

## RURAL POVERTY IN SINDH AND ROLE OF MICROFINANCE IN POVERTY ALLEVIATION

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### ABSTRACT

*This paper analyses the strategies for eradication of poverty in the rural areas of Sindh. It correlates the extent of microfinance in the process of poverty alleviation. Financial services at micro level are provided by Micro Finance Institutions (MFIs) to rural people in the shape of microcredit, micro savings and micro insurances through group lending approach. This study conducted in the selected villages of Mirpurkhas district. Participants were selected randomly from Community Groups (CGs) made for availing microfinance services from MFIs working in the area for business purposes. The study aims at exploring prevalence of rural poverty and inequalities. The study further explores the co-relationship between availability of micro financing and poverty alleviation. The results of study show that the presence of higher level of poverty and inequality among rural population of Mirpurkhas district and also confirm the significant contribution of microfinance, towards poverty reduction in study area.*

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**Keywords:** Microfinance Services, Poverty Reduction, Rural Poor, Inequality

### INTRODUCTION

Microfinance considered one of the powerful development tools for poverty reduction like many other development tools in the world. There are many studies which show that microfinance institutions (MFIs) have shown diversity in their performance and ability to reach poor and played important role in the poverty alleviation process (Morduch & Haley, 2002). Microfinance can relate to the poor from different angles. The lack of access to credit for poor people is because of absence of physical collateral and microfinance institutions do not require physical collateral in most of the cases. The poor largely rely on moneylenders at high interest rates and MFIs try to overcome these barriers and establish close relations with poor people to offer them financial services at their doorstep for poverty alleviation (ADB, 2007).

The research paper intends to test the hypothesis that there is a significant relationship of microfinance with poverty at household level in rural areas. There are three parts of this paper. First part elaborated theoretical framework and explored the poverty situation in the rural context, and discussed importance of microfinance in the poverty alleviation at

household level in Pakistan and developing world. Second part explains formal data that has been analysed to test the hypothesis and third part is relates with results, conclusions and recommendations.

#### LITERATURE REVIEW

World Bank interpreted poverty as lack of access to different type of assets necessary for high standard of income or welfare by rural poor households. In that situation, poverty can be assumed as the lack of access to human, natural, physical, social and financial assets. The poor households have lack of access to education, land ownership, infrastructure, network of obligations and financial services which are the essential assets for rural poor households (World Bank, 2002). There are two types of poverty generally discussed in studies, the income poverty and human poverty. The income poverty is purely based on level of monetary income. The World Bank defined poor categories as people living on less than 2 US Dollar per day. In further explanation it divided poor into extreme poor and moderate poor by declaring extreme to those who live on less than 1.25 US Dollar per day income (World Bank, 2014).

Poverty is a common feature of Pakistani society. More than half of the population in Pakistan is living in multi-dimensional poverty and suffering from intense deprivation. The Pakistan is ranked in low human development level countries. There are about three out of ten people are suffering from lack of health facilities in their life, five out of ten lack accesses to education which is important in modern world (UN, 2010). In Pakistan the one perspective of poverty is of urban and rural distinction. The rural poverty is higher than urban poverty because larger population lives in the rural areas with inadequate opportunities for better living as compared to urban areas. Poor are concentrated in rural areas where poverty head count is almost double to the size of that in urban areas and 80 percent of total poor live in rural areas (IMF, 2010).

The rural poor consist on households with small land ownership and land less laborer households in Pakistan. The landless laborers are almost half of the rural households and incidence of poverty is higher in landless households than small land owners and big landlords (Arif, *et.al*, 2011).

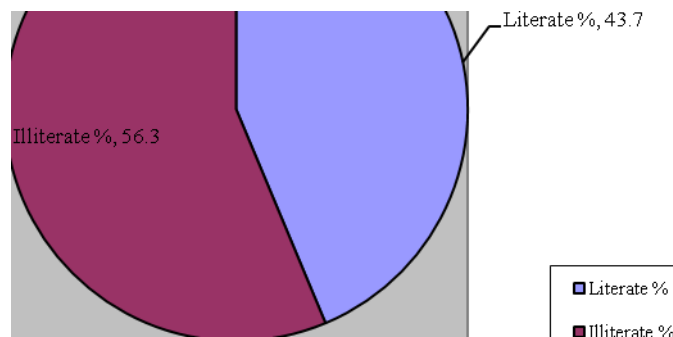
In order to overcome the shortcomings of previous studies and explore the causal linkages between microfinance and poverty this study was designed. We recruited 350 participants from randomly selected villages of Mirpurkhas district in Sindh province of Pakistan where microfinance services were available to participants. A structured questionnaire was developed and used to collect information of participants for the planned study. Data was analysed through SPSS. Mean and standard deviations for continuous variables i.e. age, family size, numbers of persons in the

households etc. and frequency and percentages for categorical variables such as sex, literacy etc. were computed. Inequality was measured through Gini coefficient and poverty levels were determined through World Bank 1.25 dollar per day definition of poverty. In order to analyse the relationship of microfinance lending with poverty we have applied regression technique.

## RESULTS AND DISCUSSIONS

There were 350 participants were included in the analysis, from the total respondents 80.6% were males, and 19.4% were females. Figure 1 shows the status of education in study participants.

**FIGURE-1**  
**EDUCATION IN STUDY PARTICIPANTS, N=350**



**Source:** Survey Data 2011/12

Figure-1 presents the percentage distribution of literate and illiterate participants in study. A total of 197 of the participants (56.3 percent) were illiterate and 153 (43.7 percent) were literate. The percentage of literate persons observed in this study is lower than over all literacy rate of Sindh province estimated at 59 percent in 2010-11(UNDP, 2012).

### *Individual and Household Characteristics*

Mean average and standard deviation of continues variables of age, families, and numbers of persons engaged in the household are provided in table 1. The mean age was 34, mean average of family was 6.94, of persons in business was 2.0 and total literate person was 2.69. In Pakistan the extended families are common phenomenon and there are cultural reasons

for that and six family members are most occurring figures in surveys (Setboonsarng & Ziyodullo, 2008). The household size in Sindh is 5.8 persons per household and the dependency ratio is 94.2. In rural areas of Sindh the dependency ratio is 97.4 and in Mirpurkhas district it is 97.5 and the household size is 6.1 (GoP, 1998).

**TABLE-1**  
**DESCRIPTIVE STATISTICS OF INDIVIDUAL & HOUSEHOLD**  
**CHARACTERISTICS**

**n=350**

| <b>Variables</b>                 | <b>Mean</b> | <b>Standard<br/>Deviation</b> |
|----------------------------------|-------------|-------------------------------|
| Family Size                      | 34.45       | 8.418                         |
| Age                              | 6.94        | 2.177                         |
| Number of Persons in Household   | 2.29        | 1.207                         |
| Business                         |             |                               |
| Total Literate Persons in Family | 2.69        | 1.833                         |
| Loan Amount                      | 13534.18.   | 10821.834                     |

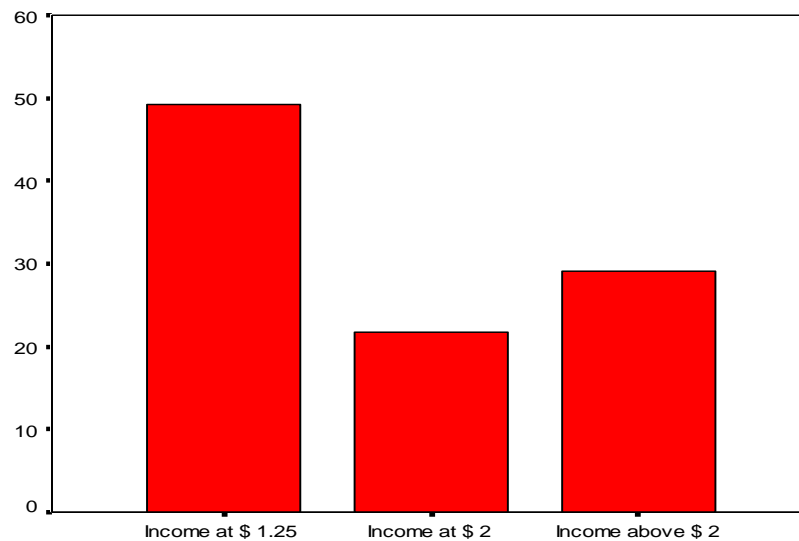
**Source:** Survey Data: 2011/12

#### ***Poverty and Inequality in Study participants***

The status of population below the poverty line in Pakistan from 1996 to 2010-11 remained between 28 and 38 percent. The rural population is more than urban population below the poverty line in Pakistan (Jamal, 2013). The Planning Commission claimed to estimate poverty of Sindh Province at just 20 percent in 2001/02 but it differs from other sources like Social Policy Development Centre (SPDC) and Pakistan Microfinance Network (PMN) who claimed the higher level of incidence in poverty estimates in Sindh province (Cheema, 2005). The recent estimates of PMN's study on poverty incidence by agro climatic zones in Pakistan provide poverty estimates of Sindh province by agro climatic zones. It shows the significant variation in the poverty at Sindh across the two zones and in urban/rural divide. The one zone is named Rice-other Sindh zone and consisted on eastern half of the province had poverty level at 35.1 percent and second zone named as Cotton wheat zone which is mostly consisted on the districts located at left bank of river Indus at western half of the province had 29.6 percent poverty. The urban poverty is lower in comparison to other zones (PMN, 2009).

**FIGURE-2**  
**POOR CATEGORIES IN STUDY PARTICIPANTS**

**n=350**

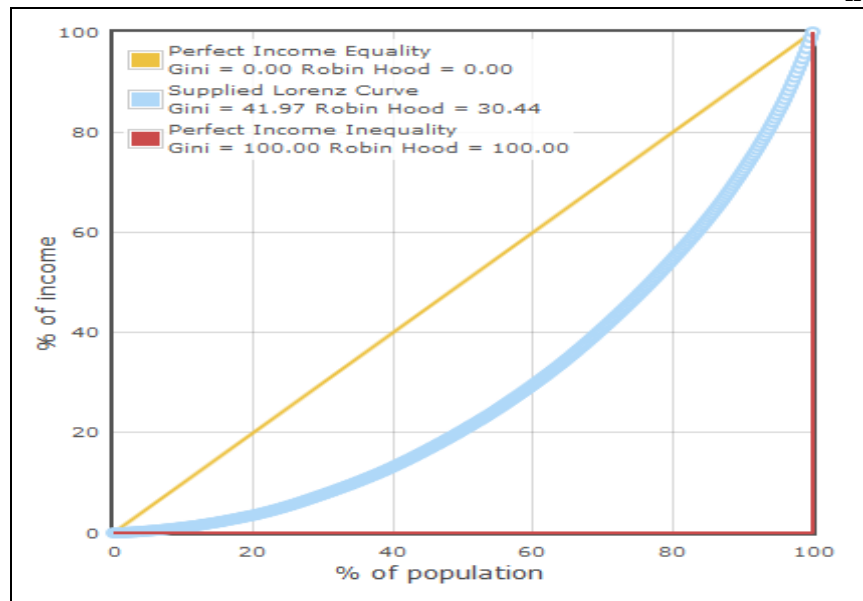


**Source:** Survey Data: 2011/12

We have used World Bank 1.25 dollars per day income definition of poverty to assess the level of poverty in study participants along with other categories of 2 dollars and above. The results revealed that 172 participants (49 percent) had per day income below 1.25 dollars. There were 76 participant (21.7 percent) had below than 2 dollar income while 29 percent of participants had more than 2 dollar income (Figure-2). This analysis show that almost half of the population is living below the poverty line and desperately need microfinance and social services.

Besides rural poverty, growing inequality in rural areas of Sindh is also main problem which shows poor distribution of sources among rural population. The previous estimates of Gini coefficient in Pakistan during the period of 2000 to 2011 showing increasing trends in inequality of income as it increased from 0.28 in 2000-01 to 0.407 in 2010-11. The Gini coefficient in rural areas was estimated at 0.373 in 2010-11(Jamal, 2013).

**FIGURE-3**  
**GINI COEFFICIENT AND LORENZ CURVE IN STUDY PARTICIPANTS**  
**n=350**



**Source:** Survey Data: 2011/12

The results of our study are in line with previous observation and even show higher estimates of inequality. The figure 3 is showing the Gini index and Lorenz curve for the study participants. Lorenz curve represents the distribution of income and the Gini index measures income inequality ranges from zero to 100 (World Bank, 2013). The Gini index for a set of income is calculated from the associated Lorenz curve. It is equal to area between that curve and the line of perfect income equality (Rosenmai, 2013). This study has estimated Gini coefficient at 0.4917 in the study participants from Mirpurkhas district and it is comparatively higher as compared to previous figures of Gini coefficient for rural areas in Pakistan.

#### ***Relationship of Microfinance with Poverty***

There are multiple factors are behind the rural poverty in Sindh province of Pakistan. Previous studies identified different predictors of poverty in the rural areas of Pakistan and identified land ownership, education, family size and household assets as the main determinants of poverty. However, our study was focused to observe the association of rural poverty along with other possible factors in study population of Mirpurkhas district.

In order to analyse the relationship of microfinance (Microfinance services availed, 0=No, 1=Yes) with poverty (Poor=0, Non-poor=1) the logistic regression model was used in the analysis. The relation of poverty with its predictors can be determined through odds ratios. As we know the log it is natural log odds of the event,  $y=1$

$$\text{logit } [p] = \ln [\text{odds}(Y = 1)] = \ln \left[ \frac{p}{1-p} \right]$$

$$\text{logit } [p] = \beta_0 + \beta_1 X_1 + \dots + \beta_k X_k$$

The equation for poverty predictors will be;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3$$

Where  $Y$  = Binary dependent variable (Poor=0, Non-Poor=1),  $\beta_0$  is the intercept or constant and  $X_1$  (Microfinance Services, 0=No, 1=Yes),  $X_2$  (Land, 0=No, 1=Yes),  $X_3$  (Family Size) are independent variables. The results of regression analysis are given below table:

**TABLE-2**  
**DETERMINANTS OF POVERTY IN STUDY POPULATION OF**  
**MIRPURKHAS DISTRICT**

| Variables       |        |       |        |    |       |        | 95% CI. for |        |
|-----------------|--------|-------|--------|----|-------|--------|-------------|--------|
|                 | B      | S.E   | Wald   | df | Sig   | Exp(B) | EXP(B)      | Upper  |
| MF-Services (1) | 2.944  | 0.703 | 17.523 | 1  | 0.000 | 18.993 | 4.786       | 75.378 |
| Land(1)         | 1.202  | 0.307 | 15.345 | 1  | 0.000 | 3.325  | 1.823       | 6.066  |
| Family Size     | -0.328 | 0.071 | 21.091 | 1  | 0.000 | 0.720  | 0.626       | 0.829  |
| Constant        | -1.716 | 0.711 | 5.829  | 1  | 0.016 | 0.180  |             |        |

MF: Microfinance services

Source: Survey data 2011/12

Table-2 revealed the results of logistic regression coefficient, Wald test and odds ratio for each of predictor in the model. By using 0.05 criterions for statistical significance, microfinance services, ownership of land and family size variables had significant effects. The odds ratio for microfinance services indicated that microfinance clients are 19 times more likely to be non-poor than non-microfinance clients. Empirical results revealed that microfinance had significant relationship with poverty. Empirical results also revealed land ownership is significant at  $p < 0.05$  in model as essential predictors for poverty while family size is negatively correlated with poverty in the participants.

## CONCLUSION AND RECOMMENDATION

The analysis of this study demonstrated that poverty is main problem in the rural areas and microfinance has significant relationship with rural poverty in Mirpurkhas Sindh. The microfinance services are accessible to low income and poor people in the form of microloans by MFIs. Those services were found highly significant with the poverty status of households and those who have got these services are less likely to be poor than non-microfinance clients. As this study has identified half of the participants living below the poverty level of 1.25 dollars per day income, there is immense need of focusing this category of poor and diversifying loan products and services for the benefit of rural poor. In the light of findings, this study suggest to introduce more loan products, increase loan ceiling and focus other services like insurance and saving mobilization in the rural areas.

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