What Impact does Microfinance Loan Have on Incomes of the Rural Poor in Nigeria?

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Abstract
The problem of poverty has attracted specific programmes within the circle of Government administrations particularly in Sub-Saharan Africa. One of such programmes is the development strategy tool of provision of microcredit to the poor through Microfinance Institutions (MFIs). Although the issue of the influence of Microfinance loan on poverty reduction has been discussed by some scholars, little efforts have been made to assess the impact of MFIs at the grassroots particularly on those who live in the rural areas. This paper therefore intends to fill the gap in literature by examining the impact of microfinance loan on poverty reduction through the dimension of rural poor income. To achieve this objective, the study adopted multi-stage random sampling technique to collect primary data through the structured questionnaire. A total sample of 1,134 microfinance loan beneficiaries and non-beneficiaries were used as respondents from three states in South-West Nigeria. Descriptive Statistics and Multiple Regression Model were explored to describe the characteristics of the sample for the study and evaluate the impact. The results revealed that microfinance has negligible income effects on the rural poor in Nigeria. To this end, the Government is advised to provide necessary amenities that will encourage MFIs to establish branches in the rural areas; and implement more supportive services like education and training on entrepreneurship and health facilities. MFIs should engage cheap labour available in the rural areas and train them for effective performance and easy penetration to the rural poor.

Keywords: Development, Poverty, Microfinance Institutions, Income, Nigeria.

1. Introduction
Poverty is manifested when one is being deprived of the essentials of life. For instance a poor person cannot afford good nutrition, quality accommodation, good education, good health status and the likes. To alleviate poverty therefore requires development strategies geared towards the improvement of quality of lives; by raising the level of economic wellbeing, freedom and capabilities for self-actualization (Todaro and Smith, 2011:5).

Poverty is a multi-faceted problem which involves economic, social, cultural and psychological dimensions. It is a world phenomenon whose consequences are dehumanizing, devastating and traumatic. In the light of this, and recognizing the importance of the devastating effect of poverty and inequality, the awareness is much more favored at the international level of finance and governance. For instance, the World Bank, United Nations (UN) and International Monetary Fund (IMF) have developed various programmes and projects that would improve the life of the poor, ensure health improvement and sustainable growth and development (Ssewamala, et al.,2010).

From Table 1 below, it is obvious that no country is free from poverty even the advanced nations that record high growth rate are plagued by high unemployment which is another indicator of poverty. This connotes that countries should not rely on growth rate to tackle the menace of poverty but take specific strategies directed towards poverty alleviation. Also to be noticed in table 1 is that the number of people trapped in extreme poverty has increased tremendously in Sub-Saharan Africa. In this table, the Sub-Saharan Africa has 50.9 percent of its
population in extreme poverty level. It is the highest percentage out of the regions in the whole world. This testifies to the fact that extreme poverty remains an alarming problem in developing countries in general and in Sub-Saharan Africa in particular.

### Table 1: Poverty Indicator

<table>
<thead>
<tr>
<th>Region</th>
<th>% in poverty</th>
<th>Population (millions)</th>
<th>Pop. in $1 a day poverty (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia and Pacific</td>
<td>16.8</td>
<td>1,884</td>
<td>316</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>8.2</td>
<td>550</td>
<td>45</td>
</tr>
<tr>
<td>South Asia</td>
<td>40.4</td>
<td>1,476</td>
<td>596</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>50.9</td>
<td>763</td>
<td>388</td>
</tr>
<tr>
<td>Total Developing countries</td>
<td>28.8</td>
<td>4673</td>
<td><strong>1345</strong></td>
</tr>
<tr>
<td>Europe and Central Asia</td>
<td>0.04</td>
<td>473</td>
<td>17</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>0.04</td>
<td>305</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5,451</td>
<td>1,372</td>
</tr>
</tbody>
</table>


In Nigeria, it has been asserted that poverty is more devastating in the rural areas where the majority of the population resides. According to the NLSS Report in 2011, 73.2 percent of the rural population is described as poor compared to 61.8 percent in the urban area. In the Southwest, the poverty incidence stood at 49.8 percent in 2010 with Ogun State having the highest incidence (69 percent) in the zone (NBS, 2012, Obisesan and Akinlade, 2013).

Poverty incidence in Nigeria became worse in 1980s. The oil prices downturn in the international market further aggravated the poverty condition in Nigeria. The Government Policy on fuel subsidy removal in 2011 further contributed to the poverty situation.

Microfinance has been adjudged as a reliable tool for poverty alleviation. It can be used to boost the investment which eventually reduces poverty through rise in income and eventually improvement in the standard of living of the poor (Obisesan and Akinlade, 2013). However, microfinance has been used on several occasions to reduce poverty in rural areas in particular which are believed to harbour the poorest people in the world. It is an important aid that can improve the economic performance of the poor. The poor people need microfinance to generate more income, improve their entrepreneurial skill and socio economic needs. But the poor people could not meet up with the requirements of the conventional banks and microfinance is not reachable. They continue to wallop in abject poverty and vicious circle.

This study has its target on the rural poor as statistics have confirmed that the rural sector harbour more poor and impoverished people (Chukwuemeka, 2009). Table 2 below depicts the contribution of Urban and Rural sectors to the poverty incidence in Nigeria. Ironically, less than 2% of rural households have access to financial services (CBN, 2005). Diagne and Zeller (2001) also confirm in their research on Malawi that poor rural households lack adequate access to credit.

### Table 2: Poverty Contribution by Sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>Incidence</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>43.2</td>
<td>35.0</td>
</tr>
<tr>
<td>Rural</td>
<td>63.3</td>
<td>65.0</td>
</tr>
</tbody>
</table>


Despite the fact that microfinance has been used for decades as an important development tool and as a formidable programme for poverty alleviation, development practitioners still know little about the possible efficiency of microfinance activities in reducing poverty (Khandker, 2005). Consequently, little efforts have been advanced to study the effect of these programmes on the rural poor particularly in Nigeria. This exercise will be the foremost study in this geographical area when an independent research will be conducted to study the impact of microfinance on the income of the rural poor. The study is therefore expected to fill a gap in literature and spur the government policy directed to empower the poor with adequate credit facilities and necessary infrastructure for economic development.

In this study, an attempt was made to appraise the content and performance of Micro-Finance Bank as a catalyst for enhancing economic growth, income redistribution and poverty eradication particularly in South-West Nigeria, having adjudged that Micro-Finance Banks have a key role to play in poverty alleviation programmes.

The research study is grouped into five sections. Following the introduction is Section 2 where the
previous literature on the subject matter is reviewed. Section 3 enumerates the methodology of the study while section 4 discusses the findings. Section 5 concludes the report with necessary recommendations to the policy makers and other stakeholders.

2. **Review of Previous Literature**

Poverty means deprivation from the basic essentials of life. The level of poverty is determined by the income level and degree of inequality among others. The roles of microfinance in poverty reduction have attracted various researchers to the extent that different opinions have been formed (for example, Noruwa and Emeka, 2012). While some researchers conclude that microfinance loans are mainly used for health, education of school children and production related expenses, others are of the opinion that microfinance has played a tremendous role in reducing the depth and incidence of rural poverty and serves as aid for shocks from natural disaster and health related calamities. Even microfinance reduces poverty at the macro level (Anriquez, and Stamoulis 2007).

Microfinance Institutions (MFIs) are expected to provide credit to the poor since the conventional banks consider microcredit loans to be risky because the poor cannot provide collateral (Morduch, 1999). Hence, Microfinance loan is regarded as panacea to alleviate poverty and increase household incomes (Aigbokan and Asemota, 2011). In view of this, scholars have made it expedient to carry out studies on the effectiveness of the programmes. For instance, Khandker and Pitt (1998) studied the impact of microcredit on 1,798 households in Bangladesh and concluded that the loan obtained by women in particular increased the household expenditure, family level of education and good nutrition among others. In the same vein, Morduch (1998) conducted research on the impact of microcredit on about 1,800 microfinance clients and non-client households taken from 1991-92 Cross-sectional survey in Bangladesh. The findings revealed that microfinance loans encourage mild increase in consumption and less vulnerability of the clients to poverty. Also Khandker (2005) conducted research on microfinance and poverty in Bangladesh; and concluded that there was 20 percent increase on microcredit given to women. The research further emphasised that impact of microfinance is always greater on the extreme poverty than the moderate one and that microfinance accounted for 40 percent of the entire reduction of moderate poverty in rural Bangladesh. Coleman (2002) studied the beneficiaries of microfinance in Northeast Thailand. It was opined that the wealthy people do participate in microfinance loan and become wealthier. Edgcomb and Garber (1998) assessed the microfinance participants and non-participants in Honduras. It was revealed that the profits of microfinance loan participants increased by 75 percent over that of non-participants.

In addition, McNelly and Lippold (1998) assessed the impact of microfinance loan on clients in Mali. The findings revealed that the more the circles or rounds of participation in microfinance, the greater the income. Karlan (2001) discussed the impact of microfinance and concludes that participants’ skill in entrepreneurship always enhance prompt loan repayment and business profit. In his study on microfinance in Peru, Alexander (2001) cited in (Goldberg, 2005) affirms that microcredit assists the poor. Khalily, (2004) also agrees that microfinance institutions can achieve the poverty reduction objective through their impact on increase in income, employment generation, increase in consumption of basic necessities, greater acquisition of assets and savings.

Furthermore, in his study of an area in Pakistan on the impact of microfinance on poverty alleviation Ayuuub,(2013) concludes that microfinance contributes tremendously in the reduction of poverty, increase of standard of living and income, adequate empowerment, and it also revives the economy. This was agreed upon by Kashif, et al. (2011) who added that microfinance can contribute to the improvement of the business performance of the beneficiary. In the same vein, Shane, (2004) confirms that microfinance can enhance the increase in well-being of the borrower with increase in children education and consumption of health services. Assessing the impact of microfinance on the Millennium Development Goals in a district in Pakistan Setboonsarng and Parpiev,(2008) affirm that microfinance has positive impact on production capacity, consumption, assets and Income.

The above studies confirm that microfinance activities have been categorized as an effective development intervention which plays a vital role in poverty reduction.

3. **Methodology**

This study used the primary data collected between July and September, 2014 from the study area: South-West Nigeria. South-West Nigeria is one of the six geo-political zones in Nigeria. South-West geo-political zones has a population of 27,722,432 people out of the Nation’s total population of 140,431,790 (National Population Census, 2006). The zone has six states comprising Ekiti, Lagos, Ogun, Ondo, Osun and Oyo states. The typical vegetation of South-West Nigeria is rainforest with about 12% (114,271km²) of Nigeria’s coverage space of 923,768 square kilometers. The zone has the highest concentration of Microfinance Institutions in Nigeria. It accommodates 346 (about 40%) of the total 870 Microfinance Institutions in six geopolitical zones in Nigeria, while the balance of sixty percent is shared among the remaining five Geo-political zones.

This study used cross-sectional data collected through the structured questionnaire. Random Sampling Technique was used to select three out of six states from the Geographical zone namely Ogun, Oyo and Osun states. 1,145 Questionnaires were distributed to the respondents out of which 1,136 were collected from the
sampled respondents. 1,134 were effectively used for the analyses; comprising 594 loan beneficiaries and 540 non-beneficiaries. The loan beneficiaries are those individuals who obtained microfinance loan in at least previous three years. Non-Beneficiaries are those who have similar characteristics with the latter and applied for microfinance loan in the previous three years but could not obtain approval for the loan. Being an individual beneficiary of microfinance loan is regarded as a derived one from the household perspective. In essence, if one or more members of a household obtain microfinance loan, the entire household is classified as beneficiary (Ashraf and Ibrahim, 2014).

Data collected included the demographic characteristics of the respondents, business and owner’s profile, consumption expenditure, loan procurement procedure, assets and business management among others. In addition, operators of Microfinance Institutions in the study area were also interviewed on their mode of operations, problems faced on the clientele and the assistance required from the Government.

4. Findings and Discussions

Table 3 below shows the demographics and socio-economic characteristics of the rural poor collected from the sampled area through the surveyed questionnaire. From the total sample size of 1,134 household heads, 594 (52.4%) are microfinance loan beneficiaries and the remaining 540 (47.6%) are non-beneficiaries. In terms of gender, the sample comprises 53% males and 47% females. About 51% of microfinance loan beneficiaries are males while almost 49% are females; whereas about 56% of non-beneficiaries are males with around 44% females. This shows that both loan beneficiaries and non-beneficiaries have similar gender characteristics.

With respect to Education level, the sampled respondents are grouped into five categories. This consists of those with no formal education, those with primary education, those who attended High School, Graduates of National Diploma and those who are degree holders. As depicted in Table 3 below, majority of the respondents have obtained education in one form or the other; about 14% of the total respondents reported no formal education. The proportion of no formal education for the microfinance loan beneficiaries is 12.5%, lower than that for the non-beneficiaries (15.4%). About 87.5% of the microfinance loan beneficiaries and 84.6% of non-beneficiaries have acquired primary education or more (including High School, National Diploma and Higher Diploma/University degree). Moreover, the proportion of microfinance loan beneficiaries with post High School education (Diploma and Degree) is higher than that of non-beneficiaries (38.7% against 30.9%).

In terms of age, the respondents have age range of between 20 and above 60 years old. The overall mean age for the sample is around 39 years. This shows that most of the respondents are still active and young enough to exhibit their entrepreneurship. When grouped into different age categories, the vast majority of both microfinance loan beneficiaries and non-beneficiaries fall into similar age bracket of 31-40 years old (46.7% and 49.5% respectively).

The field survey revealed that a large proportion of the respondents are married (75.6% of microfinance loan beneficiaries and 80.2% of non-beneficiaries). This shows that most of the sampled respondents are responsible to their families and have the tendency to cater for them.

The distribution of the respondents to religion categories is similar for both Islam and Christianity. Only 2.4% of microfinance loan beneficiaries have Traditional belief while that of non-beneficiaries is 7.6%.

The skill/Experience in business entrepreneurship is grouped into four categories. The vast majority of the respondents have acquired less than 10 years business experience. While the proportion of the microfinance loan beneficiaries that belong to this category is almost 80% that of non-beneficiaries is 68%.

As shown in the Table 3 below, monthly income for the household head is grouped into five levels. The monthly income for most of the microfinance loan beneficiaries reported is above 30,000 Nigerian Naira (28.3%) while that of the non-beneficiaries group respondents is between 21,000 and 30,000 Nigerian Naira. Also the household head monthly expenditure of microfinance loan beneficiary group respondents is mainly less than 5,000 Nigerian Naira (41.1%); most of the household heads’ monthly expenditure in the non-beneficiary respondents group falls between 5,000 and 10,000 Nigerian Naira (33.2%).

The proportion of the household size is similar in the sampled survey. About 44% of microfinance loan beneficiaries have 2-4 persons as members of the household while almost 68% of non-beneficiaries have 2-4 persons as members of their households. The survey also revealed that mostly less than 2 persons work and earn income (49.1%) in the microfinance loan beneficiary respondents group; while from 2-4 members of the non-beneficiary respondents group mostly work and earn income (64.9%).
Table 3
Characteristics of Sample (Beneficiaries and Non Beneficiaries)

<table>
<thead>
<tr>
<th></th>
<th>Non-Beneficiary</th>
<th>Beneficiary</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$N_0 = 540$ (47.6%)</td>
<td>$N_1 = 594$ (52.4%)</td>
<td>$N_3 = 1134$ (100%)</td>
</tr>
<tr>
<td>% to $N_0$</td>
<td>% to $N_1$</td>
<td>Subtotal % to $N_3$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>55.6</td>
<td>50.7</td>
<td>53</td>
</tr>
<tr>
<td>Gender</td>
<td>44.4</td>
<td>49.3</td>
<td>47</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td><strong>Demography</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>55.6</td>
<td>50.7</td>
<td>53</td>
</tr>
<tr>
<td>Female</td>
<td>44.4</td>
<td>49.3</td>
<td>47</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td><strong>Education Level</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>No formal education</td>
<td>15.4</td>
<td>12.5</td>
<td>13.8</td>
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<tr>
<td>Primary education</td>
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<tr>
<td>High school</td>
<td>25.6</td>
<td>29.3</td>
<td>27.5</td>
</tr>
<tr>
<td>National Diploma</td>
<td>18.7</td>
<td>20.2</td>
<td>19.5</td>
</tr>
<tr>
<td>Higher Diploma/University</td>
<td>12.2</td>
<td>18.5</td>
<td>15.5</td>
</tr>
<tr>
<td>degree</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Age (in years)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 - 30</td>
<td>14.3</td>
<td>17.1</td>
<td>16.1</td>
</tr>
<tr>
<td>31 - 40</td>
<td>49.5</td>
<td>46.7</td>
<td>48</td>
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<tr>
<td>41 - 50</td>
<td>27.3</td>
<td>25.1</td>
<td>26.2</td>
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<tr>
<td>51 - 60</td>
<td>6.5</td>
<td>8.7</td>
<td>7.6</td>
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<tr>
<td>&gt;60</td>
<td>2.4</td>
<td>2.6</td>
<td>2.7</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Mean Age</td>
<td>39.25</td>
<td>39.19</td>
<td>39.22</td>
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<td>Marital Status</td>
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<tr>
<td>Single</td>
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<tr>
<td>Married</td>
<td>80.2</td>
<td>75.6</td>
<td>77.8</td>
</tr>
<tr>
<td>Divorced</td>
<td>5.9</td>
<td>3.9</td>
<td>4.9</td>
</tr>
<tr>
<td>Widow</td>
<td>1.9</td>
<td>3.2</td>
<td>2.6</td>
</tr>
<tr>
<td>Widower</td>
<td>.7</td>
<td>.3</td>
<td>.5</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Islam</td>
<td>44.2</td>
<td>40.8</td>
<td>42.5</td>
</tr>
<tr>
<td>Christianity</td>
<td>48.2</td>
<td>56.8</td>
<td>52.7</td>
</tr>
<tr>
<td>Traditional</td>
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<td>4.8</td>
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<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
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### Table 3
Characteristics of Sample (Beneficiaries and Non-Beneficiaries) contd

<table>
<thead>
<tr>
<th></th>
<th>Non-Beneficiary</th>
<th>Beneficiary</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( N_0 = 540 )</td>
<td>( N_1 = 594 )</td>
<td>( N = 1134 )</td>
</tr>
<tr>
<td>% to ( N_0 )</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>% to ( N_1 )</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Subtotal % to ( N )</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Household Profile**

#### Skill/Experience in Business (in years)

<table>
<thead>
<tr>
<th>Range</th>
<th>Non-Beneficiary</th>
<th>Beneficiary</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 10</td>
<td>68.1</td>
<td>80.0</td>
<td>74.3</td>
</tr>
<tr>
<td>11 - 20</td>
<td>29.0</td>
<td>18.4</td>
<td>23.5</td>
</tr>
<tr>
<td>21 - 30</td>
<td>2.3</td>
<td>1.7</td>
<td>2.0</td>
</tr>
<tr>
<td>&gt; 30</td>
<td>.8</td>
<td>.2</td>
<td>.5</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Mean Experience in Business: 9.40

#### Household Monthly Income in Naira (Head)

<table>
<thead>
<tr>
<th>Range</th>
<th>Non-Beneficiary</th>
<th>Beneficiary</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than N5000</td>
<td>13.1</td>
<td>14.1</td>
<td>13.7</td>
</tr>
<tr>
<td>N5000 - N10000</td>
<td>11.7</td>
<td>21.0</td>
<td>16.6</td>
</tr>
<tr>
<td>N11000 - N20000</td>
<td>24.4</td>
<td>19.2</td>
<td>21.7</td>
</tr>
<tr>
<td>N21000 - N30000</td>
<td>27.2</td>
<td>17.3</td>
<td>22.0</td>
</tr>
<tr>
<td>Above N30000</td>
<td>23.5</td>
<td>28.3</td>
<td>26.0</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

#### Household expenditure (Head)

<table>
<thead>
<tr>
<th>Range</th>
<th>Non-Beneficiary</th>
<th>Beneficiary</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than N5000</td>
<td>24.9</td>
<td>41.1</td>
<td>33.4</td>
</tr>
<tr>
<td>N5000 - N10000</td>
<td>33.2</td>
<td>24.5</td>
<td>28.6</td>
</tr>
<tr>
<td>N11000 - N20000</td>
<td>30.6</td>
<td>18.5</td>
<td>24.3</td>
</tr>
<tr>
<td>N21000 - N30000</td>
<td>5.8</td>
<td>7.3</td>
<td>6.5</td>
</tr>
<tr>
<td>Above N30000</td>
<td>5.6</td>
<td>8.6</td>
<td>7.2</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

#### Household Size (members)

<table>
<thead>
<tr>
<th>Range</th>
<th>Non-Beneficiary</th>
<th>Beneficiary</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 2 persons</td>
<td>13.5</td>
<td>28.5</td>
<td>21.4</td>
</tr>
<tr>
<td>2 - 4 persons</td>
<td>67.5</td>
<td>44.3</td>
<td>55.3</td>
</tr>
<tr>
<td>5 - 7 persons</td>
<td>17.4</td>
<td>23.6</td>
<td>20.7</td>
</tr>
<tr>
<td>8 - 10 persons</td>
<td>1.1</td>
<td>3.4</td>
<td>2.3</td>
</tr>
<tr>
<td>Above 10 persons</td>
<td>.4</td>
<td>.3</td>
<td>.4</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

#### Number of Income Earners (members)

<table>
<thead>
<tr>
<th>Range</th>
<th>Non-Beneficiary</th>
<th>Beneficiary</th>
<th>Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 2 persons</td>
<td>27.5</td>
<td>49.1</td>
<td>38.8</td>
</tr>
<tr>
<td>2 - 4 persons</td>
<td>64.9</td>
<td>42.2</td>
<td>53.0</td>
</tr>
<tr>
<td>5 - 7 persons</td>
<td>7.4</td>
<td>7.8</td>
<td>7.6</td>
</tr>
<tr>
<td>8 - 10 persons</td>
<td>.2</td>
<td>1.0</td>
<td>.6</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Source**: Field Survey Data (2014)

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**Model Specification:**

The main hypothesis for the study is that microfinance loan can serve as a formidable tool for rural poverty reduction through income with other control variables.

In order to evaluate the variables that determine Poverty Alleviation together with microfinance loan in the study area, Multiple Regression Model was used. Regression can be used to estimate the “unknown effect” of a change of one variable over another. In our case Multiple Regression was used to estimate the effect of Microfinance on Poverty Alleviation through the Income of the rural poor.
Model for this study can therefore be specified as: 

\[ Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8) \]

where, 

- \( Y \) = Income (a dimension of Poverty Alleviation) 
- \( X_1 \) = Microfinance 
- \( X_2 \) = Household members employed 
- \( X_3 \) = Total Assets Acquired 
- \( X_4 \) = Household size 
- \( X_5 \) = Male 
- \( X_6 \) = Age 
- \( X_7 \) = Marital 
- \( X_8 \) = Education level 
- \( X_9 \) = Living Standard 

In this model, the income of the household head is considered as Dependent variable, while Microfinance, Household Members Employed, Total Assets Acquired, Household size, Male, Age, Marital, Education level and Living Standard are considered as explanatory or independent variables.

The analysis and empirical results of the regression model on the impact of Microfinance loan on the income of the rural poor are shown in Table 4 below. The results identify the explanatory variables determining the Income of rural households using microfinance loan as a focus variable. The model, which has Income of the Household head as its dependent variable aims at predicting the variables that determine the reduction of poverty of the rural poor in Nigeria with microfinance as a variable of interest. To this end, specific characteristic variables of the respondents like Male, Age, Marital, education level and household size were included in the explanatory variables. This is consistent with some previous literature on impact of Microfinance loan on poverty reduction that included such social demographic variables to explain the dependent variable (for example, Arun, et al, 2006; Ifelunini and Wosowe, 2012; Joseph and Imhanlahimi, 2011).

In the overall results, the linear Regression model correctly clarified \( R^2 \) of 56\% and Adjusted \( R^2 \) of 55\% which shows the variance in Income of the rural poor explained by the explanatory variables. All independent variables in the model are statistically significant at different levels except the Household Employment that is not significant. The \( F \) statistic of the model is 154.93 with \( p \)-value 0.000. This indicates that the model is highly significant and is appropriate to be used for predicting the Income of the rural poor in order to evaluate the impact of Microfinance loan on poverty alleviation in the study area. The \( p \)-value of \( F \) test is 0.166(not significant). This shows that the model is correctly specified and there is no need for more variables in the model. Variance inflation factor (vif) mean score is 1.47 which is less than 10. This confirms that the model is free from multicollinearity bias.

As indicated in Table 4, the result predicts that a proportionate increase in Microfinance loan leads to reduction in Income by 0.476. Likewise, an increase in assets by one unit would lead to reduction in Income by 0.408. These anomalies can be explained by the obnoxious conditions given by Microfinance Institutions (MFIs) to their creditors by compelling the latter to make compulsory savings and installment payments from the first week of the loan approval. This has generated controversies between the loan beneficiaries and the practitioners. Loan without moratorium may not assist the debtors in increasing their income and acquiring assets particularly, the new entrepreneurs who have not acquired many assets before taking the loan. Unless the profit margin is high, Microfinance loan may not benefit those who are new in the business. This result is consistent with Coleman (1999) that concludes that village bank loan in Northeast Thailand had little impact on the rural poor that took the loan.

Additional male beneficiary of microfinance loan would increase his income by 0.156 than the female counterpart. This further confirms the findings of Okoje et al (2009) that women have no full independence to access and utilize Microfinance loan because they have to get the consent of their husband before making decision. A year increase in age would increase the income of the rural poor microfinance beneficiary by 0.008; while those who are married increase their income by 0.088 than the single beneficiaries of microfinance loan. This can be as a result of experience and possibility of using cheap labour from the family household members. The result further predicts that a proportionate increase in education would reduce the income of microfinance loan beneficiary by 0.077. An explanation for this scenario is that due to the cost of time and lack of proper monitoring and supervision of the business, there may be setback during the course of acquiring more education. The outcome of this study agrees with Diagne and Zeller (2001) that conclude in their research on “Access to Credit and its impact in Malawi” that those beneficiaries of microcredit realised lower income than non-beneficiaries because of unfavourable terms and conditions of the Credit Institutions. Moreover, increase in living standard would contribute to additional income of the rural poor microfinance loan beneficiary by 0.379; as it is generally known that living standard enhances income and vice-versa.
Table 4. Results of Regression model on the Impact of Microfinance loan on the Income of the rural poor

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Estimated Coefficients</th>
<th>Standard Error</th>
<th>P- Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microfinance</td>
<td>-0.476</td>
<td>0.056</td>
<td>0.000</td>
</tr>
<tr>
<td>Household Employed</td>
<td>0.061</td>
<td>0.048</td>
<td>0.195</td>
</tr>
<tr>
<td>Assets</td>
<td>-0.408</td>
<td>0.030</td>
<td>0.000</td>
</tr>
<tr>
<td>Household Size</td>
<td>0.108</td>
<td>0.044</td>
<td>0.014</td>
</tr>
<tr>
<td>Male</td>
<td>0.156</td>
<td>0.052</td>
<td>0.003</td>
</tr>
<tr>
<td>Age</td>
<td>0.008</td>
<td>0.003</td>
<td>0.013</td>
</tr>
<tr>
<td>Marital</td>
<td>0.088</td>
<td>0.050</td>
<td>0.074</td>
</tr>
<tr>
<td>Education Level</td>
<td>-0.077</td>
<td>0.023</td>
<td>0.001</td>
</tr>
<tr>
<td>Living Standard</td>
<td>0.379</td>
<td>0.013</td>
<td>0.000</td>
</tr>
</tbody>
</table>

R-Squared: 0.556
F-Statistics: 154.93
p-value: 0.000
Hatsq(p-value): 0.166
Vif (mean): 1.47

Source: Field Survey Data (2014)

5. Conclusion and Recommendations

This study considers the impact of microfinance institutions towards the rural poverty reduction in terms of Income to the poor in Nigeria. The outcome of the study revealed that there is marginal contribution of microfinance institutions on the increase in the income of the households in the study area. This outcome agrees with the findings of Morduch (1998). However, in order to make Microfinance Institutions (MFIs) more effective in poverty reduction and to reach the target poor in the rural areas, the Government should create more enabling environment by improving on the rural physical infrastructural facilities such as electricity, pipe-borne water, good roads and other social facilities like education and health. All this would reduce the operational costs of MFIs and make their services in the rural areas more attractive and effective.

Moreover, MFIs should always adjust their loan terms and conditions towards the situation of their potential rural clients. For instance, short term loan and weekly repayment may not augur well for a rural peasant farmer whose harvesting period is seasonal and the crop gestation period is a bit long. In essence, MFIs should endeavor to make flexible client specific repayment schedules. In addition, MFIs can reduce the cost of operation and improve on Corporate Governance by recruiting the local educated people that can earn less than their counterparts in urban centers. Officers from local areas are expected to understand rural poverty better and should be able to convince the poor to join microfinance programmes. Also, MFIs should develop their programmes through Research and Development that would create opportunities for their clients in terms of Training and Entrepreneurship orientation. We agree with Diagne and Zeller (2001) that having access to microcredit by the rural poor may not yield successful results without the provision of necessary infrastructural facilities and human capital development. However, future studies on this subject matter can be extended to the impact of Microfinance on the household health and children education.

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