

# Impact of Community Development in Poverty Reduction: Reflections of Azad Jammu and Kashmir Community Development Program

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**Abstract** This has always been the dream of development thinkers to contribute in materializing the goal of sustainable development with maximum possible equity. It has become a challenging question whether development programs are really contributing in the welfare of masses and if so, what sort of policy messages can be taken from such success stories? In this connection, present study investigates the impact of Azad Jammu and Kashmir Community Development Program (AJKCDP) in multidimensional perspectives, while using both secondary and primary data to be collected through stratified purposive random sample of 560 respondents from four districts of AJ&K. Adjusted class of FGT measure was employed to estimate the incidence, depth and severity of poverty in absolute and relative framework. It was found that there are varying reflections of incidence, depth and severity of poverty across the sub-groups. Beside unidimensional poverty, multidimensional deprivation was also quantified for all registered and non-registered members of AJKCDP under different arbitrary weight arrangements. Most of such empirics clearly demonstrate the fact that multidimensional poverty was reduced in a higher proportion among the members as compared to non-

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members; whereas health dimension has been emerged as the leading contributor in multidimensional poverty in AJK. One key policy message emerges that no intervention can be sustainably workable and highly successful in improving the welfare of the masses until health related issues are addressed in conjunction with other development initiatives including institutional development.

**Keywords** Community development · Poverty reduction · Azad Jammu & Kashmir

#### 1 Introduction

Pakistan has been confronting the daunting challenge of development in multidimensional perspectives. Regional disparity, geographic misfortune, political instability and policy inattention towards public services are the key denominators of economic failure or poverty across various sectors of the economy. Historical trends of growth and development are encouraging to some extent in some regions but other regions including Azad Jammu and Kashmir (AJK) are still facing the dark faces of deprivations in terms of education, health, housing and employment. Since 1960s and 70s various anti poverty programmes were adopted both in developing and developed countries and community development practitioners have been influenced by structured analysis as to the causes of poverty and disadvantaged which are income inequalities and inequalities of distribution of wealth and land. Down the road to sustainable development, the experimentation of community development has evolved over past decades into a familiar discipline of interest to both practitioners and academicians (Kleiner et al. 2004). Most often practitioners take Community Development as a result of economic, social and physical enhancement in a community (Phillips and Pittman 2008). Community development can be designed in a variety of ways so as to improve of life of rural people. It is not merely a unidimensional process as it covers different programs to make life worth living as well as the economic well being of rural community on sustainable basis so it is considered a necessary condition for sustainable development. Based on this concept localities which are identified to be ineffective are tried to encourage so that these can be converted into efficient successful and integrated communities by using government interventions (Holman 2014). In AJK a variety of developmental interventions has been made to address the socio-economic conditions of the masses and Azad Jammu and Kashmir Community Development Program (AJKCDP), an IFAD funded program, is one among them to directly deal with the key issues for reducing poverty. Although, the poverty in the developing countries has decreased by one percent per year during early 2000s, but the global financial crisis which were faced previously would cause approximately 64 million more people to be in severe poverty by the end of 2010 (World Bank 2010). The cross cutting layers of the concept of poverty are also relevant in the whole debate of economic development which include incidence, depth and severity of poverty. Recent studies show that 1.29 billion people of developing economies lives in absolute poverty (Jalbani 2014) Poverty was mainly supposed as obvious deficit in the wellbeing of individual or households and also those who do not have adequate income or utilization to place them above minimum entrance level of wellbeing in any civilization (Kakwani 2001; World Bank 2000). This monetary dimension of poverty has been very popular among the development practitioner (Laderchi et al. 2003; Maltzahn and Durrheim 2007; Cheema 2005; Rao 2006; Ali et al. 2010) but meaning and measurement of poverty is so multifaceted that it prevents harmony among researchers (Shehu et al. 2012). Now it has been admitted by development economists and scholars to



be a complex and multidimensional issue depending not only on income/expenditures but other attributes that are necessary to maintain the subsistence level of living such as housing, health, literacy, provision of public services etc. (Thorbecke 2005; Alkire and Foster 2007; Atkinson 2003; Decancq and Lugo 2008; Bellani 2010). By reviewing all these studies, it was observed that the scientists focused either on monetary or multidimensional approach but this study considered both the reflection for deriving some useful results for policy purposes.

As poverty is widely and equally distributed across AJK and Overtime academicians, development thinkers and researchers have gained interest to visualize the impact of poverty intervention programs relevant to the economic and social development of communities which have been deprived since the inceptions of Pakistan. In order to evaluate/ assess the impact of poverty intervention programs on community's household poverty status various studies have been undertaken (Nasim and Aman 2009; Ferdoushi et al. 2011; Chaudhry 2009; Khurshid and Saboor 2013; Hashmi et al. 2007). All of these studies used one method of poverty estimation either unidimensional or multidimensional but the current study estimated poverty by employing both the approaches. Furthermore, these studies evaluated impact of either one or two aspects of the programs but the current study considered a variety of AJKCDP's interventions. Independent impact evaluation of government interventions in AJK is the missing link of development history of Pakistan which needs to be focussed for deriving workable policy lessons. So the current study was undertaken to empirically analyze the impact of AJKCDP which was proposed in lines with the IFAD's objective to reduce poverty and uplift vulnerable rural people of the area, socially as well as economically.

The AJKCDP was established in 2004 but properly started working after 2005 earth-quake to 2012–2013, in all ten districts of the AJK for the completion of its mission of initiating the grassroots development on poverty status of the rural communities of AJK. In search of the objective of poverty decline and improving the living way of the rural community AJKCDP has consolidated its programs into four major works for sustainable development which are Gender Sensitive Community Development which includes Social mobilization, organization and establishment of community organizations (male, female and mixed Cos) through capacity building, Human resource development and Income generation through vocational skills (AJK Community Development Program 2004). In the same pattern, Community Development Fund includes Microfinance window, Infrastructure window and Innovative window. Similarly, Natural Resource Management was in the form of Agricultural development, Livestock development and Social forestry. Finally Program Management shows Implementation and Coordination.

The AJKCDP has completed its diversified phases. To this end, a variety of research questions arise in the mind of policy experts related to the implicit and explicit impact of this program. Some of such challenging questions are stated in following line. How Community Development interventions change the welfare level of community? Whether poverty level or wellbeing is affected by AJKCDP? What is the net impact of developmental interventions on the socio-economic life of the beneficiaries? We are interested in real time impacts. If a project achieves its original objectives, it has a real time impact (AJK Community Development Program 2012). The successful execution and fulfillment of the objectives of the AJKCDP would make it an ideal model for other programs to follow (Government of Pakistan 2014). Stakeholders and policymakers are often interested in empirical estimates of impact evaluation so as to design workable policies in future developmental adventures. Future budget allocations, or aid money are often dependant on the evidence of Project Impact (GoP 2014). There is still no external impact evaluation of



AJKCDP and that too in empirical shape and as Impact Evaluation studies are gaining ground to act a derivative of policy change and opens up new avenues of research in multifaceted dimensions which emphasizes the need for present study.

This study is being carried out under the umbrella of following objectives:

- To estimate difference of difference in unidimensional poverty for registered and nonregistered members of AJKCDP.
- To filter out the net impact of the Program among registered and nonregistered members of AJKCDP through multidimensional poverty estimation.
- 3. To identify policy lessons out of impact evaluation evidences.

#### 2 Materials and Methods

#### 2.1 Sampling Framework

All districts of AJK acted as the universe of present study and sample was drawn through Multistage sampling technique. Firstly four districts: Bagh, Muzaffarabad, from earthquake hit area and Kotli, Sudhnoti from remaining, were purposively chosen as study area. Secondly, registered members of strengthened Community Organizations (COs) of AJKCDP were selected randomly from the sampled villages having more number of COs. A rounded off total of 90 registered members from each district were sampled following table developed by Bartlett et al. (2001) based on formulation and half of this number i.e. 45 non-registered members from each district were selected randomly making 180 nonregistered respondents thus totaling a sample size of 540 respondents. This sampling method is world widely used in primary data based studies. As AJK is hilly area so keeping in view the time and financial constraint it is considered most feasible method for data collection. Data was taken for two time periods i.e. before and after the program for with and without program respondents to filter the impact of the program. Primary Information was collected from the registered and non registered respondents for 2004–2005 (base year) and for 2013-2014 (current year) through a properly constructed and pretested interview schedule (Wingenbach et al. 2003). Published reports, annual reviews, third party evaluation and research papers related to operational strategies and community organizations of AJKCDP have been widely reviewed for substantiating major results and finally study's conclusion.

#### 2.2 Methodological Framework

Data was analyzed in three steps, first step included simple expressive statistics such as means, sums, ranges, frequency distributions and percentages for proper screening, second step was to estimate unidimensional poverty and third was to investigate multidimensional poverty.

#### 2.2.1 Unidimensional Poverty

In literature, several measures are used to examine unidimensional poverty index. But, generally FGT method is used for the assessment of poverty. Foster et al. (1984) showed three poverty measures for calculating the severity, incidence and depth of poverty. The FGT equation is given below:



$$FGT = \frac{1}{N} \sum_{i=1}^{m} \left( \frac{Z - Yi}{Z} \right)^{\alpha} \tag{1}$$

where Z = Agreed upon Poverty line,  $Y_i = Average$  real spending of the household member i (here it is per capita expenditure for person i), N = Number of individuals in the sample population (all households in adult equivalents), M = Number of poor individuals (all household members in adult equivalent below poverty line),  $\alpha = Reflects$  aversion of poverty and its value may be 0, 1, 2.

Thus, we can estimate poverty as when  $\alpha$  is

0 = Head Count Ratio which measures Incidence of poverty  $(H_0)$ . 1 = Poverty Gap Ratio which measures depth of poverty  $(H_1)$ . 2 = Squared Poverty Gap ratio which measures severity of poverty  $(H_2)$ .

For the evaluation of poverty the current research focused on absolute poverty line expected by calorie intake method. In this study to find out the occurrence such as depth and severity of poverty at various levels, 2350 calories per adult/day intake equivalent as authorized poverty line of Planning Commission of Pakistan is used. To measure the poverty in observed area the determined amount of calories intakes transformed into monetary terms. For base year, poverty line of Rs. 878.64 is used and for current year poverty line of year 2010–2011(Rs. 1745) according to Economic survey of Pakistan (2013–2014) was adjusted on the basis of consumer price index which is similar to the inflationary changes and therefore, Rs. 2265.59 was estimated and used as a poverty line for the year 2013–2014. After determining the Poverty Gap Index of registered and non registered members separately, the difference of difference of poverty given us the whole picture of poverty of that area, was considered.

#### 2.2.2 Multidimensional Poverty

The multidimensional poverty gives the more accurate picture of poverty because it covers several dimensions such as education (Nasir and Nazli 2000; Arif and Bilquees 2007; Chaudhry et al. 2010), health (Asselin and Anh 2005; Mohanty 2010; Yu 2008; Wagle 2007; Alkire and Santos 2010; Alkire 2007; Chaudhry et al. 2010; Cockburn and Jane 2010), and living standard (Mukherjee 2001; Kruijk and Rutten 2007; Nussbaumer et al. 2011; Anwar and Qureshi 2002; Jamal 2009; Naveed and Islam 2010; Caroline 2003). All these studies were conducted either on equal weight or alternate weight basis of different indicators of poverty but current research employed both equal and alternate weights. Alkire et al. (2014) methodology is used to measure MPI in current study, which pursued about the similar methodology as Alkire and Foster (2007, 2011). Unit of study is based on registered and nonregistered members of AJKCDP of four districts of AJK. For MPI estimation different dimensions, cutoffs and weights are used as in Alkire et al. (2014) methodology. The present study used same three dimensions as included in that methodology but indicators are a little modified depending on the availability of data. In multidimensional poverty, assigning appropriate weight to different indicators within and across each dimension is very important. Nobel et al. (2009) explained that the concept of separate domain of dimensions requires the researcher to clearly control the weights assigned to each of the domains and emphasized equal weights to each of the several dimensions while Decancq and Lugo (2008) clarified the sensitivity of weights and introduced various methods of applying contrasting weights. The current study used equal weights as well as alternate weights (Alkire et al. 2014; Noble et al. 2009; Khan et al. 2015) in which different dimensions are given unequal weights consisting of



the sum of 1 in order to arrive at some suitable policy implication regarding the specific dimension. Table 1 summarizes dimensions, indicators, cutoffs and equal weights employed in present study.

For alternative weighting structure different combinations of weights were analyzed for three dimensions giving 0.5 weight to each dimension one by one and 0.25 to others making sum of 1.

## 2.2.3 Identification of MPI Poor

A deprivation score is assigned to each individual according to the deprivations he/she possessed in the component indicators then a dual cut-off is applied.

2.2.3.1 Cut-Off Point for Deprivation Deprivational score for each individual can be calculated by taking weighted sum of the experienced deprivations and this deprivation score lies between 0 and 1 for each person. The deprivation score increases as deprivation increases for each individual and reaches a maximum of 1. The score 0 is assigned to individual who is not deprived in any dimension. Notational form can be written as:

$$C_{i=}W_{1}I_{1+}W_{2}I_{2+\cdots+}W_{k}I_{k} \tag{2}$$

where  $I_i = 0$  if individual is not deprived in indicator i and  $I_i = 1$  when he or she is deprived in indicator i. Wi is the weight which is attached to indicator I and sum of all weights is equal to 1. Here the sum '1' and this is different from the methodology coined by Alkire and Foster (2007) where the sum of weights is equal to the total number of indicators used.

## 2.2.4 Poverty Cut-Off

To indentify the multidimensionally poor people, a second cutoff is used which is the share of weighted deprivation individual must have to be considered as poor, (1/3) in present study and shows the vulnerability of being poor. It is denoted by k and it is different from Alkire and Foster (2007) where it shows the number of deprivations of an individual to be considered as poor.

| Dimensions         | Indicators  | Cutoff/deprived if   | Weights |
|--------------------|---|--|---------|
| Education          | Number of schooling years   | ≤5 years of schooling*   | 1/3     |
| Health             | Occurrence of diseases in respondent's household  | ≥3 common diseases   | 1/3     |
| Living<br>standard | <ol> <li>Types of houses</li> <li>Sanitation</li> <li>Source of drinking water</li> <li>Type of cooking fuel</li> <li>Assets owned</li> </ol> | <ol> <li>Kaccha/wooden planks</li> <li>No latrine or pit dry raised**</li> <li>Spring water or dug well**</li> <li>Fire wood/crop residual**</li> <li>≤Two common assets (radio, TV etc.)</li> </ol> | 1/3     |

Table 1 Dimensions, indicators, cutoffs and weights for MPI estimation

<sup>\*\*</sup> Shows relevancy to MDG7 which is "ensure environmental sustainability"



<sup>\*</sup> Shows that it is related to Millennium Development Goal 4 (MDG4) i.e. achieve universal primary education

Whereas in this methodology if  $c_i \ge k$  then individual or household is considered as poor. In other words it can be expressed as if an individual has deprivation score equal to or higher than 1/3 then he/she is identified as poor. The individuals whose score is less than poverty cutoff that is one-third of the weighted considered indicators, even not zero, is converted to 0 and they are identified as non- poor. This step is thus referred as censoring the deprivations of non- poor as any of the deprivations have not been considered in Censored Headcounts. In order to differentiate censored deprivation score from original one, notation  $c_i$  (k) is used for censored score. So when  $c_i \ge k$  it means  $c_i$  (k) =  $c_i$  and if  $c_i < k$  it shows  $c_i$  (k) = 0. Thus,  $c_i$  (k) represents the deprivation score for the poor.

- 2.2.4.1 Aggregation (Computing MPI) In this step the data of poor people is combined together in order to construct the MPI. Following Alkire and Foster (2011) measure of Adjusted Headcount ( $M_0$ ), calculating MPI combines two key information: first is the incidence/proportion of people of a given population whose share of weighted deprivation is equal to k or more (H) and second is the intensity of their deprivation (A) i.e. the average proportion of weighted deprivations which they experienced (Foster et al. 1984).
- 2.2.4.2 Multidimensional Headcount Ratio (H) Multidimensional Headcount ratio illustrates the percentage of the multidimensional poor population, by expending a cumulative cut-off point "k" as explained before and it is denoted by "H". Multidimensional headcount ratio "H" can be calculated as:

$$\mathbf{H} = \mathbf{b}/\mathbf{n}$$

where "b" is the number of the poor and "n" is the total population under concern and its value like traditional H ranges from zero to one.

2.2.4.3 Intensity of Poverty (A) The average Deprivational score of multidimensional poor people is the second component and can be shown as:

$$\mathbf{A} = \sum_{i=1}^{n} c_i(\mathbf{k})/\mathbf{b} \tag{2}$$

where "Ci(k)" is deprivational score (censored) of individual i, "k" is cumulative cut-off point and "b" represents the number of multi dimensionally poor people.

2.2.4.4 Adjusted Headcount Ratio  $(M_0)$  Alkire and Foster (2008), Khan et al. (2015) Explained adjusted Headcount ratio, as the total number of deprivations faced by the poor divided by greatest possible number of scarcity faced by the all people. In this manner, it joins the information of "H" referred as incidence of poverty and the "A" referred as intensity of being poor as well. As a result " $M_0$ " is calculated as the product of "H" and "A" and it is sensitive to the occurrence and degree of the multidimensional poverty in contrast to  $H_0$  as:

$$\mathbf{M}_0 = HA$$

It shows the incidence of multidimensional poverty while focusing that how many deprivations are experienced by a poor, if a person becomes poor in more dimensions, poverty level increases. For different groups in the population like province, region, gender or ethnic group  $M_0$  can be calculated.



2.2.4.5 Adjusted Poverty Gap Ratio ( $M_1$ ) Adjusted poverty gap ratio  $M_1$  incorporates the information on the depth/severity of poverty as it is calculated as the product of  $M_0$  (HA) and G as:

$$\mathbf{M}_1 = HAG$$

where, "G" is average normalized gap across all the cases of deprivations. If the poverty of any poor person become deeper in any dimension, that may lead to increase in adjusted poverty. The higher value of G will raise the value of " $M_1$ " whereas, the lower value of "G" will inversely affect the " $M_1$ ".

2.2.4.6 Adjusted Squared Poverty Gap Ratio  $(M_2)$   $M_2$  combines information of the incidence of poverty and range and severity of poverty and it reflects the inequality among poor and can be calculated as the product of  $M_0$  or HA and average severity of poverty "S" as:

$$M_2 = HAS$$

where "S" is obtained by squaring each poverty gap.

### 3 Results and Discussion

### 3.1 Unidimensional (Absolute) Poverty Estimation

The results of unidimensional poverty estimations are presented in Table 2 showing incidence H<sub>0</sub>, intensity H<sub>1</sub> and severity of poverty H<sub>2</sub> in base year and current year for respondents. It shows 35 % incidence, 2.6 % intensity and 0.3 % severity of poverty for registered members in base year while in current year incidence of poverty decreased to 29 % and intensity and severity of poverty changed to 2.9 and 0.4 % respectively. In case of non-registered members, H<sub>0</sub>, H<sub>1</sub> and H<sub>2</sub> are estimated as 37, 2.6 and 0.35 % respectively in 2004–2005 and these values changed to 34, 3.1 and 0.4 % in current year in same order. When these poverty estimates are compared for all respondents it is clear that non-registered members are suffering from more poverty incidence. Khurshid and Saboor (2013) concluded the same results that incidence of poverty for households having credit facility from AKRSP is lower than the households without credit facility. Table 2 further reveals that Poverty decreases for both type of respondents but this decrease is high for registered members then for non registered members.

## 3.2 Difference of the Difference in Absolute Unidimensional Poverty

For the purpose of comparison difference in poverty for registered and non registered members between base year and current year is calculated and then difference of the

Table 2 Unidimensional poverty (absolute) estimates of respondents (expenditure based)

| Category       | 2004–200 | 5    |      | 2013–2014 |      |      |  |
|----------------|----------|------|------|-----------|------|------|--|
|                | Н0       | H1   | H2   | Н0        | H1   | H2   |  |
| Registered     | 0.35     | 0.26 | 0.03 | 0.29      | 0.29 | 0.04 |  |
| Non-registered | 0.37     | 0.26 | 0.03 | 0.34      | 0.31 | 0.04 |  |

Source Own estimations from data of Field Survey 2013-2014



| Category       | 2004–2005 |    |    | 2013–2014 |    |    | Difference of the difference |    |    |
|----------------|-----------|----|----|-----------|----|----|------------------------------|----|----|
|                | Н0        | H1 | H2 | Н0        | H1 | H2 | Н0                           | H1 | H2 |
| Registered     | 35        | 26 | 3  | 29        | 29 | 4  | -6                           | 3  | 1  |
| Non-registered | 37        | 26 | 3  | 34        | 31 | 4  | -3                           | 5  | 1  |
| Difference     | 2         | 0  | 0  | 5         | 3  | 0  | -3                           | 2  | 0  |

Table 3 Difference of the difference in absolute unidimensional poverty (%)

Source Own estimations from data of Field Survey 2013-2014

difference is also computed as shown in Table 3 which reflects that poverty incidence decreased in study area for all respondents with the passage of time i.e. from 35 to 29 % for members and 37–34 % for non members but this decrease is 3 % more in registered members than non registered members. These results are in tally with that of Nasim and Aman (2009) as they checked the overall impact of microcredit and estimated a reduction in unidimensional poverty by 2.23 % thus concluding a positive impact. Therefore, they suggested the extension of micro credit scheme of Pakistan Poverty Alleviation Fund (PPAF) through participatory organizations across the country level to all clusters suffering from poverty. Similarly, Shehu et al. (2012) concluded the same results that Pat Feeder Command Area Development (PFCAD) project positively effected on agriculture sector and reduced all indicators of absolute poverty after the program in Baluchistan thus showing overall positive impact. As far as intensity and severity of poverty, there is a minor increase for all respondents in current study.

The above estimation was based on absolute poverty line which is a general threshold for the whole country but it did not show the income inequality among the respondents of the area under study. So was the reason that relative poverty was also estimated in addition to absolute poverty.

#### 3.3 Unidimensional (Relative) Poverty Estimation of Respondents

As unidimensional poverty can also be calculated by using relative poverty line estimated by taking average expenditures of respondents. Table 4 shows the results of relative unidimensional poverty and it shows that  $H_0$  is 50.8 % for registered members in base year and it increased to 53.8 % in current year while this incidence of poverty is 50 % for nonregistered members in base year and inclined to 56 % in current year showing more increase in poverty for non- registered members as compared to registered ones. Relative poverty shows the inequality among the respondents meaning that the rich became richer and poor became poorer with the passage of time and this result is in accordance with overall world poverty scenario.

#### 3.4 Difference of the Difference for Relative Unidimensional Poverty

Table 5 shows the net difference in poverty of both type of respondents before and after the program and it revealed that incidence of poverty is increased by 3 % for registered members and it increased by 6 % for nonregistered members in current year. It proved that poverty increase in beneficiaries of AJKCDP (3 %) is less than that of non beneficiaries i.e. 6 % and this result matches with that of Khurshid and Saboor (2013) who showed a less increase in poverty of registered members of AKRSP when compared with non members.



| Category       | 2004–200         | 5     |                | 2013–2014        |       |                |  |
|----------------|------------------|-------|----------------|------------------|-------|----------------|--|
|                | $\overline{H_0}$ | $H_1$ | H <sub>2</sub> | $\overline{H_0}$ | $H_1$ | H <sub>2</sub> |  |
| Registered     | 0.508            | 0.127 | 0.038          | 0.538            | 0.078 | 0.015          |  |
| Non-registered | 0.500            | 0.127 | 0.037          | 0.560            | 0.086 | 0.017          |  |

Table 4 Unidimensional poverty (relative) estimates of respondents (expenditure based)

Source Own estimations from data of Field Survey 2013-2014

**Table 5** Difference of the difference in relative unidimensional poverty (%)

| Category       | 2004–2005         |      |       | 2013–2014 |       |       | Difference of the difference |                |      |
|----------------|-------------------|------|-------|-----------|-------|-------|------------------------------|----------------|------|
|                | $H_0$ $H_1$ $H_2$ |      | $H_0$ | $H_1$     | $H_2$ | $H_0$ | $H_1$                        | H <sub>2</sub> |      |
| Registered     | 50.8              | 12.7 | 3.8   | 53.8      | 7.8   | 1.5   | +3                           | -4.9           | -2.3 |
| Non-registered | 50.0              | 12.7 | 3.7   | 56.0      | 8.6   | 1.7   | +6                           | -4.1           | -2.0 |
| Difference     | 0.8               | 0    | 0.1   | 2.2       | 0.8   | 0     | 3                            | 0.8            | 0.3  |

Source Own estimations from data of Field Survey 2013-2014

#### 3.5 Multidimensional Poverty Estimates of Respondents for AJK

In context of current study multidimensional poverty is mapped keeping in view the same aspect of future policy derivatives. So by following Alkire et al. (2014) methodology it was attempted to calculate multidimensional poverty of respondents for the first time in AJK. Table 6 shows the results of multidimensional poverty estimations on equal and nested weight basis and it is clear that giving equal weights to all dimensions, Adjusted head count ratio/incidence of poverty  $M_0$  for members was 43.4 % in base year and it decreases to 28.4 % in current year. On the other hand  $M_0$  for non members decreases from 43.5 to 34.2 % showing a less decrease in poverty when compared with that of members. The reasons for this decline seem to be the improvement in education and living standards with the passage of time.

As far as depth of multidimensional poverty/adjusted poverty gap i.e.  $M_1$  is concerned, it is almost equal for both categories of respondents (almost 27 %) in base year and decreases in current year for both, while this decrease is more for members (18 %) than for non members (25 %) reflecting members are having better distribution of resources of life than nonmembers. These circumstances of multidimensional poverty depth are helpful to draw an important policy lesson that there should be an equal distribution of resources among the poorest segment of the area on priority basis and such anti poverty programs would be helpful in future thus positive impact of Program is being concluded on beneficiaries. As far as adjusted squared poverty gap/severity of multidimensional poverty  $M_2$  is concerned Table 5 shows a decline for both categories but again this decrease is more (20–11 %) for members than for non members (21–19 %) which proved that AJKCDP helped in reducing the poverty of registered members more.

Different weights are assigned to dimensions of education, health and living standards to check separate effect of these dimensions in poverty profile of respondents. Education was assigned a weight of 0.5 while 0.25 weight was assigned to other two dimensions each



Table 6 Multi-dimensional poverty indices of AJK (equal & alternate weight basis)

| Dimensions and weights                                      | Category               | 2004             |              |              |              | 2013             |              |              |              |
|---|------------------------|------------------|--------------|--------------|--------------|------------------|--------------|--------------|--------------|
|   |                        | $\overline{H_0}$ | $M_0$        | $M_1$        | $M_2$        | $\overline{H_0}$ | $M_0$        | $M_1$        | $M_2$        |
| Education 0.33 Health 0.33 Living stand 0.33                | Members<br>Non-members | .564<br>.572     | .434<br>.435 | .277<br>.273 | .208<br>.210 | .466<br>.483     | .284<br>.342 | .180<br>.250 | .110<br>.190 |
| Education<br>0.50<br>Health<br>0.25<br>Living stand<br>0.25 | Members<br>Non-members | .578<br>.600     | 405<br>.417  | .287<br>.275 | .215<br>.223 | .379<br>.411     | .210<br>.296 | .140<br>.188 | .116<br>.155 |
| Health 0.50 Education 0.25 Living stand 0.25                | Members<br>Non-members | .647<br>.794     | .534<br>.526 | .203<br>.250 | .255<br>.240 | .672<br>.761     | .540<br>.536 | .192<br>.268 | .155<br>.171 |
| Living stand<br>0.50<br>Health<br>0.25<br>Education<br>0.25 | Members<br>Non-members | .661<br>.600     | .451<br>.451 | .229<br>.298 | .298<br>.234 | .358<br>.389     | .237<br>.240 | .115<br>.140 | .160<br>.103 |

Source Own estimations from data of Field Survey 2013-2014

to trace multidimensional poverty. It is found that situation is better than with that of equal weights as  $M_0$  decreased from 40.5 to 21 % and 41.7 to 29.6 % for registered and non registered members respectively (Table 6). It reflects that education status of residents of AJK is not very bad as literacy rate for AJK is about 70 % (AJK at a Glance 2013); that is why when education is given 50 % weight then multidimensional poverty figures showed a reduction.

It can be concluded that education played an important role in reducing overall multidimensional poverty milieu in AJK especially for members of CDP and also showing more participation of literate persons in such Programs.

Table 6 further tells us the result of multidimensional poverty estimates when second dimension health is given more weight (0.5) than other dimensions (0.25), surprising results were obtained as M<sub>0</sub> was above 50 % i.e. 53.4 and 52.6 % in base year and increased to 54 and 53.6 % in current year for beneficiaries and non beneficiaries of the program respectively. It reflects that health conditions are very poor in the study area due to which health poverty shows chronic figures regardless of members and non members. The reason behind it is that AJKCDP established only few First Aid Posts and among sampled members only 4.2 % have availed this facility showing no improvement in this dimension. Published data of AJK about limited health facilities available in the country (AJK at a Glance 2013) also support this finding which put emphasis on giving special attention to this sector both by government and non government funded programs. Depth



and severity of poverty  $M_1$  and  $M_2$  slightly varied from base to current year for all respondents with the passage of time, further necessitating the strong attention on improving health conditions of the residents of AJK by providing equal health facilities to all population.

Finally dimension of living standards is given 0.5 weight and table reflects the multidimensional poverty milieu, according to which  $M_0$ ,  $M_1$  and  $M_2$  for all sampled respondents showed improvements with time especially for members reflecting an overall positive impact of program. It means that house and housing facilities are improved in study area which reduces poverty to great extent.

A study using the same methodology was conducted in West African Economic & Monetary Union (WAEMU) countries by Cockburn and Jane (2010). They estimated unidimensional poverty for identifying and measuring the child poverty in four WAEMU countries, and in second step evaluated the impact of some policy interventions on the children's welfare by estimating multidimensional poverty. It was found that child poverty was higher in rural areas than in urban areas and concluded that household standards of living contributed more in multidimensional child poverty. They further emphasized the need for regional targeting and antipoverty policies in the research area.

# 4 Conclusion and Policy Implications

The empirical reflections of this study clearly demonstrate the emerging fact that deprivations should be considered in its multidimensional perspective rather than focusing on monetary measures of deprivations. It has been witnessed that the practice of community development dynamics has been successful in improving welfare of local people in their socio-economic spectrum. The results strongly indicate that interventions of AJKCDP for development of communities through formation of COs can significantly decrease the incidence and depth of poverty of AJK. Health was found to be the most neglected component in the study area as it was witnessed that health poverty has increased in the region with the passage of time (Table 6). This shows that development interventions have ignored the health imperatives in its initiatives both explicitly and implicitly.

It has been visualized that the process of socio-economic development is significantly associated to health and education related interventions. To this end, health issue should be focused at top priority for improving welfare level of the community. Some social safety nets must be introduced in the health coverage system in the valley of Kashmir. It has also been noted that the provision of infrastructure particularly associated to health and education sectors should be improved on priority basis by involving the local community and by inviting private sector through the foundation of corporate social responsibility.

A good level of political awareness of AJK masses can be capitalized by further mobilizing the communities for realizing the grass root level problems and finding their indigenous solution through participatory mechanism. Provision of public services including housing and household services would be the hall mark of development policies for achieving the goals of sustainable development if the element of good governance is seriously taken care of in community development programmes.

It has been revealed that the districts where institutional mechanism was relatively better the results of development programmes were transmitting benefits to the poor. Policy makers and development thinkers must realize this fact that established institutes for launching development programmes at community level can play a pivotal role in realizing the fruit of development equitably and effectively.



#### References

- AJK at a Glance. (2013). P&D Department, Government of Azad Government of the state of Jammu Kashmir.
- AJK Community Development Program. (2004). P and D Department, Government of Azad Government of the state of Jammu and Kashmir.
- AJK Community Development Program. (2012). Project Appraisal Report. P&D Department, Government of Azad Government of the state of Jammu & Kashmir.
- Ali, I., Saboor, A., Ahmad, S., & Mustafa, G. (2010). Relative poverty dynamics in Pakistan. *Pakistan Journal of Agricultural Sciences*, 47(1), 45–52.
- Alkire, S. (2007). Choosing dimensions: The capability approach and multidimensional poverty. Oxford Poverty & Human Development Initiative. Chronic Poverty Research Centre, Working Paper. 88.
- Alkire, S., Conconi, A., & Seth, S. (2014). Multidimensional Poverty Index: Brief methodological note. Oxford Poverty and Human Development Initiative (OPHI). Working Paper Report.
- Alkire, S. & Foster, J. (2007). Counting and multidimensional poverty. Counting and Multidimensional Poverty Measures. OPHI Working Paper Series: 7.
- Alkire, S. & Foster, J. (2008). Counting and multidimensional poverty measurement. OPHI Working Paper Series. Revised January 2008. University of Oxford.
- Alkire, S., & Foster, J. (2011). Counting and multidimensional poverty measurement. *Journal of Public Economics*, 95, 476–487.
- Alkire, S., & Santos, M. E. (2010). *Acute multidimensional poverty: A new index for developing countries*. Oxford: Oxford University and Human Development Initiative (OPHI).
- Anwar, T., & Qureshi, S. K. (2002). Trends in absolute poverty in Pakistan: 1990–91 and 2000. The Pakistan Development Review, Part II, 41(4), 859–878.
- Arif, G. M., & Bilquees, F. (2007). Chronic and transitory poverty in Pakistan: Evidence from longitudinal household survey. The Pakistan Development Review, 46(2), 111–127.
- Asselin, M. A., & Anh, V. T. (2005). Multidimensional poverty monitoring: Methodology and implementation in Vietnam. Canada: Poverty and Economic Policy Research Network.
- Atkinson, A. B. (2003). Multidimensional deprivation: contrasting social welfare and counting approaches. Journal of Economic Inequality, 12(2), 44–53.
- Bartlett, J. E., Kottrlliik, J. W., & Hiiggiinss, C. C. (2001). Organizational research: Determining an appropriate sample size in survey research. *Information Technology, Learning and Performance Journal*, 19(1), 43–50.
- Bellani, L. (2010). Multidimensional indices of deprivation: Should reference groups matter?. CEPS/ INSTEAD, Research Seminars. Universita Bocconi, Italy.
- Caroline, D. (2003). The multidimensional measurement of poverty in Belgium and Britain. Netherlands: A categorical approach.
- Chaudhry, I. S. (2009). Poverty alleviation in Southern Punjab (Pakistan): An empirical evidence from the project area of Asian Development Bank. *International Research Journal of Finance and Economics*, ISSN 1450-2887. Issue 23.
- Chaudhry, I. S., Malik, S., Hassan, A., & Faridi, M. Z. (2010). Does education alleviate poverty? Empirical evidence from Pakistan. *International Research Journal of Finance and Economics*, ISSN 1450-2887, Issue 52.
- Cheema, I. A. (2005) Revisiting the poverty line 2001–02. Centre for Research on Poverty Reduction and Income Distribution Islamabad, Pakistan. Discussion Paper Series 2.
- Cockburn, J., & Jane, K. M. (2010). Child welfare in developing countries: An introduction. Canada: Poverty and Economic Policy Research Network.
- Decancq, K. & Lugo, M. A. (2008) Setting weights in multidimensional indices of wellbeing. OPHI Working Paper Series No. 18.
- Ferdoushi, A., Siwar, C., Idris, N. A. H., & Begum, R. A. (2011). Microcredit's contribution to the socio-economic development amongst rural women: A case study of Punchagarh district in Bangladesh. *African Journal of Business Management*, 5(22), 9760–9769.
- Foster, J., Greer, J., & Thorbecke, E. (1984). A class of decomposable poverty measures. Econometrica 42:761–766
- GoP. (2014) Pakistan Economic Survey 2013–14. Finance Division, Economic Adviser's Wing, Government of Pakistan, Islamabad.
- Hashmi, A. H., Maann, A. A., Asghar, K., & Riaz, M. (2007). Gender role in livestock management and their implication for poverty reduction in rural Toba Tek Singh, Punjab-Pakistan. *Pakistan Journal of Agricultural Sciences*, 44(4), 674–678.



Holman, V. D. (2014). The relational bent of community participation: The challenge social network analysis and simmel offer to top-down prescription of 'community'. Community Development Journal, 50(3), 418–431.

- Jalbani, H. S. (2014). Transfer payments: Economic impact of Benazir Income Support Programme (BISP) on the household of Larkana. *Research Journal of Economics and Business Studies*, 3(5).
- Jamal, H. (2009). Estimation of multidimensional poverty in Pakistan. Research Report No. 79.
- Kakwani, N. (2001). On specifying poverty lines. Reforming policies and institutions for poverty reduction. Manila: Asian Development Bank.
- Khan, A. U., Saboor, A., Hussain, A., Karim, S., & Hussain, S. (2015). Spatial and temporal investigation of multidimensional poverty in rural Pakistan. *Poverty & Public Policy, A Global Journal of Social Security, Income Aid and Welfare, 7*(2), 158–175.
- Khurshid, N., & Saboor, A. (2013). Impact assessment of economic interventions of AKRSP on the lives of rural women: A case study of northern areas of Pakistan. *International Journal of Economics Com*merce and Research (IJECR), 3, 49–56.
- Kleiner, B., Raue, K., Silverstein, G., Bell, R., & Wells, J. (2004). Evaluation of the Appalachian regional commission's community capacity building projects. Washington DC: Appalachian Regional Commission.
- Kruijk, H. D. & Rutten, M. (2007). Weighting dimensions of poverty based on people's priorities: Constructing a composite poverty index for Maldives. Institute of International & Development Economics. Discussion Paper: 2.
- Laderchi, R., Saith, C., & Stewart, F. (2003). Does it matter that we do not agree on the definition of poverty? A comparison of four approaches. Oxford Development Studies, 31(3), 243–274.
- Maltzahn, V. R. & Durrheim, K. (2007). Is poverty multidimensional? A comparison of income and asset based measures in five Southern African countries. Social Indicators Research, 86(1), 149–162.
- Mohanty, S. K. (2010). Multidimensional poverty and the state of child health in India. Asian Research Centre Working Paper. 30. United Kingdom.
- Mukherjee, D. (2001). Measuring multidimensional deprivation. *Mathematical Social Sciences*, 42, 233–251.
- Nasim, S. S., & Aman, U. (2009). Role of Pakistan poverty alleviation fund's micro credit in poverty alleviation: A case of Pakistan. Pakistan Economic and Social Review, 47(2), 215–228.
- Nasir, Z. M. & Nazli, H. (2000). Education and earnings in Pakistan. Research Report No. 177. Pakistan Institute of Development Economics (PIDE).
- Naveed, A. & Islam, T. (2010). Estimating multidimensional poverty and identifying the poor in Pakistan: An alternative approach. RECOUP Working Paper Series No. 28.
- Noble, M., Barnes, H., Wright, G., & Roberts, B. (2009). Small area indices of multiple deprivation in South Africa. UK: Department of Social Policy and Social Work, University of Oxford.
- Nussbaumer, P., Bazilian, M., Modi, V., & Yumkella, K. K. (2011). Measuring energy poverty: Focusing on what matters. Oxford Poverty & Human Development Initiative. Working Paper Series 42.
- Phillips, R., & Pittman, R. H. (2008). An introduction to community development. Boca Raton: Taylor & Francis.
- Rao, D. S. P. (2006). Poverty measurement using expenditure approach. Brisbane, Australia: School of Economics, University of Queensland.
- Shehu, R. I., Abdullahi, Y. Z., & Aliero, H. M. (2012). Impact of IFAD poverty intervention programe on rural poverty reductuin in selected LGA's of Sokoto state. *JORIND*, 10(2), 266–274.
- Thorbecke. E. (2005). *Multidimensional poverty: Conceptual and measurement issues*. Paper presented at the international conference on The Many Dimensions of Poverty, Brasilia, August 29–31.
- Wagle, U. R. (2007). Multidimensional poverty: An alternative measurement approach for the United States? *Social Sciences Research*, 37, 559–580.
- Wingenbach, G. J., Boyd, B. L., Lindner, J. R., Dick, S., Arispe, S., & Haba, S. (2003). Students' knowledge and attitudes about international agricultural issues. *Journal International Agriculture and Extension Education*, 10, 25–35.
- World Bank. (2000). Protecting natural resources in north-eastern Pakistan. www.worldbank.org/sar/sa. nsf.
- World Bank. (2010). The World Bank Annual Report 2010. The World Bank, 1818 H St. NW. Washington DC 20433 USA.
- Yu, J. (2008). Multidimensional poverty in China: Findings based on CHNS. Centre for Human and Economic Development Studies, Peking University China.



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