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## **Multidimensional poverty and sustainable rural development: A study from Jammu and Kashmir, India**

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### **Abstract**

Poverty being a global phenomenon, affects population in all the corners of the world. Despite its existence in both the developed and developing countries, its actual heat is felt more in developing countries. The existence of multidimensional poverty acts as an obstacle to the sustainable rural development. Since majority of people in India reside in rural areas, as such multidimensional poverty affects the livelihoods of the majority of them. Multidimensional Poverty Index measures poverty not in terms of income only but brings out deprivations regarding certain minimum requirements of a household like adequate food, proper shelter, electricity, sanitation and also assets. Moreover, provisions such as; safe drinking water, sanitation, health and educational facilities have also been incorporated to give a multi-dimensional twist to poverty. Though the Nations like Colombia, Bhutan, Costa Rica, Egypt and Panama among others have adopted national MPI as a measure of poverty; India still has not realized its importance to be adopted at national level. A recent data of 2017 on MPI by OPHI ranks India 37<sup>th</sup> in terms of multidimensional poverty index. As such, this paper shall estimate the level of multi-dimensional poverty faced by households in the Galthotti village of Rajouri District. It shall also assess whether those out of income poverty or above BPL face multiple deprivations or not. And shall also highlight how the existence of multidimensional poverty acts as an obstacle to the sustainable rural development.

**Keywords:** Rural poverty, multidimensional poverty, sustainability, rural livelihood

### **Introduction**

Agriculture and allied sectors are the drivers of rural economies in the developing world. In India, agriculture supports 58% of its population (NSSO, 2011-12) nestled in rural areas. Even as the share of Services sector in India's economy is plummeting, agricultural sector still is dominant with 47 % of country's labour force engaged in agriculture and allied sectors. The contribution to India's GDP is however very meager amounting to only 16.5 %. The lack of agricultural development leads to a very grave problem of poverty. More than 21.2 % of population in India lies under the \$ 1.90-a-day poverty line of World Bank. Development of agriculture has a contributory role to play in rural poverty alleviation as such, owing to its linkages with other sectors of the economy. However rural poverty is not all about income-earned-per-day. There are certain minimum requirements of a household like adequate food, proper shelter, clothing, and also assets and furniture (ILO on Basic needs, 1976). Moreover provisions such as safe drinking water, sanitation, health and educational facilities have also been incorporated to give a multidimensional twist to poverty.

In India, using the NSSO's Household Consumption Expenditure data, the erstwhile Planning Commission estimated the population living below poverty line, separately in rural and urban areas. But it is largely one-dimensional, being income-based. In 2011, a household of five-earning-members is a BPL if it has an annual earning of less than Rs 27,000, the threshold income. In 1970's, poverty line was estimated on expenditure to buy 2400 calories in rural and 2100 calories in urban areas. There are major differences among different poverty lines put forward by different committees. While Tendulkar Committee says that a person spending less than Rs 27.2 a day in rural areas and Rs 33.3 in urban areas is BPL, Rangarajan Committee estimates the same as Rs 32 per day in rural and Rs 47 per day in urban areas. The later estimates 30% of India's population as poor.

These varied estimates are therefore highly criticized not only for being only income-oriented but also because poverty line has deliberately been kept low to show that millions of people have been alleviated. No importance was given to lack of education, poor-health and other socio-economic dynamics.

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So, estimation of poverty has always been a contentious issue. Poverty manifests not only in income deprivations but also in other dimensions such as health, nutrition and sanitation (Abraham and Kumar, 2008) <sup>[1]</sup>. My data indicates that even the 'above-poverty-line' population was incapable of providing minimum needs. This study regards poverty as a multidimensional aspect of incapability and has used indicators of Multidimensional Poverty Index (MPI) with slight modifications.

The MPI's 2011-12 data reveals that 41.3% of country's population is multi-dimensionally poor. Moreover 22.9 % of population is vulnerable to poverty, 15.7% are in severe poverty and 23.1% are destitute (OPHI, 2017). It is pathetic to compare the National Poverty Line 2011 data that puts poor population at only 21.9 %, almost half of MPI's data. The condition of rural India is deteriorating with 53.5 % of people being multi-dimensionally poor. For urban areas, it is 14.8%. The data of 'State-Wise Percentage of Population below Poverty line by social groups 2004-05' brought about by Ministry of Social Justice and Empowerment reveals that 28.3 % of rural population and 25.7 % of urban population lies below the Poverty line.

For Jammu & Kashmir, which is one of the North-West Himalayan states of India, the same data sources estimate that 4.6 % of rural population and 7.9% of urban population as below the poverty line, making it the least-poor of the 21-states considered. According to Tendulkar methodology, rural-poor account for 11.54 % and urban-poor for 7.20 %. This puts 10.35 % of the state's population below poverty line as in March 2012. The population of the state faces multiple deprivations owing to its topography, rural characteristics of population, agricultural dependence, climatic problems, credit availability, separate government policies, lack of technical know-how etc. Data on multidimensional poverty in the state is not available because the government of the state still relies on the income and consumption data to measure poverty using national poverty lines. The study is also relevant because it satisfies the fundamental requirement of MPI where data on all the indicators must come from the same survey, being based on primary data collected by researcher it fulfils this requirement. It is therefore an initial step to know whether the indicators of global MPI can bring out the true picture of deprivations faced by the population in the rural areas of the state or it needs some modification in indicators which are relevant to the characteristics of the population.

### Aims and Rationale

Since the present study area lacks the recent data related to the poverty estimates (income and multidimensional poverty), the present study therefore attempts to fill the void by highlighting the data about the level of multidimensional poverty faced by households in the village. The attempt has also been made to assess whether those above poverty line face multiple deprivations or not and also highlight the indicators in which majority of the surveyed people face deprivations. Besides, these aims, the major contribution of the present study is also that it highlights how the multidimensional poverty has become obstacle to sustainable rural development in the selected village and suggests the implications.

### Methods

In the present study, Global Multidimensional Poverty Index (MPI) developed by Oxford Poverty and Human

Development Initiative (OPHI) that encompasses ten indicators has been used for measurement of acute poverty. The index used in the study comprised nine out of ten indicators from MPI with the same dimensions, weights and cut-offs for the collection of data as recommended by Santos and Alkire in 2011 <sup>[13]</sup>. One indicator from the health dimension has been dropped because of its limitation in data collection, therefore weight for the indicator of first dimension i.e. health has been taken to be 1/3 rather than 1/6 for two indicators. In the study we have taken 'household' as a unit of analysis and the study is purely on the basis of primary data collected by researchers. Open-ended Interview schedule has been used as a tool to collect data. A sample of 62 household was selected out of 614 households of the village Galhotti (Census, 2011) <sup>[6]</sup> and has been surveyed using Systematic Sampling. For the clear understanding of whether the people above poverty line suffer multidimensional poverty or not households have been divided into APL and BPL. Out of the total sample size of 62, 22 APL and 40 BPL households have been surveyed.

### Multidimensional poverty index (MPI)

In 2010, Oxford Poverty and Human Development Initiative (OPHI) along with United Nations Development Programme's Human Development Reports office prepared an index known as Multidimensional Poverty Index (Alkire and Santos, 2010) <sup>[2]</sup>. It replaced the earlier index used to measure poverty under *Human Development Reports* i.e. Human Poverty Index. Although the need to have a measure that captures multiple deprivation that people face at a time was felt since 1990's but an index including comprehensive dimensions and indicators was developed at the end of the first decade of 21<sup>st</sup> century only. MPI comprises of three broad dimensions of Health, Education and Standard of living. The first two dimensions include two indicators each and the standard of living dimension includes six indicators. These indicators have been set according to the global consensus on the deprivations that can form the basis of poverty (Santos and Alkire, 2011) <sup>[13]</sup>. Moreover, the countries can change indicators as per the most relevant indicators that depict deprivation in the particular region. It is the product of H, the incidence or Headcount ratio which represents the percentage of people deprived and A, the average intensity of deprivation in the indicators which is the share of deprivations each poor person experiences i.e.  $MPI=H \times A$  (Alkire and Seth, 2013) <sup>[3]</sup>.

This measure has also an advantage for it allows comparisons across countries and within countries (Santos and Alkire, 2011) <sup>[13]</sup>. Each dimension and indicator has been assigned equal weight wherein the first two dimensions are having weight of 1/6 each and the indicators having 1/3 each. But in third dimension the weight has been assigned equals to 1/18 and each of six indicators having 1/3. Persons are identified as multi-dimensionally poor if their deprivation score exceeds a cross-dimensional poverty cutoff (Alkire and Robles, 2017) <sup>[4]</sup>, and the cross dimensional poverty cut-off here represents the weighted average of  $\geq 1/3^{\text{rd}}$  of the ten indicators shall be multi-dimensionally poor. Besides, measuring the deprivations faced by people it reveals the intensity and pattern of multiple deprivations.

### The Study Area

Village Galhotti is one of the 15 villages of Block Manjakote of Rajouri district. District Rajouri is one of the

22 districts of Jammu and Kashmir State. It is one of the prosperous villages where the basic facilities of education, health and standard of living are considered to be relatively better than in the nearby villages of the block. This has been the one of reason to select it for present study. Being a home to a large number of households i.e. 614 (Census, 2011) [6], the village poses multiple problems to its residents. The study has therefore endeavored to bring out the multiple deprivations faced by its populace at a time. The data collected by researchers is a clear picture of multiple aspects of poverty that these rural residents have to face.

**Results and discussion**

The data about the multidimensional poverty in the village has been presented in the table 1, which encompasses the information about the headcount ratio as well as the intensity of poverty. And the data in table is about the deprivations faced by proportion of the households surveyed not the population of the village. The data presents a very unique picture.

1. The percentage of the sampled households in Galhotti village of the Rajouri district who face multidimensional poverty is 16 percent. However, the percentage of multidimensionally poor has been larger

among those who were income-poor. This shows that though the non-income poor also face multidimensional poverty but the major impact is on the income poor only.

2. The income-poor sampled households in the study area who had larger headcount ratios has been in case of the income poor at 46.6 percent and in case of non-income poor has been 12.70 percent.
3. In case of the average deprivations that the multidimensionally poor sampled households in the village face, it has been 52% among the income poor and 36 percent among the non-income poor.

Thus, it follows from the mentioned points that obvious severity of multidimensional poverty is larger among the income poor than non-income poor sampled households. This necessitates the targeting of the benefits of the schemes/programmes mainly to the income-poor in the study area. And the non-income poor who are suffering the multidimensional poverty has been due to the reasons that their incomes are either just above the income poverty cut-off or they incur larger expenditures due to larger family size and have less to spend on the other necessary resources.

**Table 1: Percentage of Multidimensionally Poor Households in the Village**

| Percentage of Multidimensionally poor households in the village |        |        |        |
|---|--------|--------|--------|
| Method used   | APL    | BPL    | Total  |
| $H=q/n$   | 0.1270 | 0.4666 | 0.3206 |
| $A=\sum_{i=1}^n c_i(k)/q$                                       | 0.3662 | 0.5229 | 0.4962 |
| $MPI=H.A$   | 0.0465 | 0.2439 | 0.1590 |

Note: H= headcount ratio, q=No. of households deprived, A= intensity of deprivation,  $c_i$ = deprivation score, k=Household's size

In table 2, data on proportion of the households deprived in each indicators of health, education and standard of living has been analyzed to bring out the area or field that needs focus of the policy makers and governments. The data from the table 2 show the similar pattern as that of overall multidimensional poverty index as explained above where it is the income poor group who suffer the most deprivations.

**The findings portrayed by the data in the table 2 are**

1. The percentage of the sampled households who were deprived in the flooring status have been observed to be the highest at 56.25 percent and this percentage has been comparably larger among the income poor sampled households.

**Table 2: Number of Households Deprived (in %age) in Individual Indicators of MPI**

| Number of households deprived (in %age) in individual indicators of MPI                                 |                       |                   |       |
|---|-----------------------|-------------------|-------|
| Dimensions& Indicators (with cut-off) of MPI  | APL (Non-income poor) | BPL (income poor) | Total |
| <b>Health</b>   |                       |                   |       |
| Death of any child up to age 14 in the family in last 5 years   | 16.66                 | 15                | 15.62 |
| <b>Education</b>  |                       |                   |       |
| No family members of age 10 or older who have not completed 5 years of schooling                        | 0                     | 27.5              | 27.5  |
| Any children of age 6-14 not attending school   | 8.33                  | 40                | 28.12 |
| <b>Standard of living</b>   |                       |                   |       |
| No Electricity connection   | 0                     | 10                | 6.25  |
| Not having Safe drinking water source, and within walking distance of $\leq 30$ minutes                 | 29.16                 | 17.5              | 21.87 |
| No Improved source of sanitation and unshared   | 16.66                 | 77.5              | 54.68 |
| Status of flooring, Dirt, Sand or Dung  | 37.5                  | 72.5              | 56.25 |
| Fuel used-Charcoal, Wood, or Dung   | 8.33                  | 50                | 34.37 |
| Assets owned not more than one(TV, Radio, Telephone, Bike, Motorbike, Refrigerator) and no Car, Tractor | 0                     | 50                | 31.25 |

Note: 0=No deprivation

2. The percentage of deprivation on the indicators of the standard of living has been highest in the study area in the indicators such as sanitation, cooking fuel and the sanitation sources. This clearly highlights the priority

area for the improvement in the study area.

3. The indicators of the health dimensions showed the percentage of deprived households in the sampled area next highest to the indicators of standard of living

except access to electricity and safe drinking water. It thus shows that health facilities in the area also need to be prioritised for policy initiatives.

4. Most of the indicators that highlight the highest deprivation of households are from the standard of living dimension of MPI where both the income groups APL and BPL suffer considerable deprivations. Highest place in deprivation being occupied by the status of flooring facility where they have dirt, sand and dung used as flooring. In this indicator although it is the 72.5% of income poor who are affected but 37.5% of those who are even above poverty line have same flooring status having 56.25% of total households deprived in the same indicator.
5. In improved sanitation facility which does have a bearing on health status of the households and is also in the policy agenda of central and state governments nowadays even then, not only those below poverty line but above poverty line suffer this deprivation. 54.68% of the total households surveyed suffer deprivation in this indicator of multidimensional poverty, of which 77.5% are those who are below poverty line whereas for the above poverty line households it is 16.66%.
6. It has been found that the indicators of multidimensional poverty where 27-35% of the households face deprivation in the increasing order of percentage of deprivations in the village are; No household member of age 10 or older has completed 5 years of education having 27.5%, children in the age group 6-14 not attending school with 28.12%, Not more than anyone of the assets (TV, radio, telephone, bike, motorbike, refrigerator and no car, tractor) having 31.25%, and fuel used for cooking (charcoal, wood and dung) at 34.37% of the households surveyed are deprived.
7. Almost 22% of the combined households irrespective of income status suffer in not having safe drinking water and that too not within the walking distance of 30 minutes and 15.62% of the households have death of a child in the home in the last 5 years prior to the day of survey indicating the health condition of the village.
8. The indicator where the least households face deprivation in the village is the electricity connection where even none of the households in the above poverty line status suffers deprivation whereas, 10% of the below poverty line households suffer deprivation making overall 6.25% of the total households suffer in this indicator.

Therefore, it is safe to conclude that if the poverty among rural population on multiple fronts is not done away with, it shall remain an obstacle to the sustainable rural livelihood and as such sustainable rural development. The deprivations on individual indicators of MPI for the Galthotti village are alarming and it highlights the need to take steps to bring those below poverty line at par with the above poverty line. Since the indicators used in multidimensional poverty are interrelated to each other in one or the other ways, as such the deprivation in one indicator has direct or indirect effect on the sufferings of the households residing and making them suffer on multiple fronts.

### Conclusion

The deprivations faced by the people of village Galthotti on the individual indicators of MPI has brought out a very

unique picture. It has been found that the households which are well off and even do not fall under income poverty are Multidimensionally poor. It can therefore be safely concluded that each selected indicator for the study shows deprivation faced by households in the village with few indicators touching heights and only one indicator from standard of living shows less deprivations. It has been found in the study that deprivation in the multiple indicators makes them more vulnerable to the poverty and the circle of their sufferings never comes to end. Therefore, to bring about the sustainable rural livelihood and as such sustainable rural development, it is necessary to do away with the poverty that exists on multiple fronts. The indicator that needs modification is number of assets owned not more than one. In this indicator even the households who do face deprivation in majority of indicators possess two phones owing to its necessity in the present time but they are actually poor. The study therefore concludes that despite the village being considered well off relative to the nearby villages and having access to resources affects its considerable population multidimensionally and also lacks policies that are taking it on the path of sustainable rural development. This also necessitates that though the focus should be targeting of resources to the poorest but those who are just above the poverty cut-off or vulnerable to poverty have to be taken care of.

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