)	Frequency	Percentage
4-6	108	65.85
7-9	46	28.05
10-12	10	6.10
Total	164	100.00

Source: Field Survey, 2002

FADU also offers various forms of assistance to farmers who have been granted loans. This is to ensure appropriate utilization and monitoring of the loan facility. See Table 3 below.

Table 4: FADU's assistance to farmers after Loan

Form of Assistance	Frequency	Percentage
Monitoring and training	38	23.17
Monitoring loan repayment and utilization	51	31.10
Evaluation process	38	23.17
Technical assistance	6	3.66
Distribution of requested farm needs	21	12.80
None	10	6.10
Total	164	100.0

Source: Field Survey, 2002

Table 4 depicts the various forms of assistance given by FADU to loan beneficiaries. These forms of assistance encourage the monitoring of the facility and enable the NGO to assess the repayment ability of the borrower on time with a view to interven-

ing at critical periods to prevent default. FADU takes special interest in monitoring the loan utilization and repayment as reported by most (31.10 percent) of the respondents. Training and evaluation of the funded project was also a very important form of assistance as reported by 23.17 percent of the beneficiaries. The reported forms of assistance may be responsible for the success of the FADU loan scheme. The specific forms of assistance are worth sharing with other micro-loaning bodies to enhance effectiveness and possible efficiency.

Table 5: Gender analysis of FADU beneficiaries

Characteristics	Male (mean)	F e m a l e Mean	T-ratio
Sex	89	75	
Age (years)	48.69	43.38	2.905*
Educational level	3.34	3.72	-0.918
Farming Experience (years)	22.94	14.28	3.330*
Rent land	8.31	5.00	0.235
Purchase land	15.89	60.00	-2.792*
Lease	19.00	10.00	1.069
Gift	1.83	1.72	0.998
Family size	11.75	10.50	0.260
Number of children	2.32	1.71	1.803**
Hoes	4.46	5.48	-1.456
Cutlass	5.50	7.92	-1.710**
Tractor	1.37	1.17	1.779**
Amount spent on food	2263.64	2065.52	0.671
Amount spent on children's education	6152.38	5050.00	0.677
Amount of loan obtained from cooperatives (N'000)	25.00	25.84	3.856*
Amount of loan obtained from FADU	32.50	36.90	2.005*
Income obtained from farm operations	93.97	40.84	3.013*
Loan requested (N'000)	38.13	42.59	-0.731
Loan granted (N'000)	23.31	24.66	-0.348
Amount of contribution (N'000)	1.44	1.74	1.230
Amount put in cooperative (N'000)	0.588	0.943	-0.935
Total savings	35.88	17.45	2.775*

Source: Field Survey, 2002

●, ** significant at 5% and 10% levels
t-test for equality of means

Table 5 shows the breakdown of the socioeconomic characteristics of respondents by gender. The data show that women beneficiaries are younger in age (29 years) compared to 35 years for men. They also have more years of formal education (3.72 years) compared with 3.34 years for men. The women have less years of farming experience (14.28 years) while men have 22.94 years of experience. Furthermore, women have lower number of children (about two) while men had about three children on the average. In terms of access to productive resources, more women than men purchase land, although more men obtain land by lease, rent and gifts.

In other words, access to land by women is more by outright purchase than any other means. Women have restricted access to land as a productive venture. Unlike men, who are able to access land through cheaper sources, women obtain land mainly through outright purchase, at cost to the limited productive resources. Women seem to have less family size (about eleven) than men (about twelve). This is attributable to men's proneness to polygamy resulting in more children.

Women use more hoes and cutlass (7.92) compared to men (5.50), on the average. However, men compared to women, have better access to higher technological tools such as tractors. This may be because women compared to men have smaller farm size and hence may not need the service of tractors.

Women obtain more loan (N36900.00 from FADU and N25840 from Cooperatives) on the average than men (N32500 from FADU and N25000 from Cooperatives). Although men have more of their loan request granted (61.13 percent) than women's (57.90 percent). In absolute terms, women obtained more loans (N24660) than men (N23310).

The World Bank had prescribed a threshold income of \$1.00 per day totaling about \$365 per annum as constituting the poverty line. Results of the study showed that men reported a mean income of \$721.76, while female reported an income of \$326.72. This shows that while men were far above (earning almost double the threshold) the poverty line, women were below it. These figures confirm the feminization of income poverty in Nigeria.

The amount of income reportedly obtained by the FADU beneficiaries (of N93970 and N40000 per annum for men and women respectively) suggests that the FADU beneficiaries earned an income more than the reported national average monthly income level of N3,770 obtained in 1997 (CBN 1999). Furthermore, if we compare these figures with the threshold income of FADU's target population of \$260 per annum, we can safely assert that the welfare of beneficiaries have improved.

Probit Results

Table 6: Probit Regression Results

Independent Variables	Probit	dProbit
Constant	-1.022 (1.050)	
Age (X ₁)	-0.0209	0.0081 (0.0093)
Marital Status (X ₂)	-0.1736 (0.4146)	0.0534 (0.1613)
Total Household Number (X ₃)	0.1167* (0.0658)	0.0453* (0.0253)
Farmers Experience(X ₄)	0.0323* (0.0200)	0.0125* (0.0077)
Total Savings (X ₅)	0.0283* (0.0143)	0.0109* (0.0054)
N =	164	
LR chi2	0.2203	
Pseudo R2	19.44*	
Log likelihood	34.36	
Observed	0.547	
Predicted	0.592 at X	

Source: Field Survey, 2002

Note: * significant at 5 % level

Using the probit specification stated earlier, a maximum likelihood estimation procedure was utilized as stated in the STATA software package. The results are captured in Table 6 below. The level of significance chosen for the analysis was 0.10.

Three variables bore significant and positive relation regarding the gender of the beneficiary, while the rest (two) bore negative relations, which are not significant.

The coefficient of total household number is positive, as expected, suggesting that male, compared to female, household heads are more likely to obtain micro-credit facility. In similar vein, more experienced male compared to female farmers who have more savings with the union are likely to obtain the facility. Also, the negative

sign of age and marital status indicates that older women compared to men who are married are likely to obtain the micro-credit facility, although the coefficients of these variables are not statistically significant.

The results of the dprobit analysis are also presented in Table 6 above. The results are essentially similar to the probit analysis except that the value of the coefficients are different since they measure different parameters.. The dprobit shows the change in gender as a result of an infinitesimal change in each of the independent variables. For instance, with an additional year of farming experience, there is a 1.2 percent likelihood that micro-credit will be extended to a woman instead of a man. Similarly, women, with more savings, compared to men, stand a 1.0 percent chance of obtaining micro-credit. The actual and predicted frequency at the mean is 54.7 percent and 59.2 percent respectively.

CONCLUSION

The results obtained from this study show that FADU, a micro-credit NGO, affords women compared to men, better access to agricultural credit. This is because almost equal opportunity is granted to men and women in granting loans. However, the propensity to consider women for micro-credit is still very low at one out of one hundred. Interestingly, the average amount of loan granted to women was more than that granted to men.

The average income obtained by beneficiaries of FADU suggests that male beneficiaries were above the income poverty line. However, female beneficiaries were below the poverty line although close to the threshold. Noteworthy is that both men and women were mostly below the line before their involvement in the program. We can safely assert that the micro-credit program has enhanced the income level of the beneficiaries, bringing them out of the poverty cycle. In spite of this success, the gender bias remains.

Gender disparities in access to productive resources; namely land and technology, have contributed largely to gender inequality in benefits.

RECOMMENDATIONS

The results obtained in this study are of importance to national and international agencies involved in micro-credit delivery. First, that micro-credit is a veritable tool in mitigating the hush effects of poverty among vulnerable groups. Second, that, the after sales service package provided by the FADU as an NGO induces sustainability of the group loan scheme. Furthermore, group lending is an effective means of credit administration among the poor who will use peer pressure to ensure prompt payment.

However, for any meaningful project development, the nature of the loan disbursed needs to be reviewed. This is with a view to giving more long-term loans for sustain-

able projects that will further enhance the living standards of the beneficiaries. Also, conscious attempts at gender equity should be encouraged. Poverty being a prevalent problem in developing countries needs to be addressed multi-variously to ameliorate its effects on the vulnerable.

Finally, and more importantly, given the increased access of women to micro-credit through FADU, it is suggested that similar innovations in micro-credit delivery need to be encouraged in rural areas and urban fringes. FADU's model of group lending and close follow-up of the clients is worth emulating. However, the low propensity of gender considerations can be changed through the sensitization and education of officers and members of FADU on the benefits of gender equity on overall family livelihood, poverty reduction and development. This can ensure equal benefits of FADU's novelty in micro-credit lending to men and women.

REFERENCES

- Ajetomobi, J. O. (1995): Economic Efficiency of Women Farmers within the Ondo State Agricultural Development Programme. Unpublished M.Sc. Thesis. Obafemi Awolowo University Ile-Ife. 156p
- Ajao, A. O. (2000): Production Risk and Resource -Use Efficiency Among the Participants of the Women in Agriculture Programme of the Oyo State Agricultural Development Project. Unpublished M.Sc. Thesis. Obafemi Awolowo University Ile-Ife. 80p
- Akinola, A. A. (1987) "An Application of the Probit Analysis to the Adoption of Tractor Hiring Service Scheme in Nigeria" Oxford Agrarian Studies 16: p.70-82
- Dey, J. (1984): Women in Food Production and Food Security in Africa. Food and Agricultural Organisation of the United Nations (FAO) Rome.
- Federal Office of Statistics (1999): Poverty Profile for Nigeria 1980-1996 Federal Office of Statistics, Lagos.
- Hayes, J; M.Roth; and Lydia Zepeda (1997): "Tenure Security, Investment and Productivity in Gambian Agriculture: A Generalised Probit Analysis" American Journal of Agricultural Economics 79 (May 1997) 369-382
- Iniodu, P.U. and A. N. Ukpak (1996) "The Relevance of Rural Finance for Efficient Management of Agricultural Production in Post-Adjustment Nigeria" Conference Proceedings of Nigerian Economic Society Uyo pp 243-262
- Khandker, S. R. and O. H. Chowdhury(1996) "Targeted Credit Programmes and Rural Poverty in Bangladesh" in Proceedings of the Workshop Credit Programmes for the Poor: Household and Intrahousehold Impact and Programme Sustainability held

in March 19-21, 1995, (edited by Latif, M. A., Khandker, S.S. and Khan, Z. H. Dhaka).

Latif, M. A. (2001): 'Microcredit and Savings of Rural Households in Bangladesh' The Bangladesh Development Studies Vol XXVII, March 2001 No.1

Nkamleu, G. B. and A. A. Adesina(2000): "Determinants of Chemical Input Use in Peri-Urban Lowland Systems; Bivariate Probit Analysis in Cameroon" Agricultural Systems 63(2000) 111-121

Odejide, A. F. (1997): Breaking the Vicious Cycle of Poverty Among Women in Developing Countries: The case for Micro-Credit in Poverty Alleviation in Nigeria Proceedings of the (1997) Annual Conference of the Nigeria Economic Society pp.367-381

Olawoye, J. E. (1989): Harmonising the Effects of development Agencies for Rural Women in Nigeria. Proceedings of National Conference of the Ibadan Socio-Economic Group. University of Ibadan. July 7-8.

Olomola, A. S. (1994): Loan Administration and Utilization Under the Graduate Agricultural Loan Scheme in Nigeria NISER Individual Research Project Report No.2 Nigerian Institute of Social and economic Research (NISER), Ibadan.

Proshika Manobic Keridra (1995) Impact Evaluation and Monitoring Cell. Impact Assessment Survey Report. Dhaka.

Schubert, R. (1994): Poverty in Development Countries- Its Definition, Extent and Implications. Economics Volume 49/50

UNDP Nigeria (1998): Nigerian Human Development Report 1998. United Nations Development Programme, Lagos.

United Nations Common Country Assessment (2001): United Nations Systems in Nigeria World Bank (1990): World Development Report Oxford University Press, London

World Bank (1999) : World Development Report 2000/2001 Consultation with the Poor. Nigeria: Voice of the Poor. Country Synthesis Report Nigeria