MULTIDIMENSIONAL POVERTY AMONG WEAKER SECTIONS IN RURAL AREAS OF SOUTH-WEST PUNJAB

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Abstract

The present paper is an attempt to examine multidimensional poverty among weaker sections in south-west Punjab. The study revealed that the proportion of multidimensional poor in south-west Punjab is 24 per cent. The percentage of people below poverty line is the highest in Faridkot district followed by Bathinda, Sri Muktsar Sahib and Mansa districts. The labour household category is multidimensionally poorer than the other categories of weaker sections mainly because of the poor education level and the living environment. The small farm households have more percentage of multidimensional poor than the marginal farm households, because of the deprivation of education indicator. The deprivation of asset contributes the most to overall poverty. The other indicators in order of their deprivation are participation of women in vital decisions, debt over one lakh, cooking fuel, sanitation, drinking water, wife is illiterate, house is not pucca, women not allowed to go to market independently, economically dependent ratio, consumption level below poverty line and no child has completed primary level at the age of sixteen years.

Keywords: Rural, multidimensional, poverty, indicators,

JEL Codes: D63, I32, Q15

Introduction

Rural development has been on the national agenda in India after independence. The importance of reduction in poverty and provision of other basic needs has been emphasized in all the five-year plans. Despite the efforts made over the past decades, rural poverty in India still a cause of concern. Poverty among socially disadvantaged groups was much higher than other groups. Persistent poverty in spite of two decades of high economic growth indicates a skewed distribution and concentration of incomes (Varadharajan et al. 2013). It results into increase in income inequalities which push the marginalised sections of the society into deeper morass of poverty (Anupama 2015).

The average calorie consumption in India is already lower than international standards and at the same time, it is much lower in case of weaker sections in rural areas (Sharma and Bhatia 2012). The consumption standards of the rural households were below the recommended threshold level of consumption leading to food and nutritional insecurity. Low expenditure for cereals and high expenditure for other food items showed a shift in food consumption habits of both rural and urban areas (Geetha 2012). Despite rapid economic growth in the past two decades, per capita availability, as well as consumption of food grains, in India has declined and the calorie consumption of the bottom half of the population has been consistently declining since 1987 (Saxena 2006).

Despite the fact, the Green Revolution in India has improved productivity, availability and access to food grains in Punjab, but there has not been a commensurate decrease in the levels of hunger and under nutrition. The state figured disappointingly on hunger index, one-fourth of children were underweight and one-eighth of adults had BMI below the normal levels. As many as 80 per cent of the children, 33 per cent of the women and 40 per cent of the pregnant women still suffered from anaemia (Bhatia 2013). The globalisation policy has affected all the sections of rural people at large and weaker sections specifically. Globalisation has implied a massive land-grab, displacing farmers, and adding million to the ranks of the landless (Shiva and Jalees 2009). Rural poverty rose sharply from 25 per cent to almost 36 per cent within a year i.e. between 1990–91 and 1992, and only returned to its pre-reform level, in 1993–94, after government intervention (Tendulkar and Jain 1995). With per capita increase in income of the

economy, the income shares of the bottom quintile population have fallen whereas the income of the highest quintile population has increased (Gupta et al. 2015).

The idea of multidimensional poverty came to existence with Sen's capability approach emphasizing the non-income indicators (Sen1988). According to capability approach, poverty is not only deprivation of monetary factors but it is also of deprivation of other social indicators, i.e. health, education and other capabilities. The data for income and consumption at household level provides no information regarding intra household resource allocation (Alkire and Santos 2009). Multidimensional poverty studies the poverty along with a spectrum of deprivations encompassing various aspects of well-being such as social, economic and material. Basically, the deprivation is not only of income or consumption expenditure, it can be of education, health, living standards and women empowerment. A person or household can be income poor but multidimensionality not poor or vice versa. Multidimensional poverty is a relatively stable measure because it does not fluctuate with inflation. Moreover, the decline in income poverty does not guarantee a fall in the non-income dimensions of poverty such as education or health (Grosse et al. 2005). So multidimensional poverty measures are crucial to provide a relatively more accurate representation of the multidimensional deprivations from that people suffer. The present paper is an attempt to describes the multidimensional poverty among weaker sections in rural areas of south-west Punjab.

Methodology

The locale of the study is south-west Punjab of India. For the purpose of study, four districts Faridkot, Bathinda, Sri Muktsar Sahib and Mansa had been taken because these are the only prominent districts of this region. Multi-staged random sampling method is used for this study. In the first stage, two blocks are randomly selected from each of the district. One village was selected from each block randomly. In the last stage of sampling, households of the weaker sections were selected. It was decided to select 40 households from each village. For the selection of households, first of all, the categories of these householders were listed. Then the number of households in each category was calculated proportionately. After deciding the number of the households, the selection was made randomly. Over all 320 households are selected for the study. Out of the total 320 households, 53 households belong to small farmers,

80 households belong to marginal farmers, 39 households belong to rural artisans and 148 households belong to labourers.

Multidimensional Poverty Index (MPI)

It has been now established that poverty is a multidimensional phenomenon. However, there is no consensus on the measurement of multidimensional poverty indices, assigning weights to different indicators and cut-off point of poverty. Alkire and Foster (2007; 2011) present the methodology of the multidimensional poverty index (MPI). The same method has been used in the present study. In the present paper, an attempt is made to take the different set of dimensions and to examine the poverty level in a comparatively developed state like Punjab in India. The different situations have been taken.

Situation-1: In this situation, three non-monetary dimensions such as education, health and living environment has been considered.

Situation-2: The situation-2 includes the entire dimensions taken in situation -1 and economic status of sampled households.

Situation-3: Under this situation, a broad view is taken in which dimensions such as education, health, living environment, economic status, and women empowerment has also been taken care of.

Multidimensional Poverty: Dimensions, indicators and weights

Dimension	**Indicators**	**Weights**		
		Situation-1	**Situation-2**	**Situation-3**
Education Status	Head of the family is illiterate	1/9	1/12	1/21
	No child has completed up to primary level at the age up to 14 years	1/9	1/12	1/21
	Education of the wife up to middle	1/9	1/12	1/21
	Total for Education Status	**1/3**	**1/4**	**1/7**
Health Status	At least one member of the family is malnutrition. (Children getting mid-day meal means it is	1/6	1/8	1/14

	compensated by the govt.)			
	One or more children have died	1/6	1/8	1/14
	Total for Health Status	**1/3**	**1/4**	**1/7**
Living Environment Status	House is not *Pucca*	1/15	1/20	1/35
	No electricity	1/15	1/20	1/35
	Household using *dung, firewood, charcoal etc.* for fuel	1/15	1/20	1/35
	Non availability of clean drinking water	1/15	1/20	1/35
	No adequate sanitation including latrine facility at home	1/15	1/20	1/35
	Total for Living Standard Status	**1/3**	**1/4**	**1/7**
Poverty and Dependency Status	Householders having consumption level BPL		1/16	1/14
	The economically dependent ratio is 1:3		1/16	1/14
	Total for Poverty and Dependency Status			**1/7**
Asset status	Household having no agricultural land or business establishment	-	1/16	**1/7**
Debt Status	Household having debt over one lakh over the year	-	1/16	**1/7**
	Total for Economic Dimension(for Situation 2)		**1/4**	
Women Empowerment status	Woman not allowed freely to go out or she cannot go to market independently	-		1/14
	Women do not participate in decision making in the household or she cannot vote to the candidate of her choice	-		1/14
	Total for Women Empowerment Status	**-**		**1/7**

Dimensions and indicators

Education

The Multidimensional Poverty Index (MPI) used three indicators of education. The first indicator is the education of the head of the family. If the head is illiterate, then that shows the deprivation. The second indicator is whether the child has completed up to primary level at the age of 14 years and the third indicator is whether the wife of head of the family is illiterate. If head of the family is illiterate, the child above the age of 14 years has not completed even primary level of education and the wife of the head of the family is illiterate, then the household is considered as deprived of education.

Health

The MPI uses two indicators to measure the health conditions of the sampled households. The first indicator examines the nutrition of household members. The second indicator is child mortality. The MPI identifies a person as deprived if anyone in the family is malnourished or there is at least one child death.

Living environment

The dimension of living environment is divided into five indicators.

Water: A household has access to clean drinking water i.e. the water source is piped water, public tap, borehole or pump and the water is safe and free from chemicals. If any of the earlier mentioned condition regarding water is not satisfied, then the household is deprived to access to clean drinking water.

Improved sanitation: A household is considered to have access to improved sanitation if there are proper sewerage facilities and proper flush toilet or latrine. Otherwise the house is deprived to improved sanitation facilities.

Electricity: If any of the household of the sampled data does not have electricity connection then the household is considered deprived of electricity.

Cooking fuel: If the household is using dirty fuel for cooking say for example dung cakes, charcoal or wood, then the household is considered deprived of access to clean cooking fuel.

Type of house: If the floor or the walls of the household are made up of dirt, sand or dung or thatch of mud, then the household is deprived of proper *pucca* houses.

Economic Dimension

In most of the global studies regarding MPI, there is no mention of direct economic variables such as income/consumption, debt, material assets or so. But these variables are important in a developed state like Punjab. The income inequality, assets and debt is a game changer in this state. Under this heading there are two indicators.

Moderate or Median Poverty Line ($ 3.10 per day on PPP basis): First indicator of the economic dimension is consumption level below the poverty line. The Moderate poverty line worked out by the World Bank ($3.20 per day on PPP basis) is used in the study. The PPP of US $1 was Rs. 28.71 (https://data.oced.org/conversion/purchasing-power-parities-ppp.htm) and poverty line worked out to be Rs.1425 per month per capita for the year 2010-11. However, for the purposes of this study, the poverty line has been estimated for the year 2015 by using the general consumer price index for the agricultural labourers for the year 2015-16. The poverty line comes to be Rs. 2015 per capita per month or Rs. 24520, per annum. The households whose consumption level is below the determined poverty line are considered as deprived households.

Dependency ratio: The second indicator is the household with economically dependent ratio 1:3 or higher. If the dependency ratio is 1:3 and higher, the household is considered to be economically deprived.

Asset status: The household having no agricultural land/ or business establishment are considered deprived.

Debt status: The household having debt of 1 lakh or more over the year is considered as deprived. It is mainly because of the fact that a debt amount above Rs. 1 lakh becomes debt trap for a weaker section household.

Women empowerment status: In the study, two indicators are used for women empowerment status: i) the confidence of women to go to the market independently; and ii) the casting of vote to the choice of her candidate. The deprivation of these indicators shows the dominance of male.

Measurement of Multidimensional Poverty Index and Poverty Cut-off

A threshold is used to identify the multidimensional poor, which in the Alkire Foster methodology is called the poverty cut-off. Someone is considered poor if the deprivation score is

equal or greater than the poverty cut-off. Formally, someone is poor if $c_i \geq k$ (sum of each deprivation multiplied by its weight). In the MPI, a person is identified as poor if he or she has a deprivation score higher than or equal to 1/3. In other words, a person's deprivation must be no less than a third of the (weighted) considered indicators to be considered MPI poor.

Computing MPI

The MPI combines two key pieces of information: (1) the proportion or incidence of people (within a given population) who experience multiple deprivations, and (2) the intensity of their deprivation: the average proportion of (weighted) deprivations they experience. Formally, the first component is called the multidimensional headcount ratio (H):

H=q/n

Here *q* is the number of people who are multidimensionally poor and *n* is the total population. The second component is called the intensity (or breadth) of poverty (A). It is the average deprivation score of the multidimensional poor people and can be expressed as:

$$A = \frac{\sum_{i=1}^{n} c_i(k)}{q}$$

Where c_i (k) is the deprivation score of individual i and q is the number of people who are multidimensionally poor.

The MPI is the product of both: **MPI = *H* × *A/100*.**

Decomposition of MPI

We have further decomposed the *MPI* by its component indicators. The censored headcount ratio is first identified to decompose *MPI* into each indicator. The censored headcount ratio is defined as the share of multidimensional poor deprived in the given indicator in the total population. The contribution of deprivation of a particular indicator is computed as:

$$MPI = \frac{wiCHi}{MPIofArea} * 100$$

where wi is the weight of ith indicator and CHi is the censored head-count ratio of ith indicator.

The contribution of each region to overall poverty is computed by using the following formula: i.e. Contribution of region i to

$$MPI = \frac{ni / nMPIi}{MPIofArea} * 100$$

Where n_i is the population of i^{th} region and n is the total population. MPI_i is the MPI of the i^{th} region.

Results and Discussion

Multidimensional poverty situation-1 among weaker sections in South-West Punjab

The table 1 reveals that the proportion of multidimensional poor in south-west Punjab is 24 per cent. Among the different districts, the percentage of people below poverty line is the highest in Faridkot district followed by Bathinda, Sri Muktsar Sahib and Mansa districts. The labour households have the highest percentage of poor i.e. 39.67 per cent followed by the rural artisan, small farm and marginal farm households. In all the four districts, the labour household category is the multidimensionally poorer than the other categories of weaker section mainly because of the poor education level and the living environment. The small farm households have more percentage of multidimensional poor than the marginal farm households, though it is financially sound, because of the deprivation of education indicator. The values of the multidimensional head count and intensity of poverty, both are the highest for the labour households. It shows that the labour households face a lot of deprivations instead of either income or consumption deprivations.

Table 1: Multidimensional poverty in South-West Punjab according to situation-1

District	Category	MHR (H)	IP (A)	MPI=(H×A)/100
Bathinda	Marginal Farmers	12.50	28.80	3.60
	Small Farmers	5.48	42.00	2.30
	Rural Artisans	47.06	38.63	18.18
	Labourers	85.91	48.72	41.86

	Total	54.32	44.81	24.34
Faridkot	Marginal Farmers	5.97	39.90	2.38
	Small Farmers	36.25	37.60	13.63
	Rural Artisans	18.75	48.60	9.11
	Labourers	91.48	45.87	41.96
	Total	56.99	45.64	26.01
Mansa	Marginal Farmers	15.49	42.55	6.59
	Small Farmers	27.46	41.77	11.47
	Rural Artisans	47.92	40.40	19.36
	Labourers	71.43	42.11	30.08
	Total	38.55	39.49	15.22
Sri Muktsar Sahib	Marginal Farmers	10.17	42.00	4.27
	Small Farmers	0.00	0.00	0.00
	Rural Artisans	32.39	42.34	13.72
	Labourers	81.00	47.85	38.76
	Total	50.66	47.00	23.81
All Sampled Households	Marginal Farmers	10.92	39.79	4.34
	Small Farmers	21.05	40.10	8.44
	Rural Artisans	38.46	41.03	15.78
	Labourers	84.59	46.90	39.67
	Total	52.97	45.55	24.13

Source: Field Survey, 2015-16

Head count ratio=H, Intensity of poverty=A, Multidimensional poverty index=MPI

Multidimensional poverty situation-2 and situation-3 among weaker sections in South-West Punjab

The table 2 shows the multidimensional poverty according to situations-2 and 3, in south-west Punjab, by using World Bank's moderate poverty line of consumption.

Situation-2

According to situation-2, the extent of the poverty is 26.46 per cent, for an average weaker section household. The percentage of poverty is the highest in Sri Muktsar Sahib district with highest head count ratio followed by Bathinda, Faridkot and Mansa districts. The poverty pattern of all the districts is the same but it is not equal to the overall poverty pattern of the sampled population. The multidimensional poverty index is the highest for the labour households followed by the rural artisan, small farm and marginal farm households.

Situation-3

Table 2 also shows the multidimensional poverty index according to the situation-3 on the basis of World Bank's moderate poverty line among different districts of South-West Punjab. For an average weaker section household level, the value of MPI is 32 per cent, with an average intensity of 48 per cent and multidimensional head count ratio is 66 per cent. The highest multidimensional headcount ratio is in Faridkot district and the highest intensity of poverty is in Bathinda district, among the labour households. The values of multidimensional poverty index are the highest in Sri Muktsar Sahib district, followed by Bathinda, Faridkot and Mansa districts. The pattern of MPI values is the same in three districts namely Bathinda, Faridkot and Mansa, which have the highest MPI values for the labour households and the least for the marginal farm households and this pattern is also same for all sampled households. In Sri Muktsar Sahib district, the labour households have the highest MPI values and the small farm households have the lowest MPI values.

Table 2: Multidimensional poverty in South-West Punjab according to situation-2 and situation-3

District	Category	Situation-2			Situation-3		
		MHR (H)	IP (A)	MPI=H×A	MHR (H)	IP (A)	MPI=H×A
Bathinda	**Marginal Farmers**	12.50	40.41	5.05	25.00	37.60	9.40
	Small Farmers	10.96	40.00	4.38	50.68	39.93	20.24
	Rural Artisans	47.06	42.44	19.97	47.06	43.41	20.43
	Labourers	89.09	47.73	42.53	89.09	52.15	46.46
	Total	**62.40**	**46.95**	**29.29**	**71.59**	**49.39**	**35.36**

Faridkot	**Marginal Farmers**	13.43	36.01	4.84	11.94	40.09	4.79
	Small Farmers	11.25	40.69	4.58	36.25	37.60	13.63
	Rural Artisans	18.75	42.91	8.05	43.75	37.45	16.39
	Labourers	93.72	47.14	44.18	92.83	47.94	44.50
	Total	**59.59**	**46.40**	**27.65**	**65.03**	**46.20**	**30.04**
Mansa	**Marginal Farmers**	11.27	35.88	4.04	64.41	41.18	4.58
	Small Farmers	27.46	11.08	3.04	39.44	41.60	16.40
	Rural Artisans	56.25	43.79	24.63	81.25	43.16	35.00
	Labourers	82.14	44.17	36.28	86.90	45.37	39.00
	Total	**41.45**	**47.21**	**19.57**	**51.01**	**43.47**	**22.17**
Sri Muktsar Sahib	**Marginal Farmers**	20.34	40.00	8.13	64.41	46.14	26.00
	Small Farmers	8.51	35.83	3.05	14.89	38.61	5.75
	Rural Artisans	59.15	43.37	25.65	85.92	48.03	41.26
	Labourers	92.00	49.39	45.44	91.50	50.42	46.13
	Total	**64.19**	**47.65**	**30.59**	**76.66**	**51.69**	**37.28**
All Sampled Households	**Marginal Farmers**	14.41	37.96	5.47	27.07	10.97	10.97
	Small Farmers	17.54	40.05	7.03	37.72	40.06	15.11
	Rural Artisans	64.50	42.34	27.31	72.78	45.28	32.96
	Labourers	82.67	46.90	38.77	90.65	49.59	44.95
	Total	**57.19**	**46.26**	**26.46**	**66.33**	**48.18**	**31.33**

Source: Field Survey, 2015-16

Head count ratio=H, Intensity of poverty=A, Multidimensional poverty index=MPI

The values of the multidimensional head count and intensity of poverty, both are the maximum for the labour households. It shows that the number of poor labour households and number of deprivations faced by the labour households are the highest among other categories of weaker section households.

Contribution of different dimensions to MPI

Calculation of MPI depicts that the deprivation of which indicator leads to poverty or the lack of what makes the people poor. The MPI has been decomposed into its component censored indicators to show how people are poor the composition of deprivations, they experience.

Among sixteen indicators, the deprivation of asset contributes the most (around 22 per cent) to overall poverty, (see table 3). The other indicators in order of their deprivation are participation of women in vital decisions, debt over one lakh, cooking fuel, sanitation, drinking water, wife is illiterate, house is not *pucca*, women not allowed to go to market independently, economically dependent ratio, consumption level below poverty line and no child has completed primary level at the age of sixteen years. The indicators of nutrition, child mortality and electricity are the least contributors to overall poverty. Among the seven dimensions, it is clear that deprivation in living standard contributes more to overall poverty followed by asset deprivation, women empowerment, debt, economic dimension and education. Among different categories, the deprivations of indicators vary; it is found that the composition of poverty influenced by the deprivation indicators is very different among the categories. In case of the marginal farm households, the deprivation in women empowerment contributes more to poverty.

Table 3: Contributions of different indicators to MPI

Indicators		**Bathinda District**					**Faridkot District**				
		MF	**SF**	**LA**	**RA**	**Total**	**MF**	**SF**	**LA**	**RA**	**Total**
Education	**Head is illiterate**	5.40	0.81	4.23	1.61	3.49	3.25	0.98	6.02	7.71	4.93
	No primary edu. Even after 16 yrs	0.00	1.42	0.98	0.00	0.92	1.30	1.97	1.69	0.00	1.64
	Wife is illiterate	2.40	2.02	4.62	6.43	4.22	1.62	3.35	7.23	7.71	6.00
Health	**Nutrition**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Child Mortality	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Living standard	**House not *Pucca***	0.00	0.00	6.13	5.13	4.67	0.00	0.00	6.18	2.01	4.36
	No electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cooking Fuel	11.67	8.97	6.57	8.31	7.41	11.84	7.30	6.53	5.36	7.18
	Drinking Water	1.46	4.55	5.11	8.31	5.08	9.87	5.86	6.53	2.01	6.63
	Sanitation	2.92	5.28	6.13	8.31	5.98	9.87	6.46	6.53	2.01	6.73
Economic Status	**BPL Cons. level**	0.00	0.00	4.23	0.00	2.93	0.00	0.00	7.86	0.00	5.47
	EDR 1:3 or more	10.88	10.08	2.45	6.68	4.57	10.30	3.57	2.18	8.32	3.45
Asset	**No asset**	0.00	0.00	32.67	41.28	26.04	0.00	0.00	32.47	53.24	24.22
Debt	**Debt at 1 lakh over the yr.**	29.01	40.31	10.10	0.00	15.38	17.64	40.45	0.87	0.00	9.32

Women Empowerment	**Not independently mkt.**	7.26	5.19	1.71	0.00	2.48	3.91	7.14	2.34	0.00	3.24
	No participation in vital decisions	29.00	21.38	15.07	13.96	16.83	30.40	22.91	13.54	11.65	16.82
	Total	**100**	**100**	**100**	**100.**	**100**	**100.**	**100**	**100**	**100**	**100**
Indicators		**Mansa District**					**Shri Muktsar District**				
		MF	**SF**	**LA**	**RA**	**Total**	**MF**	**SF**	**LA**	**RA**	**Total**
Education	**Head is illiterate**	2.25	2.01	5.56	2.09	3.06	2.15	1.50	6.39	3.76	4.91
	No primary edu. Even after 16 yrs	0.00	0.30	0.74	0.00	0.33	1.20	0.00	1.84	0.78	1.40
	Wife is illiterate	1.40	4.53	5.71	2.35	4.06	4.06	3.37	7.12	5.95	6.18
Health Living standard	**Nutrition**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Child Mortality	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	House not *Pucca*	5.29	3.91	5.61	6.03	4.93	1.60	0.00	6.42	3.52	4.69
	No electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Cooking Fuel	11.44	8.01	7.48	7.32	8.26	8.57	10.71	6.42	5.71	6.91
	Drinking Water	7.34	6.05	5.34	7.32	6.24	5.23	3.42	6.42	3.43	5.42
	Sanitation	10.76	6.48	5.87	7.32	7.07	5.67	4.56	6.42	4.95	5.88
Economic Status	**BPL Cons. level**	0.00	0.00	3.76	0.00	1.05	0.00	0.00	4.30	1.42	2.81
	EDR 1:3 or more	3.82	2.13	1.55	7.90	3.13	4.33	7.36	3.10	5.44	4.07
Asset	**No asset**	0.00	0.00	37.15	37.94	16.51	0.00	0.00	31.91	33.59	25.45
Debt	**Debt at 1 lakh over the yr.**	18.67	41.03	4.87	2.37	21.39	31.06	45.31	10.03	8.99	15.50
Women Empowerment	**Not independently mkt.**	12.73	11.55	4.64	2.37	8.32	15.89	8.49	0.15	5.68	3.98
	No participation in vital decisions	26.30	13.98	11.72	16.99	15.64	20.23	15.29	9.48	16.79	12.81
	Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100.**	**100**

Source: Field Survey, 2015-16

Marginal Farmer=MF, Small Farmer=SF, Rural Artisan=RA, Labourer=LA

The MPI further highlights the intensity of poverty among the average sampled households, i.e. the proportion of indicators in which they are deprived. The labour households are multidimensionality poorer because of high head count ratio and high intensity of poverty.

Decompositions of MPI by sub-groups

The MPI varies greatly across the different categories surveyed in south-west Punjab and the data provide some important insights into the nature of poverty across region. The contribution of different categories/sub-groups in studying multidimensional poverty index is shown in Table 4 by using $3.10 as poverty line. The table reveals that the maximum contribution in MPI is made by the labourer category followed by the rural artisan, small farmer and marginal farmer, categories. District-wise, the maximum contribution is made by Sri Muktsar Sahib district followed by Bathinda, Faridkot and Mansa districts. The small farm households have higher MPI than the rural artisan and marginal farm households because the amount of debt over 1 lakh is more in case of the small farm households. The labour households are multidimensionality poorer because of high head count ratio and high intensity of poverty. Anupama (2015) also revealed that the labour households are the poorest one.

Table 4: Contribution by different categories to poverty in South-West Punjab

District	Category	Number of Family Members	Situ-1	Situ-2	Situ-3
Bathinda	**M F**	32	0.32	0.45	0.84
	S F	73	0.47	0.81	4.12
	R A	34	1.72	1.89	1.93
	LA	220	25.65	26.35	28.47
	Total	**359**	**24.34**	**29.00**	**35.36**
Faridkot	**M F**	67	0.41	0.87	0.83
	S F	80	2.83	1.04	2.83
	R A	16	0.38	0.33	0.68
	LA	223	24.24	25.42	25.71
	Total	**386**	**26.01**	**28.00**	**30.04**

Mansa	**M F**	71	1.36	0.82	10.29
	S F	142	4.72	1.23	6.75
	R A	48	2.69	3.48	4.88
	LA	84	7.32	8.77	9.60
	Total	**345**	**15.22**	**20.00**	**22.17**
Sri Muktsar Sahib	**M F**	59	0.67	1.25	4.07
	S F	47	0.00	0.37	0.72
	R A	71	2.58	4.90	7.77
	LA	200	20.56	23.87	24.47
	Total	**377**	**23.81**	**31.00**	**37.00**
All Sampled Households	**M F**	229	0.68	0.78	1.72
	S F	342	1.97	1.63	3.52
	R A	169	1.82	3.11	3.80
	LA	727	19.66	19.33	22.28
	Total	**1467**	**24.13**	**26.00**	**31.00**

Source: Field Survey, 2015-16

Marginal Farmer=MF, Small Farmer=SF, Rural Artisan=RA, Labourer=LA

Comparison of head count poverty measured by different approaches

An attempt has been made here to give comparison of head count poverty measured by monetary and non-monetary measures of poverty. There may be the possibility that in some of the cases the multidimensional poverty count may be lower than the monetary based measure in a certain group of people because their non-monetary fundamentals may be strong. However, it may also be otherwise round i.e. the multidimensional poverty may be higher than the monetary measure of poverty mainly because of the fact that monetary measure may be strong. The results are shown in Table 5. The table shows the proportion of population living below poverty line on the basis of World Bank's moderate poverty line and multidimensional poverty. The extent of poverty is the highest in case of situation-3 methodology of MPI followed by World Bank's moderate income poverty methodology, situation-2 and situation-1 of MDP. The percentage of poor people is the least according to consumption. The sampled population has the large number of multidimensional poor people. Both the rural artisan and labour households are poor in both

measures i.e. monetary as well as multidimensional. The farming categories are multidimensional poor but the extent of monetary poverty is found only in the marginal farmers.

In Bathinda district, the extent of poverty is the highest in labour households both monetary and multidimensional poverty lines. The marginal and small farm households are not poor on monetary basis. According to situation-1 and 2 of multidimensional poverty, 12.5 per cent of the marginal farmers are poor whereas according to situation-3 the percentage rises to 25 per cent. In case of the small farmers, the percentage of poor population according to situation-1, 2 and 3 is 5.48, 10.96 and 50.68 per cent, respectively. The rural artisan households have the highest extent of poverty according to income poverty line. In case of the labour households, the percentage of poverty is the highest according to income poverty methodology.

Table 5: Head count poverty among different districts of South-West Punjab

District	Category	Monetary Measure Of Poverty		Multidimensional Poverty		
		Income Measure	Consumption Measure	Situ-1	Situ-2	Situ-3
Bathinda	**M F**	0.00	0.00	12.50	12.50	25.00
	S F	0.00	0.00	5.48	10.96	50.68
	R A	88.24	35.29	47.06	47.06	47.06
	LA	90.79	83.77	85.91	89.09	89.09
	Total	**70.47**	**62.40**	**54.32**	**62.40**	**71.59**
Faridkot	**M F**	26.87	23.88	5.97	13.43	11.94
	S F	0.00	0.00	36.25	11.25	36.25
	R A	81.25	31.25	18.75	18.75	43.75
	LA	97.76	87.00	91.48	93.72	92.83
	Total	**64.51**	**55.70**	**56.99**	**59.59**	**65.03**
Mansa	**M F**	43.66	26.76	15.49	11.27	64.41
	S F	0.00	0.00	27.46	27.46	39.44
	R A	77.08	50.00	47.92	56.25	81.25
	LA	96.43	88.10	71.43	82.14	86.90
	Total	**43.19**	**35.94**	**38.55**	**41.45**	**51.01**

Sri Muktsar Sahib	**M F**	23.73	33.90	10.17	20.34	64.41
	S F	0.00	0.00	0.00	8.51	14.89
	R A	54.93	81.69	32.39	59.15	85.92
	LA	96.50	85.50	81.00	92.00	91.50
	Total	**72.41**	**87.32**	**50.66**	**64.19**	**76.66**
All Sampled Households	**M F**	31.44	27.51	10.92	14.41	27.07
	S F	0.00	0.00	21.05	17.54	37.72
	R A	84.02	47.34	38.46	64.50	72.78
	LA	95.46	86.66	84.59	82.67	90.65
	Total	**61.90**	**52.69**	**52.97**	**57.19**	**66.33**

Source: Field Survey, 2015-16

Marginal Farmer=MF, Small Farmer=SF, Rural Artisan=RA, Labourer=LA

In Faridkot district, the small farmers are multidimensionally poor but not on the basis of monetary measures of poverty. The marginal farmers are below poverty line according to WB's moderate poverty line of income and consumption. The highest percentage of rural artisans and labourers, below poverty line is in case of income poverty line. More than 87 per cent of labour households are below poverty line according monetary and multidimensional measures. In Mansa district, among the marginal farmers, the highest percentage of population is below poverty line is on basis of situation-3 methodology. The percentage of small farmers multidimensionally poor is 27.46 per cent according to situation-1 & 2 and 39.44 per cent according to situation-3. The highest percentage of rural artisans are living below poverty line in case of situation-3 and the least in case of situation-1. The highest percentage of labour population living below poverty line is 96.43 per cent on the basis of income poverty line.

In Sri Muktsar Sahib district, the highest population of marginal farmers are living below poverty line on the basis of situation-3 of MPI methodology. The small farmers are above poverty line according to monetary measures of poverty but 8.51 and 14.89 per cent of population is multidimensional poor according to situation-2 and situation-3, respectively. The percentage of rural artisans living below poverty is the highest in case of situation-3. In case of the labour households, the highest percentage of population living below poverty line is

according to income poverty line followed by situation-2, situation-3, consumption poverty and situation-1.

Conclusions and Policy Implications

The analysis shows that the labour households are the poorest among all the categories of weaker section households. There is strong need of effective land reforms. The upper ceiling level of landholdings should be decreased so that there should be equity in the assets of rural areas. Moreover, there is lack of employment opportunities more particularly for landless labourers and rural artisans. Agro based industries must be set up in rural areas. It will provide employment opportunities to weaker sections at village level. There were certain hopes on MGNREGA, but due to paucity of funds that programme had been failing. This programme must be implement properly. Minimum wage legislation should be effectively implemented. The remunerative minimum support prices of the different crops grown by the farmers should be fixed according to cost of production and consumer price indices in a manner that the farming categories are able to meet their basic needs of food, shelter, clothing, education, healthcare and clean environment in a respectable manner. The small and marginal farmers should be encouraged to do mixed farming. They should adopt poultry farming, fish farming; dairy farming etc. If the farmers feel financial constraints, they should be helped by institutional finance. The government should launch a program in order to provide cost free technical education to the weaker sections so that they may be able to establish their own ventures.

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