Does Access to Finance Reduce Poverty? Evidence from Katsina State

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Abstract *Enhancing access to formal financial services especially credit to the rural populace has been identified as a means of reducing poverty in developing countries. This paper investigates whether access to financial services reduces poverty in Nigeria focusing specially on rural areas. A cross-sectional primary data was generated using a structured questionnaire administered on randomly selected respondents from rural areas of Katsina state. The study used multinomial logit model in examining the relationship, and the study found a negative relationship between poverty level and access to financial services. The study concludes that promoting access to formal financial services increases the level of income of the rural dwellers and thus a retarding effect on the level of poverty in the rural areas.*

Key words: Access to finance, poverty, rural populace, financial services

1. Introduction

Nigerian governments implemented several development plans aimed at serving as a catalyst for expanding the country's production possibility frontier. However, it turns out that population explosion and abject poverty which appears to be undisputed features of developing economies predominates in Nigeria (Ekong, 1977; Olayide, Eweka and Osagie 1980; Babasanya, Bolagun, Zungun and Olawohuwa, 2008). On the other hand, Nigeria is endowed with abundant resources both human and material, yet it has been classified as one of the poorest countries in terms of its per capita income (Umoh and Ibanga, 1997). Also available data (see for instance, UNDP, 1990 and World Bank, 1995) revealed that basic social and economic indicators point to the fact that even when the rest of developing countries are making substantial progress, Nigeria is not getting beyond where it was thirty years ago. The country is also disturbed with severity of poverty; the World Bank (1995) reported that poverty was found to be a rural phenomenon, in every 10 million of Nigerians, 8.4 million are extremely poor people being from rural areas. The rural sector is made up of small-scale poor farmers, food processors, informal traders and other micro-entrepreneurs who are said to account for about two-third of the population living in poverty (World Bank, 1996). More so, UNDP (2010) ranked Nigeria as 142nd in a sample of 169th poorest countries in the world. Unsurprisingly, the poor are disproportionately located in rural areas, primarily engaged in agricultural and associated activities and are mostly women and children than adult males (Todaro, 2000). On the other hand, the rural poor need only a little money to set up a business that can make a dramatic difference in the quality of their lives (Yunus,

2006). Poverty in Nigeria, particularly in the rural areas, could be linked to lack of adequate financial access in the area, among other things (Egwuatu, 2008; Ladipo, 2008).

Against this background, the study seeks to investigate the relationship between access to financial services and poverty reduction in rural areas. Specifically, the study will examine the extent to which the provision of a better financial system to rural areas has actually reduced poverty in the rural areas. To achieve the objective, the paper is divided into five sections including this introduction. Section two presents literature review, section three describe the methodology, section four shows the results and discussions, while the last section concludes the study.

2. Literature Review

There is ample evidence showing a strong and causal relationship between financial sector development and economic growth. An efficient financial sector that responds to the needs of the private sector increases investment, enhances economic growth, and creates a job which is one of the major challenges for developing economies (Nasr, 2006). Improving households' access to financial services will also help to reduce poverty and improve income equality while financial exclusion can retard economic growth and increase poverty and inequality (Butler and Cornaggia, 2008). Robust economic growth cannot 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 (CBN, 2005a). The capacity of poor for entrepreneurship would be significantly enhanced through the provision of financial services to enable them engage in economic activities and be more self-reliant, increase employment opportunities, enhance household income thereby leading to economic growth.

Broad access to financial services is related to the economic and social development agenda for at least two reasons. First, a large theoretical and empirical literature has shown the importance of well developed financial system for economic development and poverty alleviation (Beck *et al*., 2000; Beck *et al*., 2004). Second, access to financial services can be seen as a public good that is essential to enables participation in the benefits of a market based economy, in an analogous way, as is access to safe water, basic health services, and primary education (Peachey and Roe, 2004). Similarly, Sacerdoti (2005) argued that faster economic growth will not be possible without a deepening of the financial system and, in particular, more support from the banking system. He further showed that there is strong association between access to bank credit and overall economic development of a country. Access to finance can help poor to increase income, build viable business, and reduce their vulnerability to external shocks. It can also be a powerful instrument for self-empowerment by enabling the poor, especially women, to become economic agents of changes (Bashir, 2008). As noted by De la Torre and Schmukler (2006), the discussion of the plausible channels through which financial depth could cause economic growth often resorts to access related stories. Prominent in this regard is the Schumpeterian view that finance leads to growth because it reduces creative destruction by allocating resources to efficient newcomers. That is through broader access to external funds, talented newcomers are empowered and freed the disadvantages that would otherwise arise from their lack of inherited wealth and absence of connection to the network of well off incumbents (Rajan and Zingales, 2003).

Aggregate economic growth and efficiency are influenced by financial transaction in their role in agglomerating capital, selecting projects most likely to yield the highest return, monitoring borrowers (investors), enforcing contracts, transferring, sharing, and pooling risk, and promoting diversification (Stiglitz, 1993). An expansion of the supply of agricultural credit will have a better chance of success if it is embedded in effort to improve the performance of rural financial market and in effort to achieve greater market integration and more rapid economic growth in the rural areas (Gonzalez-Vega, 2003). The ability of the poor to borrow a small amount of money to take advantages of a business opportunity not only impacts positively on eradication of poverty but also tend to swell the rank of micro-entrepreneurs (Egwuatu, 2008). The supply

of efficient, sustainable, and broadly-based financial service is particularly important in rural areas, giving high risks and transaction costs in most rural markets for goods, services, assets, and factors of production, which result in large degrees of market fragmentation that is, the costs and risk are responsible for low level of market integration and for a wide dispersion of the marginal rates of return on resources used (Mckinnon, 1973).

The growing interest in rural financial deepening has been an interest in poverty alleviation. Though, the relationship between poverty and finance are quite complex, it is most important to recognize that, despite major earlier attempts to expand the supply of agricultural credit and despite the massive use of public funds for this purpose, the majority of the rural population of the developing countries has actually never had access to formal financial services (Gonzale-vega, 2003).

3. Methodology

Katsina state was carved out of Kaduna state in 1987; it is made-up of 34 local Government Areas (LGAs) and the state is located in the North Western part of the country. It is bordered by Niger Republic in the North, Kano state in the South, Kaduna state in the South-West, Jigawa in the East, Sokoto and Zamfara states in the West. The native people are predominantly Hausa and Fulani while Islam is their major religion, while Christians constitute small proportions. Katsina state has a total population of 5,801,584 as at 2006 census (NPC, 2007). The main economic activity of the rural people of Katsina state is farming (small scale farming, animal husbandry and food processing). Informal trading and other micro-entrepreneurship are also playing a crucial role in their economic life (www.katsinastategov.ng). Despite CBN directive on rural banking, most rural areas in the state do not have even a single financial institution, talk less of insurance company.

A cross-sectional primary data was collected from 384 respondents dwelling in rural areas of Katsina state through administered questionnaire. The selection of the LGAs in the state that represents population of the study was randomly made. The LGAs were arranged in alphabetical order; number was allotted to each upon which table of the random numbers was used to select six LGAs, the selected LGAa were Mani, Safana, Zango, Kurfi, Rimi and Kankara. However, the respondents from each of the selected LGAs were purposely selected due to the unavailability of a sample frame. A total of 384 questionnaires was shared to the selected LGAs based on Proportional Allocation Formula (PAF).

Average monthly income of the respondents was used by IPAR (2007) to proxy poverty. Respondents with income level below $2 per day will proxy rural poor because Sani (2008) argued that extreme poor are those with daily income level of less than one US dollar. This is in line with the millennium declaration popularly known as MDGs. Therefore, respondents with income level above $2 per day were coded 1 and 0 if otherwise. IPAR (2007) further used the level of financial exposure of the respondents on Saving Account, Current Account, Fixed Deposit, Loans, ATM/Credit/Debit Card, Loan, Insurance, Mobile Banking, Internet Banking, Shares and Pension to proxy access to finance. They coded 0 for individuals who didn't answer the question or did not know the answer, 1 for individuals that had never used the product, 2 for individuals who used the product before, 3 for individuals who have other members of the household using the product in question and 4 was allocated to individuals who currently have the product. Nevertheless, in this study 0 was coded for the respondents unanswered the question or do not know the answer, 1 was awarded to individuals who had never used the product, 2 for individuals who used the product before and 3 for individuals who are currently using the product.

Logit model was used to analyse the influence of independent variables (financial services) on the dependent variable (level of income). The model is given below:

$$Pr (Y_i =1) = F (X_i'b) \ldots\ldots\ldots\ldots\ldots(1)$$

Where

$Pr(Y_i)$ = probability of income of the respondents$_i$ is N10,000 and above
X = vector of explanatory variables
b = parameter to be estimated
F = cumulative logistic functions also known as log odds

Since the respondents exhibit different categories of income level, we applied multinomial logit model to ascertain how the degree of financial services usage vary among the different income categories of the respondents. The respondents were categorised into four income brackets, below N10, 000, N10, 001 – N15, 000, N15, 001 – N20, 000 and N20, 001 and above. Therefore, the model is further modified to accommodate different income brackets of the respondents, as such; the model is given in turn.

$Pr(>10000 = 0) = F(X_i \beta)$…………… .(3)

$Pr(10000 – 15000 =1) = F(X_i\Phi)$………(4)

$Pr(15001 – 20000 =1) = F(X_i\Omega)$……..(5)

$Pr(20001 \text{ and above } =1) = F(X_i\delta)$……(6)

Where β, Φ, Ω and δ are parameters to be estimated, and F is the normal cumulative distributions function.

4. Results and Discussion

The result is divided into two parts i.e. descriptive results and inferential results.

Table 1: Demographic distributions of the respondents

Variables	Frequency	Percent
Sex		
Male	298	78
Female	86	22
Marital status		
Single	125	33
Married	251	65
Divorced	8	2
Educational qualifications		
No formal education	136	37
Primary school	67	17
Secondary school	81	21
Equivalent diploma	71	19
Degree and above	28	7
Occupation		
No response	7	2
Farming	167	44
Business	120	31
Civil servant	90	23
Income range in Naira		
Below 10,000	84	22
10,001-15,000	111	29
15,001-20,000	95	25
Above 20,000	94	24
Source: survey, 2010		

In Table 1 above, it shows that 298 respondents were male while 86 respondents were female representing 78% and 22% respectively. The Table also shows information regarding the marital status of the respondents and it indicated that majority of the respondents were married, numbering 251, while 125 respondents were single and only 8 were divorced representing 65%, 33% and 2% respectively. Moreover,

data pertaining to educational qualifications of the respondents shows that 137 of the respondents do not have any formal education, 67 possess primary school leaving certificate, 81 indicated having secondary school certificate, 71 with diploma/NCE and its equivalent, 28 of them have first degree certificate and above representing 36%, 17%, 21%, 19% and 7% respectively. This data coincides with Beck *et al.,* (2006) assertion that finance appears inaccessible because of high rate of illiteracy in rural areas. Table 1 above, further shows the frequency of the occupational distribution of the respondents. It was observed that 7 respondents (2%) did not respond to the question, 167 (44%) were farmers, 90 (23%) were civil servant, 120 (31%) indicated business as their occupation. In order to avoid multiplicity of response, respondents that affiliated to more than one occupation were only asked to give their major one. We similarly depict the monthly income brackets of the respondents from the above Table. One hundred and eleven (111) respondents (29%) indicated earning N10,000 – N 15,000, 95 respondents or 25% indicated N15,001 - N20,000 as their income bracket, 94 or 24% were earning above N20,000, while 84 (22%) indicates earning below N10,000.

Table 2: Summary of Multinomial Logit Regression

Variables	Coefficient			Probability
	(4)	(5)	(6)	
Saving account	-0.27	-0.42	-0.56	0.202
	(- 1.28)	(-1.96)**	(-2.60)***	
Current account	0.10	0.10	0.25	0.692
	(0.44)	(0.40)	(1.08)	
Fixed deposit	0.74	0.73	0.54	0.234
	(1.67)*	(1.44)	(1.19)	
Loan	0.01	-0.88	-0.64	0.985
	(0.02)	(-2.60)***	(-2.07)**	
ATM/debit card	0.06	-0.08	0.29	0.787
	(0.27)	(-0.32)	(1.20)	
Insurance	-1.12	-1.12	0.18	0.721
	(-1.57)	(-1.57)	(0.36)	
Microfinance	0.37	0.37	-0.6	0.840
	(1.25)	(1.25)	(-0.20)	
Mobile banking	0.93	0.93	-0.69	0.172
	(2.27)**	(2.27)**	(-1.37)	
Pseudo R^2	0.40			
LR Chi^2	42.03***			
No. of observation	384			
* ** *** Indicate significance at 10, 5 & 1 percent probability levels				
Z-ratios in parenthesis				
Source: Survey, 2010.				

Table 2 above shows the summary of multinomial logit regression results. It could be discerned from the result that the estimated coefficient of saving is negative but not significant in equation 4, while the estimated coefficient is significant in equation 5 and 6. The result means that high income class has more capacity to save than poor dwelling in rural areas. The finding appears to support the predication of Economics theory of savings which argues that saving is a function of the level of income. On the contrary, the estimated coefficients of current account and fixed deposit are positive but statistically insignificant in all models however both have 69% and 23% probabilities of reducing poverty. Moreover, the estimated coefficient of loan is positive but insignificant in equation 3, while the estimated coefficient in equation 4 and 5 are and statistically significant at 1% and 5% level of significance respectively. The estimated coefficient of loan has the highest probability (98%) of reducing poverty in rural areas. This finding tends to supports Burgess and Pande (2003), who asserted that access to formal finance is critical for enabling the poor to transform their

production systems and thus exit poverty. Access to finance through credit assists the poor not only to smooth their consumption expenditure but also to build their assets, which enhance their productive capacity (IPAR, 2007).

Further more, the estimated coefficients of ATM and insurance are not statistically significant in all equation but has approximately 79% and 72% likelihood of reducing poverty in rural areas respectively. Similarly, the estimated coefficient of microfinance is statistically insignificant in all equations with 84% probability of reducing poverty in rural areas. The estimated coefficients of mobile banking are positive and significant at 5% level of significance in equation 3 and 4 respectively. Moreover, the estimated coefficient in equation 5 is not statistically significant. The coefficient has 17% probability of reducing poverty in rural areas. The overall model is adequate given by significant LR Chi^2 value at 1% level of significance, so also 40% variations in dependent variable is jointly explained by independent variables as shown by Pseudo R^2 value.

5. Conclusion and Recommendation

The study found that access to formal financial services increases with level of respondents' income in rural areas also most of the variables that were examined indicated a very high probability of reducing poverty. It could therefore be concluded that enhancing access to formal finance especially credit has a high likelihood of reducing poverty in rural areas. The implication of this study is that the federal government of Nigeria and financial institutions in the country should take up the challenge of establishing bank branches in the rural areas or make formidable arrangement for supplying more credit to the rural dwellers. This study suggests that group lending strategy of Grammen Bank of Bangladesh could be copied, since the bank recorded very low default rate. This is based on the premise that the government policy priority is poverty reduction.

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