IMPACT OF IFAD POVERTY INTERVENTION PROGRAMME ON RURAL POVERTY REDUCTION IN SELECTED LGAs OF SOKOTO STATE

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Abstract
This study is undertaken to empirically investigate the impact of IFAD poverty intervention programme on rural poverty reduction in selected Local Governments Areas (LGAs) of Sokoto State. Using a structured questionnaire, the study obtains data from 210 respondents randomly drawn from the IFAD beneficiary LGAs. The study uses both descriptive and Logit regression approach for the purpose of analysis. It was found that education has significant negative relationship with rural poverty while gender, age and household size have significant positive relationship with rural poverty. It was also found that IFAD poverty intervention programme has positively impacted on the rural poverty reduction in the selected LGAs. We therefore recommend that IFAD should focus more on educating the rural communities as well as the provision of infrastructural facilities in order to ensure more effective poverty reduction.

Keywords: Intervention, rural, poverty, reduction,

Introduction
Poverty is seen as a constraint that leads to deterioration in peoples’ purchasing power and living conditions resulting mainly from: a lack of economic growth; permanent structural imbalances; weak growth of GDP and high growth rate of population; underdevelopment of sectors and factors of production; degradation of natural resources; barriers to rural development as the engine of the economy; limited access of the majority of the population to basic social services; weak human institutions and governance capacity.

The promotion of any economy must explore the potential of increasing employment opportunities, a sustain increase in capital formation, provision of social overhead, reduce incomes disparities, streaming premature rural-urban drift, sustain increase in official development assistance to agriculture, development of SMEs through micro financing and ultimately reducing poverty at the grassroots level. The inability of any economy to ensure a stability of its key macroeconomics variables, the resulting consequence will be mass abject poverty and an entrapment of its people into poverty trap then the actualization of its growth potentials will only be an illusion. Development economics literature has since been showcasing that most of the developing countries are poverty prone. As pointed out by Aliero (2008) since 1950s there has been growing concern about rising trends of poverty among the developing countries. Since then several approaches have been suggested for its alleviation. This ranges from large investment in physical capital and infrastructures to the addition of health and education to the menu of fighting poverty. Aliero further indicates that Nigerian policy makers have been conscious of the fact that majority of their population reside in the rural areas and that majority of the poor are found in the rural areas and that majority of the rural poor engage in smallholder agriculture as their means of sustenance.

A number of poverty reduction strategies were introduced by the various governments we have had, such as Operation Feed the Nation (OFN), the Green Revolution, Directorate of Food Roads and Rural Infrastructure (DFFRI), Family Economic Advancement Programme (FEAP), Family Support Programme (FSP), National Poverty Eradication Programme (NAPEP) among others. On the other hand, the desire to reduce global extreme poverty prompted the international community’s attention which also led to the emergence of international development institutions such as UNDP, IFAD, FAO, and NEPAD, whose main priority was to assist the developing countries in their pursuit of eradicating poverty more particularly in the rural communities. It is sufficed to say that as the
consequences of poverty prove more severe by the year 2000, so its fight becomes more responsive. The effort of Nigeria in poverty alleviation is also supported by international development partners. Significant resources have been expanded by both the government and donor agencies yet a greater number of Nigerians continue to be poorer. This prompted the general believe by the poor that poverty eradication programmes in the country are never meant to actualise their stated objectives.

International Fund for Agricultural Development (IFAD) is an international development partner that has been intervening in the economies of countries like Nigeria to help them achieve the desired objectives. In Nigeria IFAD has been giving support to agricultural sector to help reduce the level of poverty among farmers. It is against this background that this paper intends to evaluate the impact of IFAD intervention programme on rural poverty reduction with a particular reference to selected rural communities in Sokoto State Nigeria. To achieve this objective the paper is organised in five parts with this introduction as the first part. Part two deals with the methodology, part three is the review of related literature, part four contains results of our analysis and its discussion while section five is the conclusion and recommendation.

**Methodology**

This study sourced data from primary source, using questionnaire to collect a cross sectional data from areas where IFAD intervention programmes were found in the study area. A total of two hundred and ten (210) structured questionnaires were administered on our respondents. The choice of the study area (Sokoto State) is purposive. In order to come up with the sample size a multi stage sampling technique was employed. First a Systematic sampling technique was used in selecting the three local government areas from which the samples were drawn. The second stage, involves random sampling technique, where a simple random selection was used in selecting one hundred (100) individual rural farmers from the selected LGAs. The Logit (logistic) regression model was used to establish the relationship between the likelihood of being poor and access to the IFAD programs and project and the various factors (predictor variables) affecting the household poverty status.

Theoretically, the Logit model is expressed as:

\[ p = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots \ldots \ldots + \beta_n X_n \]

Where:
- \( p \) = Likelihood of being poor or otherwise
- \( \beta_0 \) = intercept;
- \( \beta_1, \ldots, \beta_n \) = estimated parameters;
- \( X_1, \ldots, X_n \) = Set of independent variables.

For the Logit model, the equation for the relationship between socio-economic characteristics of respondents and the likelihood of being poor or non-poor is:

\[ P = \beta_0 + \beta_1 EDU + \beta_2 GEN + \beta_3 AGE + \beta_4 ASST + \beta_5 HHS + \beta_6 REG + \beta_7 AMKT + \beta_8 \text{Incapexp} + e \]

Where
- \( P \) = Likelihood of being poor or non poor, a dummy variable (1 poor and 0 otherwise)
- \( EDU \) = Educational level (measured in years spent in formal schooling).
- \( GEN \) = Gender of respondents (male or female)
- \( AGE \) = Age of respondents (measured in years).
- \( ASST \) = Assets ownership (IFAD poverty intervention programme)
- \( HHS \) = Household size (measured in persons living under the care of the respondent)
- \( REG \) = Region of residence (measured in terms of proximity of residence)
- \( AMKT \) = Access to market (IFAD poverty intervention programme)
- \( \text{Incapexp} \) = Increase capital expenditure (IFAD poverty intervention programme)
- \( e \) = Error term which satisfies all the econometric conditions of ordinary least square (OLS).

On the other hand, the Logit regression model is characterised by a binary dependent variable with mutually exclusive and exhaustive outcomes. The dependent variable is the poverty status of the respondents which is 1 if poor and 0 if otherwise. Following Maddala (1990) and Babcock et al (1995), as stated by Akinleye (2004) the model specification gives rise to a system of two probabilities as:

\[ \text{Prob}(Y_{i=j}) = \sum_j e^{\beta_j X_j} \quad (1) \]

Where \( J = 0 \) or 1

Expanding equation 2:

\[ \text{Prob}(Y_i = j) = \frac{e^{\beta_j X_j}}{e^{\beta_j X_j} + e^{\beta_j X_j}} \]

(2)
The equation above is then rewritten as:

\[ \Pr(\text{poor}) = \frac{e^{\beta_0 + \sum \beta_i X_i}}{1 + e^{\beta_0 + \sum \beta_i X_i}} \]

(3)

Then, the probability of being poor \((j = 0 \text{ or } 1)\) is:

\[ \text{Prob}(Y_i = 0) = \frac{1}{1 + \sum e^{\beta_0 + \beta_i X_i}} \]

(4)

\[ \text{Prob}(Y_i = 1) = \frac{e^{\beta_0 + \sum \beta_i X_i}}{1 + \sum e^{\beta_0 + \beta_i X_i}} \]

(5)

Where \(\beta_i\) is a vector of parameters that relate the explanatory variable \(X_i\) to the probability that

The variables for the logit analysis are:

- \(Y\) = Poverty status as dependent variable determined in FGT analysis which is 1 if poor and 0 if non-poor
- \(X_1\) = Educational level of the household
- \(X_2\) = Gender of household head where male = 1 and 0 otherwise
- \(X_3\) = Age of household head in years
- \(X_4\) = Assets ownership of the househead
- \(X_5\) = Household size
- \(X_6\) = Region of residence of the household
- \(X_7\) = Access to market for the increase output
- \(X_8\) = Increase capital expenditure

In the above relationships, the probability of an event occurring is a function of a set of non-stochastic explanatory variables and a vector of unknown parameter.

Literature synopsis

The multifaceted nature of poverty and relativity of the concept of poverty prevents unanimity among scholars as regards to its meaning or measurement. Evidently, there are intensive and extensive consultations and debates in determining a conceptual definition of poverty. Consequently, scholars and development economists admit that the concept of poverty is complex and multidimensional as such a mere definition may not give a vivid picture of its complexity (see Le Niger Contre La pouvrete, 2002; Little et al, 2006; Osmani, 2003; oyemomi, 2003; Olaniyan and Bankole, 2005). Ajakaiye and Adeyeye (2003) further state that two factors are crucial with regards to conceptualization of poverty. First was emphasis on relative deprivation inspired by the work of “Runciman and Townsend” that sees poverty not just as a failure to meet minimum nutrition or subsistence but as a failure to keep up with the standard prevalent in a given society.

World Bank (2001), states that “Poverty can be regarded as the denial of choices and opportunities, a violation of human dignity. Todaro and Smith (2006) states that the poor are widely perceived to be unable to feed adequately, lack asset and are indebted, live in an inadequate and unhygienic environment, they lack access to medical facilities, water and other basic services, they mostly indulge in alcoholism, drugs abuse, domestic violence they are physically handicapped and indolence.

Ajayi (2006) as cited by Sanyal (1991) and Schubert (1994) saw poverty as either absolute or relative or both. Absolute poverty is that which could be applied at all times in all societies such as the level of income necessary for bare subsistence. In absolute Poverty Productivity is low; the GDP per capita is less than X amount. People in absolute poverty suffer from a lack of sufficient resources to provide for their daily requirements. Aliyu (2003) explained absolute poverty as “the condition where an individual or group of people are unable to satisfy their basic requirements for human survival in terms of education, health, housing, feeding employment, transportation, etc. In contrast he views Relative poverty “as a situation

In consideration of the several empirical surveys undertaken by World Bank (WB), United Nation Development Programme (UNDP), Human Development Index (HDI) and International Comparison Programme (ICP) three forms of ‘poverty line’ have been determined. These are relative poverty line, absolute poverty line and poverty line based on US $1 a day, (World Bank, 1999-2005; UNDP, 2001; International Comparison Programme, 2005). Ultimately a poverty line refers to the expenditure level below which a households can not attain sufficient
calories (basic energy requirement), even if they spend all their money on food.

**Measurement and causes of poverty**

The multidimensionality and complexity of the concept of poverty is as contending as its definition. According to Omonona (2010) the incidence of poverty (headcount index) is the share of the population whose income or consumption is below the poverty line. The depth of poverty (poverty gap) provides information regarding how far households are from the poverty line. This measure captures the mean aggregate income or consumption shortfall relative to the poverty line across the whole population. The poverty severity (squared poverty gap) takes into account not only the distance separating the poor from the poverty line (the poverty gap), but also the inequality among the poor.

Osberg and Xu (2006) highlight that the debate over the measurement of poverty gains momentum base upon the axiomatic approach advocated by Sen (1976). However, in contrast, most are not actually consistent in practice. In the economics literature there exist a handful approaches upon which absolute poverty could be measured. These are the headcount ratio/ incidence of poverty; the poverty gap/ income shortfall; composite poverty measure; the physical quality of life index and the human development index. Compare Maxwell, (1999); Todaro and Smiths,( 2006); Poggy and Reddy, (2006); Deaton, (2010); IFPRI, (2008); Rio Group, (2006); Osberg and Xu, (2006); Ajakaiye and Adeyeye, (2003). A number of impact evaluations/assessments were undertaken to measure the significance of rural household poverty status on a given poverty intervention programmes Akinleye, (2004); Kakwani and Hyun, (1980); Chinasa, (2008); Buhl and Sen, (2006); Ravallion, (1996); Hashmi and Sial, (2007); IADB, (1998); Oyeranti and Olaiyiwola, (2005); and Sokoto, (2002).

This study is undertaken to explore the statistical relationship of the impact of IFAD intervention on rural poverty reduction in Nigeria with respect to the selected rural areas of this study. This research, therefore, intends to provide empirical evidence on the impact of IFAD intervention programmes on poverty reduction.
Results and discussion

Table 1: Summary of Regression Result

<table>
<thead>
<tr>
<th>Dependent Variable: Rural Poverty</th>
<th>Independent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational level dummy: -2.12 (-4.73)***</td>
<td></td>
</tr>
<tr>
<td>Gender of a household dummy: 0.217 (0.40)</td>
<td></td>
</tr>
<tr>
<td>Age of house head: 0.37 (1.82)**</td>
<td></td>
</tr>
<tr>
<td>Asset ownership: .11 (0.62)</td>
<td></td>
</tr>
<tr>
<td>Household size: 0.37 (0.82)</td>
<td></td>
</tr>
<tr>
<td>Region of resident dummy: 1.67 (3.86)***</td>
<td></td>
</tr>
<tr>
<td>Access to market dummy: -1.04 (-2.28)**</td>
<td></td>
</tr>
<tr>
<td>Increase in capital expenditure dummy: .23 (0.43)</td>
<td></td>
</tr>
<tr>
<td>Psuedo R²</td>
<td>0.36</td>
</tr>
<tr>
<td>LR Chi²</td>
<td>77.96</td>
</tr>
<tr>
<td>No of observations</td>
<td>210</td>
</tr>
</tbody>
</table>

Significant at 10% (*); 5% (**) 1% (***)
Z-ratio in parenthesis
Source: Survey 2011.

From the results in table 1 it could be observed that educational attainment has a significant and negative relationship with rural poverty. This finding coincides with that of Hashmi and Sial (2007); ADB, (2007); World Bank (2005) who observed education to have significant negative impact on household poverty status. Therefore, education and educational attainment can reduce the prevalence of poverty and chances of being poor. The study further indicates that the relationship between gender and rural poverty is positively insignificant. This finding is in line with that of Oyemomi (2003) and Lawson el-at (1992) who stated that generally, male-headed households have higher per capita incomes than female headed households, which also supported the fact that male headed household participate more in economics activities than female. The study further showed that age of a household head has a positive and significant influence on rural poverty. The same finding was observed by Asselin (2005) and Oyemomi (2003) that recorded positive significant relationship between gender and rural poverty. This finding shows that although there is no discrimination for the access to IFAD poverty intervention programme but the participation of 40-60 is higher than other age groups.

In addition asset ownership in this study is positive but has an insignificant effect on rural household poverty. This finding contradicts the apriori expectation that the more the assets a household head possesses the more chances of being non poor. Studies such as Lawson, et al (1992); Kakwani and Hyun (1980) stated that one of the important reasons why poverty persists in rural areas is that the poor do not possess productive assets. And the productivity of the assets they own may be low. This means that an insignificant increase of the rural farmers’ assets may not significantly reduce the prevalence of poverty.

The study also reveals the results on household size of the rural poor that are positive but statistically insignificant. This findings concur with the
findings of Akinleye, (2004) and Oyemomi, (2003) which revealed that the chronically poor have a high average household size at both the start and end periods of their studies that the chronically poor not only have larger sized households but, and perhaps more significantly, they have larger proportions of household members. Geographical location or location of residence in this result indicates a positive and significant influence on rural poverty. This study in line with studies such as (ADB, 2007; World Bank 2005) that show regional influence can significantly increases the chances of being poor. And that poverty is found in the remote regions of developing countries. Access to market for rural farmers’ output is negative but statistically significant. This means that access to market exact a positive and significant influence on rural poverty but the influence is statistically insignificant. The same findings is stated in IFAD, (2008); Sugiyarto, (2007); Akinleye, (2004); Idrisa, et al ( ). Capital expenditure of the rural farmers in this study is positive insignificant influence on rural poverty. Therefore, although, there is a positive influence between capital expenditure and rural household poverty status but the influence is insignificant.

Conclusions
Deducing from the findings of this study the following conclusions could be made:

i. That education and educational attainment can negatively reduce rural poverty. This means that educating the rural populace in both basic education and skill acquisition can significantly reduce poverty. The study further indicate that gender of a household head has a positive influence on rural poverty as such more participation of women in IFAD poverty intervention programme will reduce the prevalence of rural poverty. In addition age of a household head also positively affects rural poverty. There is the need for IFAD poverty intervention programme to reflect the different age group within the rural communities.

ii. That assets ownership in term of farm land; livestock and implements positively affect rural poverty. This contradicts the priory expectation of this study. In contrast rural household size also affect positively affect rural poverty. This means larger household is likely to increase the chances of being poor and vice versa. In addition geographical location positively affects rural poverty. This indicates that being in remote or isolated rural areas are likely to increase the chances of poverty. Furthermore, the study also indicate that access to market by the rural farmers negatively influence rural poverty while capital expenditure in contrast to the priory expectation positively affects rural poverty.

Recommendations
Based on the above conclusions the following recommendations could be offered with a view to improving the impacts of IFAD poverty intervention programme on rural poverty.

i. Educational attainment is one of the major determinants of escaping from poverty in the rural communities’. Education consequently, must be given adequate attention. Focus on education and training and retraining will in great extent curtail the menace of poverty with a much more positive approach.

ii. IFAD poverty reduction programme, needs to give emphasis of the provision of infrastructural facilities that will provides access to the rural poor as well as given access to the market for any increase of their farm produce.

iii. Loan application and other IFAD intervention strategy must provide sufficient poverty reduction package that will be efficient as to increase the level of labour employment, acquisition of large farm land, farming implements and livestock farming.


References


