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Inter-Regional Analysis of Incidence and Determinants of Poverty among Scheduled Caste Households in Rural Punjab

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Abstract

The present paper attempts to analyse the inter-regional incidence and determinants of poverty among the Scheduled Caste (SC) households in rural Punjab. The study, based on the primary data of 543 SC households selected from the three different regions of Punjab, concluded that the incidence of poverty among different categories of Scheduled Caste households is the highest in Malwa region, followed by Majha and Doaba regions. The category-wise analysis reveals that majority of the households belonging to the agricultural labour, non-agricultural labour, artisan and others categories are living below the poverty line in all the regions. The incidence of consumption-based poverty among the different categories of SC households is slightly less than the incidence of income-based poverty among these households across the three regions. The variations in the per capita income of the different categories of SC households across the three regions are explained by family-size, total household income, expenditure on education and number of earners. The variations in the per capita consumption of the different categories of Scheduled Caste households across the sampled regions are explained by number of earners, educational level of the decision-maker in the family and repayment of old debt. The study suggests that the proportion of Scheduled Caste living BPL can decrease with an increase in their level of income and employment.

Keywords: Scheduled Caste, Regions, Poverty, Income, Consumption Expenditure, Determinants.

Introduction

Poverty is one of the major disabilities of the Scheduled Caste households (Nancharaiah, 1990). Poverty means the inability of an individual to secure a normative minimum level of living. In the narrow sense, it represents the basic material conditions of households or individuals in terms of low production, consumption and income (Singh and Thakur, 2005). The question of poverty in the Indian context is related to the low level of per capita income and its highly skewed distribution, along with a slow pace of economic development (Nayak, 2012).The incidence and intensity of poverty are much higher among the Scheduled Castes as compared to other groups (Adhikary and Mazumder, 2010; Meenakshi, et al.,2000).

The Scheduled Castes have been at the lowest end of the Hindu (social) caste hierarchy based on birth. Over long periods in the past, the social system ascribed occupations to this group which were not only low in social ordering but were also characterised by very low productivity. With ascription on the basis of birth, the system did not permit occupational mobility. Consequently, this group remained at the lowest end of the economic hierarchy as well (Sundram and Tendulkar, 2003). Although the untouchability practices are decaying in many parts of the country, yet the caste rigidities continue to confine many Scheduled Caste labourers in undignified occupations that place them at a disadvantage when compared to the other communities (Reddy, 2008). Majority of the Scheduled Castes are discriminated against in every respect and denied ownership of productive assets like capital, as well as basic rights such as education and equality, which resulted in continuation of their extreme socio-economic deprivation (GOI, 2009).

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Due to the lack of access to fixed sources of income and high incidence of wage labour associated with high rate of under-employment and low wages, the Scheduled Caste households are often faced with low incomes and high incidence of poverty. In 2004-05, 36.80 per cent of the Scheduled Caste people were living below the poverty line in the rural areas as compared to only 28.30 per cent for others non-Scheduled Caste/ST households (Planning Commission, 2008). Many studies reveal that a large number of SC households are employed as agricultural labourers. Most are engaged as landless labourers and are still deprived of regular work opportunities (Nanchariah, 1990; Singh, 2009; Wankhede, 1999). On account of the negative agricultural price policy pursued by the government of India, farmers are not in a position to pay increased wages to agricultural labourers (Singh, 2014). As a result, the economic condition of the Scheduled Caste workers, who mainly depend upon agricultural sector has not improved after the Green Revolution.

During the initial phases, the emphasis was on land reforms and agricultural growth. The available information and data show that the recent economic growth has not been trickled down properly which has resulted in mass poverty, low income, and deprivation (Kumar and Prakash, 2017). It was realized that higher agricultural growth by itself would not be sufficient to ensure removal of rural poverty (Singh, 2013). The level of poverty of agricultural labour in Punjab is getting grimmer. This is the result of the fact that a sizable proportion of local casual labour in rural Punjab is not able to find sufficient amount of work in agriculture (Ghuman et al., 2007). About 86 per cent of farming households and slightly more than 80 per cent of agricultural labour households Punjab are under debt. The average amount of debt per sampled household is Rs. 147,421.99 and Rs.54,709.30 for farmers and agricultural labourers, respectively, in 2014–2015 (Singh et al., 2016). During the last one decade, there were reportedly 4,687 suicides by farmers and agricultural labourers (Singh, 2014). One finds that while the male head of agricultural labour household succumbing to economic distress commits suicide, the female members of the household too get severely affected and, some in desperation kill themselves (Jain et al., 2018).

Poverty is the effect of lack of income and access to credit. But the measures initiated to reduce indebtedness and regulating money-lending activities for agricultural purposes failed to provide a long-term solution (Kaur and Kaur, 2016). Many national rural development programmes in the form of integrated efforts or cooperatives have endeavored to increase the availability of financial services, reduce collateral or other requirements, and adopt procedures to help rural clients. But because of the principle of open membership, most cooperatives have come under the control of well-to-do powerful farmers and have failed to make any contribution in the alleviation of poverty (Sharma, 2009). According to census of 2011, 31.94 percent population living in Punjab belongs to the Scheduled Castes. Almost the entire Scheduled Caste population is landless. As a result these people mainly depend on hiring out labour in farm and non-farm activities and living in miserable conditios.

The present study attempts to analyse the inter-regional incidence and determinants of poverty among Scheduled Caste households in rural Punjab.

Methodology

The present study, based on a three-stage stratified random sampling technique, relates to 2012–2013. For the analysis of incidence and determinants of poverty among the Scheduled Caste households, namely agricultural labour, non-agricultural labour, government employees, private employees, artisans and others, the Punjab state has been divided into three zones on the basis of the highest, medium and lowest concentration zones of SC population. Keeping in mind, differences in the concentration, Jalandhar district was chosen for its highest concentration Fatehgarh Sahib district for its medium concentration and Gurdaspur district for its lowest concentration (Ministry of Home Affairs, 2013, pp. 23–32). The selected districts also represent three geographical regions of Punjab: Doaba, Malwa and Majha, respectively. One village has been selected from each development block of the selected districts. There are 11 development blocks in Jalandhar district, 5 development blocks in Fatehgarh Sahib district and 11 development blocks in Gurdaspur district. Thus, in all, a total of 27 villages have been selected for the survey from the three districts. Out of 27 villages, 543 SC households have been selected for the study. From each selected village, 10 per cent of the SC households have been selected for the survey on a random basis. Out of these 543 households, 303 from Doaba (Jalandhar district), 103 from Malwa (Fatehgarh Sahib district) and 137 from Majha (Gurdaspur district) are selected. To analyse the data, apart from using mean values and percentages, a multiple regression model has also been used. The poverty prevailing among the Scheduled Caste households in rural Punjab has been analysed on the basis of following criteria:

The Expert Group Criterion

The poverty line worked out by the Expert Group (GoI, 1979) is Rs. 49.09 (rounded to Rs. 49.0) monthly per capita expenditure at 1973-74 prices for the rural areas. However, for the purpose of present study, the poverty line has been estimated by using the general consumer price index for the agricultural labourers for the year 2012-13 (GoI, 2014). It comes to Rs. 21,574.44 per capita, per annum. All the households in the categories of agricultural labour, non-agricultural labour, government employees, private employees, artisans and others having per capita income or per capita consumption expenditure below Rs.21,574.44 have been considered as poor. The commonest measure is the Head-Count measure, given by the proportion of the total population that happens to be identified as poor, e.g., as falling below the particular poverty line income.

The 50 Per Cent of the State Per Capita Income (PCI) Criterion

This criterion defines poverty line by taking 50 per cent of the state per capita income. Punjab's per capita income at current prices for the year 2012-

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13 is Rs. 89,345 (Economic Survey of Punjab, 2012-13). The formula for finding the per capita income of persons who constitute the below poverty line can be worked out as follows:

Cut-off income = PCI of State / 2

= Rs. 89,345 / 2

= Rs. 44,672.50 /- (per capita, per annum)

The 40 Per Cent of the State Per Capita Income (PCI) Criterion

In this criterion, we take 40 per cent of per capita income of the state instead of 50 per cent and draw poverty line as follows:

Cut-off income = PCI of State / 100 × 40

= Rs. 89,345 / 100 × 40

= Rs. 35,738 /- (per capita, per annum)

Determinants of Poverty

The multiple regression analysis has been worked out to identify the factors that determine and influence poverty. The multiple regression model used is:

$$Y = a x_1 b^1 . x_2 b^2 \ldots\ldots\ldots x_n b^n$$

Where, Y is the dependent variable; x_1 through x_n are the explanatory variables; 'a' is a constant term; and b^1 through b^n are the regression coefficients for x_1 through x_n respectively.

Results and Discussion

Incidence of Income-Based Poverty

The data showing the incidence of income–based poverty among the different categories of Scheduled Caste households across the regions is presented in Table 1.

Table 1
Region-wise Incidence of Income-Based Poverty among Scheduled Caste Households

Description→		Proportion of Persons Below the Poverty Line		
Regions	Scheduled Caste Categories	Measuring Poverty by the Expert Group Criterion	Measuring Poverty by the 50% of State Per Capita Income	Measuring Poverty by the 40% of State Per Capita Income
Doaba	Agricultural Labour	96.70	100.00	100.00
	Non-agricultural Labour	95.16	100.00	99.16
	Government Employee	2.76	10.57	7.73
	Private Employee	80.92	97.69	95.95
	Artisan	95.36	100.00	100.00
	Others	94.80	100.00	98.84
	All Sampled Households	82.11	89.38	87.66
Malwa	Agricultural Labour	92.16	100.00	100.00
	Non-agricultural Labour	92.25	100.00	98.45
	Government Employee	10.71	10.71	10.71
	Private Employee	83.67	100.00	100.00
	Artisan	92.75	100.00	100.00
	Others	100.00	100.00	100.00
	All Sampled Households	84.60	90.94	90.58
Majha	Agricultural Labour	93.26	100.00	98.88
	Non-agricultural Labour	95.00	100.00	98.33
	Government Employee	8.45	15.49	8.45
	Private Employee	76.74	88.37	88.37
	Artisan	90.43	100.00	100.00
	Others	95.76	100.00	100.00
	All Sampled Households	82.85	89.58	87.34

Source: Field Survey 2012-13

The table describes that on the basis of the Expert Group criterion, the incidence of poverty is the highest (84.60 per cent) in Malwa, followed by Majha and Doaba with the respective percentages of 82.85 and 82.11. In the case of agricultural and non-agricultural labour households, this percentage is the highest in Doaba and the lowest in Malwa. For the government employee and artisan households, this percentage is the highest in Doaba and lowest in Majha. In the categories of private employee and others households, this percentage is the highest in Malwa and the lowest in Doaba. The proportion of Scheduled Caste people living below the poverty line has decreased with the increase in their level of income and employment in all the three regions. The field survey has revealed that only a single member

from government employee category of Scheduled Caste households under study has got petty government job, due to this job incidence of poverty is low for these households.

The data showing the incidence of poverty among the different categories of Scheduled Caste households under the poverty measure of 50 per cent per capita income of the state is also presented in Table 1. It is clear from the table that the percentage of Scheduled Caste population living below the poverty level is the highest in Malwa, i.e., 90.94 per cent, followed by Majha (89.58 per cent) and Doaba (89.38 per cent). The category-wise analysis reveals that all the households belonging to the agricultural labour, non-agricultural labour, artisan and others categories are living below the poverty line in all the

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regions. The percentages for those in the government employee category are 10.57, 15.49 and 10.71 in Doaba, Majha and Malwa respectively. Similarly, the percentages for the households in the private employee category are 100.00, 97.69 and 88.37 in Malwa, Doaba and Majha, respectively. There is an inverse relationship between the level of income and persons living below the poverty line.

The table further reveals that by using the third criterion, i.e., 40 per cent per capita income of the state, as many as 90.58 per cent Scheduled Caste households under study in Malwa live below the poverty line. The corresponding figures for those in Doaba and Majha are 87.66 per cent and 87.34 per cent, respectively. The category-wise analysis shows that all the agricultural labour households under study in Doaba and Malwa live below the poverty line, while the corresponding figure for those in Majha is 98.88 per cent. The agricultural labour households experienced the highest level of poverty (Sundram and Tendulkar, 2001). Despite the government's claims of initiating a number of employment programmes and aids to the agricultural labourers for uplifting their levels of living, a large proportion of agricultural labourers still remain poor, both in absolute and relative terms, and continue to demand a better implementation of these schemes (Singh and Singh, 2016).

In the case of non-agricultural labour households, this percentage is, again, the highest in Doaba (99.16 per cent) and the lowest (98.33 per cent) in Majha. As many as 10.71, 8.45 and 7.73 per cent households in the government employee category belonging to Malwa, Majha and Doaba

regions respectively live below the poverty line, while the corresponding figures for those in private jobs are 100, 95.95 and 88.37 per cent in the three regions. However, all the artisan households under study are found to be living below the poverty line in all the three regions. However, the situation is slightly different for those in the others category, where 98.84 per cent of the households in Doaba are found to be living below the poverty line.

Overall, there is a high incidence of poverty among the different categories of Scheduled Caste households in Malwa. This region is facing huge agrarian crisis due to wheat- cotton rotation and many other factors, so incidence of poverty is high in this region among the Scheduled Caste households

Incidence of Consumption Expenditure-Based Poverty

The per capita consumption expenditure levels have shown a positive relationship with the level of income. But the per capita consumption expenditure levels exceed the income level. So, it becomes necessary to measure the incidence of poverty among the different categories of Scheduled Caste households based on their per capita consumption expenditure level.

The data showing the incidence of consumption-based poverty among the different categories of Scheduled Caste households across the three regions are presented in Table 2. On the basis of the Expert Group criterion, the incidence of poverty on the basis of consumption is the highest (80.98 per cent) in the case of Malwa, followed by Majha and Doaba with the percentages of 79.97 and 78.55 respectively.

Table 2
Region-wise Incidence of Consumption Expenditure-Based Poverty among Scheduled Caste Households

Description→		Proportion of Persons Below the Poverty Line		
Regions	Scheduled Caste Categories	Measuring Poverty by the Expert Group Criterion	Measuring Poverty by the 50% of State Per Capita Income	Measuring Poverty by the 40% of State Per Capita Income
Doaba	Agricultural Labour	89.01	100.00	100.00
	Non-agricultural Labour	88.00	99.58	97.26
	Government Employee	2.21	9.81	5.52
	Private Employee	79.19	94.80	92.49
	Artisan	93.99	100.00	98.91
	Others	93.64	98.84	98.84
	All Sampled Households	78.55	88.42	86.09
Malwa	Agricultural Labour	90.20	100.00	100.00
	Non-agricultural Labour	86.82	100.00	97.67
	Government Employee	8.93	8.93	8.93
	Private Employee	81.63	100.00	91.84
	Artisan	89.86	100.00	94.20
	Others	93.75	100.00	100.00
	All Sampled Households	80.98	90.76	88.77
Majha	Agricultural Labour	92.13	98.31	96.63
	Non-agricultural Labour	86.67	98.33	98.33
	Government Employee	5.63	12.68	5.63
	Private Employee	74.42	86.05	86.05
	Artisan	88.30	96.81	96.81
	Others	94.92	100.00	100.00
	All Sampled Households	79.97	87.82	86.54

Source: Field Survey 2012-13

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In the case of Scheduled Caste households under the agricultural labour and others categories, this percentage is the highest in Majha and the lowest in Doaba. In the case of non-agricultural labour households, this percentage is the highest (88.00 per cent) in Doaba. For those under the government and private employee categories, this percentage is the highest in Malwa. In the case of artisan households, this percentage is the highest (93.99 per cent) in Doaba.

By taking the poverty line of 50 per cent of per capita consumption expenditure of the state, as many as 90.76 per cent Scheduled Caste households are living below the poverty line in Malwa, followed by Doaba (88.42 per cent) and Majha (87.82 per cent). However, the incidence of consumption expenditure-based poverty is different for all the categories of Scheduled Caste households.

An analysis of the data pertaining to the agricultural labour households has provided that the whole population of this category is living below the poverty line in Doaba and Malwa, whereas this percentage is 98.31 in Majha. Similarly, the whole population of the non-agricultural labour households is living below the poverty line in Malwa, while the corresponding figures for those in Doaba and Majha are 99.58 and 98.33 per cent respectively. The percentage for the government employee households living below the poverty line is the highest, i.e., 13.81 per cent in Doaba, followed by Majha and Malwa with the respective percentages of 12.68 and 8.93 per cent.

All the households under the private employee category in Malwa are living below the poverty line, while the corresponding figures for those in Doaba and Majha are 94.80 and 86.05 per cent, respectively. The whole population of the artisan households is living under the poverty line in Doaba and Malwa, whereas this percentage is 96.81 in Majha. In the case of households under the others category, the whole Scheduled Caste population is found to be living below the poverty line in Malwa and Majha, while this figure appears as 98.84 per cent in Doaba. There exists an inverse relationship between the level of income and poverty among the Scheduled Caste households in all the regions.

The region-wise analysis highlights that as many as 86.09 per cent of the sampled population of Scheduled Caste households is living below the poverty line in Doaba according to the 40 per cent of state per capita consumption expenditure criterion. However, this proportion varies among the various categories of Scheduled Caste households. This percentage is the highest (100.00 per cent) for the agricultural labour households, whereas the corresponding figures for those under the artisan, others, non-agricultural labour, private employee and government employee categories respectively in Doaba are 98.91, 98.84, 97.26, 92.49 and 5.52 per cent. In the case of Malwa, 88.77 per cent of the Scheduled Caste population lives below the poverty line, whereas the corresponding figures for the agricultural labour, non-agricultural labour, government employee, private employee, artisan and others categories of households are 100.00, 97.67, 8.93, 91.84 ,94.20 and 100.00 per cent respectively.

In Majha, the proportion of Scheduled Caste population living below the poverty line is 86.54 per cent. This proportion is the highest (100.00 per cent) for the others category households, while those under the categories such as non-agricultural labour, artisan, agricultural labour, private employee and government employee appear with the respective percentages of 98.33, 96.81, 96.63, 86.05 and 5.63. The above analysis further provides that the whole population of agricultural labour households is found to be living below the poverty line in Doaba and Malwa, whereas the same is true for the others category households in Malwa and Majha. The average wage rate in non-agricultural sector is significantly higher than that in agricultural sector (Ghuman et al .2007). So, the extent of poverty is higher among agricultural labour households.

By comparing the income and consumption expenditure-based poverty among the different categories of Scheduled Caste households, it has been found that the incidence of consumption expenditure-based poverty is slightly less than the incidence of income-based poverty across the three regions. This can be attributed to the reason that the Scheduled Caste households try to maintain a minimum level of living by availing loans from various institutional as well as non-institutional agencies.

Determinants of Income-Based Poverty

On the basis of well-recognised criteria, poverty is measured either in terms of per capita income or per capita consumption expenditure. As a result, the factors which affect the per capita income or per capita consumption expenditure of the different categories of Scheduled Caste households are considered to be the determinants of poverty. The following variables are selected for the final run:

$$Y = f\ (x_1, x_2, x_3, x_4)$$

Where,   Y = Per capita income (Rs.)

x_1 = Family-size (number)

x_2 = Total household income (Rs.)

x_3 = Per capita expenditure on education (Rs.)

x_4 = No. of earners

In this way, an attempt has been made to explain the variations in per capita income of the Scheduled Caste households in rural Punjab. Table 3 describes the variations in the per capita income of the different categories of Scheduled Caste households across the three regions. The variations are explained by family-size, total household income, expenditure on education, and number of earners.

Agricultural Labour Households

Table 3 depicts that per capita income-based poverty of the agricultural labour households is explained by the family-size, total household income, expenditure on education and number of earners. In the case of all the three regions, the contribution of family-size is negative and statistically significant. The table explains that family-size is the biggest constraint on the levels of living. The regression coefficient for the factor, viz. total household income is positively and statistically significant in all the three regions. The regression coefficient for expenditure on education is

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positive in all the three regions, but statistically significant in Majha only. The regression coefficient for number of earners is positive, but statistically non-significant in all the three regions. The regression coefficient for number of earners is positive, but statistically non-significant. The analysis leads us to conclude that better employment opportunities provided to the Scheduled Caste households can help to improve their level of income. The regression coefficients of multiple determination range between 0.90 and 0.94 for the agricultural labour households which reveal that 90 to 94 per cent variations in per capita income are explained by the explanatory variables.

Non-Agricultural Labour Households

The variations in the per capita income of the non-agricultural labour households are determined by the factors such as family size, total household income, expenditure on education and number of earners. The region-wise analysis provides that the family-size contributes significantly in explaining the per capita income-based poverty differentials of the non-agricultural labour households. The estimates of this explanatory variable are negative, but statistically significant in all the three regions under study. The regression coefficient for the total household income is positive and statistically significant in all the three regions. The regression coefficient for expenditure on education is positive and statistically significant at five and ten per cent levels in Malwa and Doaba, respectively. The regression coefficient for number of earners is positive, but statistically non-significant in all the three regions. The values of R^2 are 0.83, 0.84 and 0.86 for the households under the non-agricultural labour category in Malwa, Majha and Doaba, respectively.

Table 3
Factors affecting Income-based Poverty among Scheduled Caste Households

(Results of Multiple Regression Analysis)

Sl. No.	Categories→ Factors↓	AL	NAL	SERVICES		ART.	OTHERS	ALL
				GOVT.	PVT.			
				Doaba				
1.	Family size	-2102.26* (4.72)	-2303.76* (9.06)	-1974.928* (3.07)	-2913.62* (7.79)	-1558.12* (9.71)	-1724.03* (4.37)	-2037.68* (16.32)
2.	Total household income	0.214* (10.76)	0.225* (20.22)	0.207* (12.02)	0.228* (31.82)	0.213* (26.79)	0.221* (9.85)	0.217* (49.46)
3.	Expenditure on education	1.035ns (0.28)	0.703*** (1.91)	1.132ns (1.64)	1.222* (3.54)	1.438* (3.11)	2.787** (2.70)	1.056* (5.26)
4.	No. of earners	85.065ns (0.14)	730.71ns (1.50)	2203.79*** (1.85)	223.79ns (0.57)	74.43ns (0.23)	249.09ns (0.33)	743.374* (3.33)
	R²	**0.90**	**0.86**	**0.88**	**0.97**	**0.94**	**0.84**	**0.90**
				Malwa				
1.	Family size	-1196.39* (3.64)	-2213.06* (3.89)	-350.168ns (0.37)	-1674.32ns (1.63)	-1077.9ns (0.81)	-805.47* (4.79)	-1339.26* (5.57)
2.	Total household income	0.220* (15.81)	0.170* (7.72)	0.087** (2.62)	0.106* (4.37)	0.076ns (1.75)	0.149* (8.56)	0.155* (16.48)
3.	Expenditure on education	0.935ns (0.85)	1.406** (2.10)	1.247ns (1.31)	8.094* (4.06)	11.452** (2.58)	1.029ns (1.55)	2.017* (4.91)
4.	No. of earners	803.023ns (1.62)	902.893ns (0.96)	7173.284* (3.31)	1061.66ns (0.66)	2191.21ns (0.74)	1335.75** (2.74)	1327.58* (3.12)
	R²	**0.94**	**0.83**	**0.97**	**0.97**	**0.62**	**0.97**	**0.83**
				Majha				
1.	Family size	-2301.96* (5.88)	-3888.05* (5.21)	-6530.27* (5.07)	-3483.19ns (1.50)	-1020.19* (6.76)	-1614.79** (2.33)	-3149.34* (9.39)
2.	Total household income	0.243* (18.93)	0.224* (8.52)	0.243* (25.60)	0.358* (6.21)	0.197* (34.19)	0.148* (3.30)	0.244* (27.56)
3.	Expenditure on education	2.399* (4.31)	1.476ns (1.07)	0.060ns (2.34)	0.509ns (0.19)	2.330* (4.69)	5.134ns (1.03)	0.303ns (1.23)
4	No. of earners	494.713ns (0.91)	498.838ns (0.37)	2191.559ns (1.37)	1320.010ns (0.19)	617.074ns (1.46)	3573.74*** (2.04)	657.959ns (1.16)
	R²	**0.94**	**0.84**	**0.98**	**0.89**	**0.99**	**0.70**	**0.88**

Source: Field Survey 2012-13
Notes: Results of multiple regression analysis. Figures in parentheses indicate t-values. *, ** and * significant at 1%, 5% and 10%, respectively. ns: Non-significant**

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Government Employee Households

The contribution of family size is negative in all the three regions and statistically significant at one per cent level in Doaba and Majha for this category. The total household income has contributed significantly in explaining the per capita income differentials of the Scheduled Caste households. The estimates of this explanatory variable are positive and statistically significant in all the three regions. The contribution of the expenditure on education is positive and statistically non-significant in all the three regions. The contribution of the factor, viz. number of earners is positive in all the three regions and statistically significant at one and ten per cent levels in Malwa and Doaba, respectively. The values of R^2 are 0.88, 0.97 and 0.98 for the households under the government employee category in Doaba, Malwa and Majha, respectively. The analysis highlights that the Scheduled Caste households under the government employee category can reduce their poverty by spending more money on education.

Private Employee Households

The estimates of the explanatory variable, viz. family-size are negative in all the three regions, but statistically significant in Doaba only. The table reveals that the familysize is a major constraint on the levels of living. The estimates of regression coefficient suggest that the variations in per capita income of the households under the private employee category are explained to a large extent by the total household income in all the three regions. The regression coefficient for expenditure on education is positive and significant at one per cent level in Doaba and Malwa. The regression coefficient for the factor called number of earners is positive, but statistically non-significant in all the three regions. The analysis leads us to conclude that the factors, such as expenditure on education and number of earners have a limited role in reducing poverty in the case of households under the private employee category. The regression coefficients of multiple determinants range between 0.89 and 0.97 for the households under the private employee category which reveal that 89 to 97 per cent variations in per capita income are explained by the explanatory variables.

Artisan Households

The region-wise analysis highlights that the family size appears to have a significant contribution in explaining the per capita income differentials of artisan households in all the three regions. The estimates of this explanatory variable are negative and statistically significant at one per cent level in Doaba and Majha. The contribution of total household income is positive in all the three regions. It is statistically significant at one per cent level in Doaba and Majha, and non-significant in Malwa. Education appears to have a significant contribution in explaining the per capita income differentials of the artisan households in all the three three regions. The estimates of this explanatory variable are positive and statistically significant at one per cent level in Doaba and Majha, and at five per cent level in Malwa . The contribution of the factor called number of earners is positive and statistically non-significant in all the three

regions. The analysis brings out the fact that all the factors contribute significantly in reducing poverty among the artisan households except the family-size. The values of R^2 are 0.62, 0.94 and 0.99 for the artisan households in Malwa, Doaba and Majha, respectively.

Others Category Households

The contribution of family-sizeis negative and statistically significant at one per cent level in Doaba and Malwa, and at five per cent level in Majha. The regression coefficient for the factor, viz. total household income is positive and statistically significant in all the three regions. The regression coefficient for expenditure on education is positive in all the three regions, but statistically significant at five per cent level in Doaba region. Similarly, the regression coefficient for number of earners is positive in all the three regions, but statistically significant at five and ten per cent level in Malwa and Majha, respectively. The regression coefficients of multiple determinants range between 0.70 and 0.97 for the households under the others category. It reveals that 70 to 97 per cent variations in per capita income are explained by the explanatory variables.

All Sampled Households

The estimates of regression coefficient suggest that the variations in per capita income are explained only by the factors such as family size, total household income, expenditure on education and the number of earners when taken together in all the three regions. The regression coefficient for family size is negative and statistically significant at one per cent in all the three regions. The contribution of total household income is positive and statistically significant in all the three regions. The regression coefficient for expenditure on education is positive in all the three regions, but statistically non-significant in Majha only. Similarly, the regression coefficient for number of earners is positive in all the three regions, but statistically significant in Doaba and Malwa only. The values of R^2 are 0.83, 0.88 and 0.90 for the sampled Scheduled Caste households in Malwa, Majha and Doaba, respectively.

The foregoing analysis depicts that the factors like increase in total household income, expenditure on education and number of earners contribute significantly to raise per capita income and help to reduce poverty among the different categories of Scheduled Caste households in the rural areas of Punjab. Thus, the income-based poverty can be curtailed only by way of increasing the income level and employment of the Scheduled Caste households.

Determinants Of Consumption Expenditure-Based Poverty

The socio-economic conditions of the three Scheduled Caste households vary from one category to another. The factors which affect the per capita consumption expenditure are considered as the determinants of poverty. The following variables are selected for the final run:

$$Y = f(x_1, x_2, x_3, x_4)$$

Where, Y = Per capita consumption expenditure (Rs.)

x_1 = Number of dependents

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x_2 = Total household income (Rs.)

x_3 = Educational level of the decision-maker in the family

x_4 = Repayment of debt (Rs.)

An attempt has been made to explain the factors affecting per capita consumption expenditure of the Scheduled Caste households in all the three regions in the rural areas of Punjab. The results are exhibited in Table 4.

Agricultural Labour Households

The regression coefficient of number of dependents is negative in all the three regions and statistically significant at one per cent level in Doaba and at five per cent level in Malwa and Majha for agricultural labour households. The regression coefficient for the factor, viz. total household income is positive and statistically significant at one per cent in Malwa and Majha.

Table 4
Factors affecting Consumption Expenditure-based Poverty among Scheduled Caste Households

(Results of Multiple Regression Analysis)

SI. No	Regions Categories→ Factors↓	Doaba				ART	OTHERS	ALL
		AL	NAL	SERVICES				
				GOVT.	PVT.			
1.	No. of dependents	-2289.19* (3.01)	-518.18ns (0.89)	-2905.02** (2.32)	-2132.24*** (1.77)	-1078.46** (2.65)	-2139.84* (3.11)	-1259.82* (4.08)
2.	Total household income	0.070ns (1.57)	0.191* (7.37)	0.099* (5.31)	0.093* (3.11)	0.143* (7.38)	0.111* (4.32)	0.122* (12.86)
3.	Educational level of the decision-maker in the family	438.455*** (2.01)	800.367* (3.83)	933.678** (2.86)	814.426** (2.35)	602.767* (3.64)	261.785ns (1.57)	658.731* (7.00)
4.	Repayment of debt	-0.081ns (0.62)	-0.150ns (1.09)	-0.780* (2.98)	-0.458ns (1.47)	-0.064ns (0.64)	-0.158ns (0.59)	-0.235* (3.24)
	R²	0.73	0.54	0.66	0.61	0.68	0.64	-0.57
		Malwa						
1.	No. of dependents	-1844.37** (2.12)	-129.83ns (0.10)	-3345.11ns (1.60)	-1576.436ns (0.73)	-2310.14ns (1.05)	-1998.12ns (1.69)	-1596.23* (3.57)
2.	Total household income	0.113* (2.87)	0.154* (5.03)	0.045ns (1.30)	0.173* (3.77)	0.165** (2.68)	0.067ns (1.64)	0.118* (9.29)
3.	Educational level of the decision-maker in the family	842.467* (2.86)	883.118** (2.38)	1160.065** (2.69)	72.760ns (0.12)	301.924ns (0.40)	666.320*** (1.89)	671.431* (5.02)
4.	Repayment of debt	-0.406** (2.58)	-0.201ns (1.23)	-0.386*** (2.16)	-0.507ns (1.31)	-0.204ns (0.51)	-0.133ns (0.95)	-0.276* (3.76)
	R²	0.52	0.77	0.97	0.86	0.81	0.69	0.73
		Majha						
1.	No. of dependents	-2168.56** (2.32)	-1303.47ns (1.42)	-1461.82ns (0.48)	-4298.47ns (1.71)	-11152.55ns (0.77)	-1180.34ns (1.68)	-1619.21* (3.29)
2.	Total household income	0.150* (3.54)	0.042ns (1.70)	0.217* (6.30)	0.135** (2.89)	0.193* (3.97)	0.133* (3.74)	0.185* (13.95)
3.	Educational level of the decision-maker in the family	953.213* (2.97)	1063.509* (2.93)	327.426ns (0.53)	483.686ns (0.50)	1202.200** (2.34)	499.232*** (1.92)	628.209* (4.04)
4	Repayment of debt	0.034ns (0.29)	-0.113ns (1.30)	-0.407ns (1.13)	-0.822*** (1.79)	-0.164ns (1.02)	-0.102ns (0.69)	-0.167** (2.38)
	R²	0.57	0.87	0.84	0.82	0.80	0.82	0.76

Source: Field Survey 2012-13

Notes: Results of multiple regression analysis. Figures in parentheses indicate t-values. *, ** and *** significant at 1%, 5% and 10%, respectively. ns: Non-significant

The regression coefficient for educational level of the decision-maker in the family is positive and statistically significant in all the three regions at different levels. Similarly, the regression coefficient for repayment of debt is negative in all the three regions, but statistically significant at five per cent level in Malwa only. The regression coefficients of multiple determinants range between 0.52 and 0.73 which reveal that 52 to 73 per cent variations in per capita income of agricultural labour households are explained by the explanatory variables in all the three regions.

Non-Agricultural Labour Households

In case of non-agricultural labour households, the coefficient of number of dependents is negative and statistically non-significant in all the

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three regions. The regression coefficient for the total household income is positive in all the three regions, but statistically significant in Doaba and Malwa only. Similarly, the regression coefficient for educational level of the decision-maker in the family is positive and statistically significant in all the three regions. The regression coefficients for repayment of debt are negative and statistically non-significant in all the three regions. The values of R^2 are 0.54, 0.77 and 0.87 for the non-agricultural labour households in Doaba, Malwa and Majha, respectively.

Government Employee Households

The contribution of number of dependents is negative in all the three regions and statistically significant at one per cent level in Doaba for government employee households. The regression coefficient for total household income is positive in all the three regions and statistically significant at one per cent level in Doaba and Majha. The contribution of educational level of the decision-maker in the family is positive in all the three regions and statistically significant at five per cent level in Doaba and Malwa. The regression coefficient for repayment of debt is negative in all the three regions and statistically significant at one and ten per cent levels in Doaba and Malwa respectively. The values of R^2 are 0.66, 0.97 and 0.84 for the households under the government employee category in Doaba, Malwa and Majha, respectively.

Private Employee Households

The estimates of the explanatory variable, viz. number of dependents are negative in all the three regions, but statistically significant at ten per cent level in Doaba only. The estimates of regression coefficient suggest that the variations in per capita income of the households under the private employee category are explained to a large extent by the total household income. The regression coefficient for this variable is positive and statistically significant in all the three regions. The regression coefficient for educational level of the decision-maker in the family is positive and statistically significant in Doaba only. The regression coefficient for repayment of debt is negative and statistically significant at ten per cent level in Majha. The regression coefficients of multiple determinants are 0.61, 0.82 and 0.86 for the households under the private employee category in Doaba, Majha and Malwa, respectively.

Artisan Households

The number of dependents appears to have a significant contribution in explaining the per capita income differentials of artisan households in all the three regions. The estimates of this explanatory variable are negative and statistically significant at five per cent level in Doaba. The contribution of total household income is positive and statistically significant in all the three regions. The regression coefficient for educational level of the head of the family is positive in all the three regions and statistically significant in Doaba and Majha only. The regression coefficient for repayment of debt is negative and statistically non-significant in all the three regions. The values of R^2 are 0.68, 0.80 and 0.81 for the artisan households in Doaba, Majha and Malwa, respectively.

Others Category Households

For other category households, the contribution of number of dependents is negative and statistically significant at one per cent level in Doaba only. The regression coefficient for the factor, viz. total household income is positive in all the three regions, and statistically significant in Doaba and Majha only. The regression coefficient for the factor, namely, educational level of the decision-maker in the family is positive in all the three regions, but statistically significant in Malwa and Majha only. Similarly, the regression coefficient for repayment of debt is negative and statistically non-significant in all the three regions.he regression coefficients of multiple determinants are 0.64, 0.69 and 0.82 for the households under the others category in Doaba, Malwa and Majha, respectively.

All Sampled Households

Variations in per capita consumption expenditure of all the sampled Scheduled Caste households when taken together are accounted by the number of dependents, total household income, education level of the decision-maker in the family, and repayment of debt in all the regions. The number of dependents has a negative and significant contribution in consumption differentials in all the three regions. On the other hand, the regression coefficients for the factors, viz. total household income and educational level of the decision-maker in the family are positive and statistically significant at one per cent level in all the three regions. It suggests that consumption expenditure-based poverty can be removed by way of increasing the education level of the Scheduled Caste households. The regression coefficient for repayment of debt is negative and statistically significant in all the three regions. The analysis also highlights that the debt incurred during the previous years reduces the current per capita consumption expenditure of the Scheduled Caste households. All the explanatory variables when taken together explain 57, 73 and 76 per cent variations in the consumption levels of all the Scheduled Caste households in Doaba, Malwa and Majha, respectively.

Conclusions and Policy Implications

The foregoing analysis depicts that there is a high incidence of poverty among the different categories of Scheduled Caste households in Malwa. This region is facing huge agrarian crisis due to wheat- cotton rotation and many other factors, so incidence of poverty is relatively high in this region among the Scheduled Caste households. The category-wise analysis shows that the incidence of poverty is high for agricultural and non-agricultural labour households in all the three regions. The incidence of consumption expenditure-based poverty is slightly less than the incidence of income-based poverty across the three regions. The factors like increase in total household income, expenditure on education, and number of earners contribute significantly to raise per capita income and help to reduce poverty among the different categories of

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Scheduled Caste households in the rural areas of Punjab.

The study has brought out important implications for policymakers that will help to reduce poverty among the Scheduled Caste households in rural Punjab. Pro-poor growth policies should be launched in order to generate productive employment and empowerment of the Scheduled Caste people in all the three regions. There is an urgent need to enforce the Minimum Wages Act properly for the agricultural and non-agricultural labourers which will ultimately help in preventing their exploitation at the work place. Land reforms in their favour and increased wages are need of the hour for reducing the incidence of chronic poverty. The establishment of agro-based industries in the rural areas and proper implementation of MGNREGS would help to generate productive employment opportunities for the Scheduled Caste labourers in rural Punjab. The government should start special training programmes for the rural Scheduled Caste people to upgrade their skills and capabilities. Efforts must be made by the state government to improve the health and educational status of the poor Scheduled Caste peoples. Their income level should be raised through the implementation of various government schemes; and they should be provided the basic consumption items at concessional rates through the Public Distribution System. Programmes like *Sarva Shiksha Abhiyan* should be implemented on a priority basis. It is important to ensure that the benefits of programmes and schemes must reach the targetted Scheduled Caste people.

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