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Caste and economic disparity in rural Punjab, India

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Abstract

The scheduled castes and scheduled tribes are the most marginalized sections of Indian society. The present paper using the National Sample Survey Organization's data attempts to analyze economic disparity across the caste groups in terms of differences in income, and standards of living in rural Punjab, India. The univariate analysis shows that monthly household income for each size class of land possessed indicates that the scheduled castes households earn about two and a half times lower income than the non-scheduled castes group households. The consumption standard of the scheduled castes households is about one and a half times lower than the non-scheduled castes group households in rural Punjab. Similarly, the net investment in productive assets of the scheduled castes is eighteen times lower than the non-scheduled caste households.

JEL Code: E21, E22, J62.

Keywords: Scheduled castes, caste and standard of living, caste and average monthly per capita consumption expenditure, caste and the net investment in productive assets, rural Punjab

Introduction

Caste is one of the institutions used to divide people into groups, along with religion, race, and regionalism. It is connected to how individuals live their daily lives and the conditions that are related to society's overall well-being. Despite widespread disapproval and provisions enshrined in the Indian Constitution, it is one of India's long-standing institutions that still exists and serves as the foundation for discrimination. Evidence compiled by policymakers and academics suggests that members of the disadvantaged castes continue to experience higher rates of poverty and appallingly low levels of socioeconomic status. Researchers and decision-makers in India began paying more attention to the problem. As a result, a sizable body of literature has been produced that analyses the various aspects of their backwardness. Few researchers, meanwhile, concurrently look at their socioeconomic well-being. The study of issues related to poverty and inequality has continued to dominate economics research (Dutta 2011; Thorat, Mahamallik, & Sadana 2012; Vithayathil & Singh 2012; Gang, Sen, & Yun 2017) [12, 34, 37, 13].

Since Becker (1957) [5] brought up the subject of economic discrimination in his book 'taste for discrimination', it has received extensive development. With their statistical discrimination theory, Arrow (1973) [2], Akerlof (1976) [1], and Phelps (1972) [30] expanded the conversation. However, due to a lack of enough data, the empirical literature on the subject examined the theory of statistical discrimination's validity, whereas there is insufficient information on the validity of the theory of taste for discrimination (Krueger 1963; Ayres and Siegelman 1995; Heckman 1998; Neumark 1999; List 2004; Dickson & Oaxaca 2009) [24, 38, 19, 29, 26, 10]. However, theories generally attempt and evaluate just explicit discrimination, leaving the amount of implicit discrimination and processes on how it influences it mostly unexplored.

Review of Literature

The majority of empirical evidence reveals that marginalized groups, including minorities, black people, and scheduled castes (SCs) frequently face market discrimination (Goldsmith, Hamilton, & Darity, 2007; Charles & Guryan, 2008; Banerjee, Bertrand, Datta, & Mullainathan, 2009; Singh, 2009; Lang & Lehmann, 2011) [17, 7, 4, 33, 25]. Researchers noted that hiring or entry-level discrimination by employers is the most common. Many similar studies have demonstrated that they discriminate in wage payment, minority's ownership of

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assets, and so forth (Matthew, 1963; Gilman, 1965; Duncan, 1969; Gwartney, 1969; Blinder, 1973; Darity & Nembhard, 2000) [28, 15, 11, 18, 6, 8]. The occupational segregation of blacks into low-paying positions by whites results in wage discrimination against blacks (Gill, 1989) [14]. Depending on race and gender, non-cognitive abilities account for varying proportions of the racial pay difference (Hokayem, 2011) [20].

Bhattacharjee (1985) [39] using information from a Bombay automobile company discovered that similarly skilled individuals were subject to caste-based salary discrimination. The wage disparity across castes has widened across three occupation groups: ploughing, sowing, and weeding. Along with continuing to face restrictions on changing occupations and occupational segregation, *Dalits* also receive lesser pay than non-*Dalits*. The SC's real agricultural wage rates are similar to the average wages paid nationally, but the wage rates in the non-agricultural sector were found to be somewhat lower than the average for all households. It suggests that SCs receive comparatively low real earnings in the non-agricultural sector, which confirms the existence of wage disparities in the sector (Thorat, 2002 and 2009) [34-35]. Using structural equation models, Ito (2009) [21] studied caste-based discrimination in the rural labour markets of the states of Uttar Pradesh and Bihar. He concluded that caste discrimination in India takes the form of job or occupation discrimination than wage discrimination. In support of caste discrimination in wage payments, Thorat, Mahamallik, and Sadana (2012) [36] also discovered evidence. Caste identification influences self-worth beliefs, which in turn affects actual incomes from self-employment (Goel & Deshpande, 2016) [16].

In the formal urban labour market, Madheswaran and Attewell (2012) [27] discovered that income discrimination was pervasive. It was discovered that wage discrimination, which mostly manifests itself in the form of unequal access to jobs, is particularly prevalent in the private sector. In addition, they discovered that the returns to schooling for SC and ST were significantly lower than for non-SC/ST. Thorat and Negi (2014) [40] found that SC workers are paid less than non-SC workers. In rural and urban areas, Deshpande (2014) [9] observed that the non-SC/ST had a greater monthly per capita consumption expenditure (MPCE) than SC/ST. She also observed that during the 1980 and 1990s the gap between SC, ST, and non-SC/ST decreased in the rural areas but grew in urban areas. She found that high levels of growth do not assure equal distribution of growth gains across all social groupings. Instead, the ruling caste groups steal them for themselves.

In the state of Punjab, discrimination has been a secondary concern until the recent past. This is particularly true in rural Punjab, which has the distinction of being one of the richest states in India while also having the largest proportion of the SC population in its rural areas. Although numerous attempts to understand the sociopolitical situation of the SC in the State have been made (Jodhka, 2002 & 2004; Ram, 2004 & 2007; Judge & Bal, 2008; Bal & Judge, 2010) [24, 31, 32, 23, 3], none of them have specifically addressed economic discrimination and market discrimination. Consequently, several research issues, such as: Do SC in rural Punjab encounter wage discrimination? Does the SC population in the State live up to the same standard of life as the non-SC population? There was no response to questions like "Have they experienced any occupational mobility?" The current

research makes an effort to close this gap by establishing empirical evidence of caste-based economic discrimination through an examination of variations in living standards in rural Punjab.

Objectives of the study

The objective of the current paper is to comprehend caste-based economic inequality in rural Punjab, India. Even though there are many other aspects to economic disparities, they are often examined in terms of differences in standard of living, wages, and income earned. Thus, disparities in income and wages received, as well as living standards of SC and non-SC caste groups in rural Punjab, are analysed. In this context, the following hypotheses are studied:

H₁: The income earned by the SC households is lower than the non-SC households.

H₂: Compared to the non-SC, the standard of living of SC households is very poor in rural Punjab.

Research Methodology

The scheduled castes population is approximately one-third of the total population of the State. On the other hand, only a nominal population of the scheduled tribe is residing in the State which is further pocketed in selected areas of the State. Therefore, the present analysis is focused on the SC population of rural Punjab. The present study analyzed discrimination, both at the macro as well as micro levels. For the macro analysis of discrimination in Punjab state, unit-level data from the 68th round of the National Sample Survey Organization (NSSO) was used. Also NSS Report No. 576: Income, Expenditure, Productive Assets, and Indebtedness of Agricultural Households in India, 2012-13 was used. Empirical analysis to test various hypotheses is based on univariate analysis. The differences in standards of living and differences in average monthly per capita consumption expenditure are tested using the Z statistics.

Results and Discussion

The differences in wages and standards of living of different caste groups are inevitable aspects to be looked upon and analyzed for understanding caste-based market discrimination in a better way. A relatively lower level of wages in identical occupations and poor standards of living for the SC vis-à-vis non-SC, prima facie, signifies the prevalence of market discrimination against them. This section is divided into two sub-sections: 1. Wages and Income across the Caste Groups; and 2. Average monthly per capita consumer expenditure (AMPCE) across the caste groups, and is presented as follows.

1. Wages and Income across the Caste Groups: The discussion regarding caste-wise occupational differences has established the fact that the SC remained trapped in their traditional occupations and physical labour-intensive, low-status, and low-rewarding occupations. However, it is better to affirm the same through the analyses of caste group-wise differences in wages and income. Although very inadequate information is available for comparing the wage differences across the caste groups, nevertheless, we attempted to test the same using the unit-level data from the 68th round of NSSO. The information on wage/salary received by the workers is available for three categories of occupations- the workers working as regular salaried/wage employees, casual labour in NREGA works, and casual labour in other types of work. The NSSO data suggests that none of the workers

from others caste group has worked as casual labour in NREGA works. That is, only SC workers have reported working as casual labour in NREGA works. Therefore, for wage comparison, we have considered only two broad categories, i.e., workers working as regular salaried/wage employees, and casual labour. The average wages among these occupations for different caste groups in rural Punjab are computed and presented in Table 1. It is evident that there exist significant differences in the average wages earned by the SC and the others caste group workers. The overall wage difference indicates that on average the wages received by the others caste group workers are approximately one and a half times higher than that of the SC workers. A similar type of scenario is observed when wage differences are analyzed for individual occupation

categories. The average wages earned by the regular salaried/wage employees in the others caste group workers are approximately one and a half times higher than the average wages earned by their SC counterparts. On the other hand, the average wages earned by the SC workers are marginally higher (less than 10 percent) than the average wages received by the others caste group workers in the case of casual labour. This wage differential may be either on account of Becker's (1957) [5] Taste for Discrimination theory whereby the employer has taste in favour of one caste group and is ready to pay higher wages or due to the operation of Statistical Discrimination theory (Phelps 1972, Arrow 1973) [30, 2] whereby employer, on basis of observed characteristics of the workers, is ready to pay more wages to a group with relatively more productivity.

Table 1: Caste group-wise average weekly wages received by workers in rural Punjab: 2011-12 (₹- standard deviation)

Occupations	Percentage		Average [£]		Z ^p _{sc-o}	Z ^a _{sc-o}
	SC	Others	SC	others		
Regular salaried/wage employed	28.7	63.2	1447.86 (1497.696)	2168.63 (2318.643)	-12.374*	-4.407*
Worked as casual labour	71.3	36.8	1254.05 (440.681)	1180.01 (377.693)	12.374*	2.043**
Overall	100.0	100.0	1309.67 (888.796)	1804.65 (1917.456)	--	-5.239*

Note: 1. The caste group SC includes all the Scheduled castes of Punjab State. 2. The caste group others includes BC/OBC and General. 3. Z^p_{sc-o} is computed Z value for the difference of proportion between the SC and others. 4. Z^a_{sc-o} is computed Z value for the difference of mean wages/salary between the SC and others. 5. * and ** indicate value significant statistically at 1%, and 5% levels of significance respectively.

Source: Calculated from Unit Level data, National Sample Survey Office (NSSO) 68th Round (2011-12).

To supplement the information on wages for workers, information on average monthly income for the agricultural households of rural Punjab by class of land possessed based on size is analyzed and presented in Table 2. It is found that with exception of the first two size classes that are virtually landless, for the remaining classes of land possessed the average monthly income of the other caste households is substantially higher than that of the SC households. On the whole, the net average monthly income of the other caste (₹ 22239) group households is 2.6 times higher than that of the SC (₹ 8574) households. Similarly, the average monthly income of the other caste group households is two and a half times greater than the SC households for 2.01 - 4.00 hectares size class of land possessed. In the case of the 4.01 - 10.00 and 0.41 - 1.00 hectares size class, the income of the other caste group household exceeds the income of the SC counterpart by 1.6 times to 1.8 times respectively. It is also found that for the 10.00+ hectares size class of land possessed, the net average monthly income of the SC households is negative. It can be explained by the negative net receipt from cultivation reported by them, meaning thereby that the cost of cultivation exceeded the income earned from cultivation for the SC households during the

survey period, i.e., July 2012 to June 2013.

The differences in income across the caste groups become even clearer when analyzed from the source of income perspective for the various size class of land possessed. Except for the income from wages, the income earned by the SC households for all land size classes is much lower than the income earned by the other caste group households in rural Punjab. This is true since only 4.5 percent of the SC households are self-employed in agriculture. The net receipts from cultivation for the other caste group households are approximately sixteen and a half times larger than that of the SC households. Further, for different size classes of land possessed, the other caste group household's net receipts from cultivation are found 1.5 times to 5.5 times greater than that of the SC households. Similar types of differences exist even in cases of net receipts from farming of animals and nonfarm business. While the net income of the other caste group from farming animals is twelve and a half times greater than the SC, net receipts from the non-farm business are approximately double for them. The evidence validates our hypothesis that the income earned by the SC households is lower than the other caste group households.

Table 2: Caste group-wise average monthly income (₹) per agricultural household for each size class of land possessed: 2012-13 (Season: combined)

Size class of Land possessed (hectares)	Income from wages		Net receipt from cultivation		Net receipt from farming of animals		Net receipt from non-farm business		Total income	
	SC	Others	SC	Others	SC	Others	SC	Others	SC	Others
<0.01	7205	1088	0	-9	-205	-1397	19	48	7019	-271
0.01 - 0.40	7588	5067	94	454	-33	1187	463	1309	8112	8016
0.41 - 1.00	4285	2966	2640	7963	1021	3495	0	175	7945	14599
1.01 - 2.00	1334	1979	6368	13019	3502	1228	1177	818	12381	17045
2.01 - 4.00	6748	3370	4090	22658	877	2170	0	534	11715	28731
4.01 - 10.00	29	4559	23734	36469	3364	2751	0	657	27126	44436
10.00+	0	1931	-25758	82424	4800	11951	0	2665	-20958	98971
All size (inc. n. r.)	7049	3633	947	15535	186	2330	392	741	8574	22239

Note: 1. The caste group SC includes all the Scheduled castes of Punjab State. 2. The caste group others includes BC/OBC and General. 3. inc. n.r.- including not reported.

Source: NSS Report No.576: Income, Expenditure, Productive Assets and Indebtedness of Agricultural Households in India, 2012-13.

2. Average monthly per capita consumer expenditure (AMPCE) across the caste groups: As discussed in the previous section it can be pointed out that the SC workers are not only earning relatively lower wages and income than the non-SC workers, but they also remain confined to the low status, low paying unclean occupations. Therefore, they are bound to suffer from relatively poor standards of living than the non-SC group members. In order to verify the exact position of the standard of living of the SC households in rural Punjab, the average monthly per capita consumer expenditure (AMPCE) for different caste groups is computed using NSSO data, and the same is presented in Table 3. The households are categorized in accordance with the AMPCE of the households as low, middle, and high AMPCE households. From the table, it becomes clear that

approximately one-half of the SC households are classified as having low AMPCE as compared to approximately 17 percent of the non-SC households falling in this low-income category. On the other end of the high-income category, only 6.4 percent of the SC fall into this category compared with 29.1 percent of non-SC falling in the same. The majority (52.2 percent) of the non-SC households are in the middle-income bracket. The proportion (44.4 percent) of households in the middle-income bracket is slightly low amongst the SC group of households. Not only does the proportion of the SC and non-SC differ for the AMPCE classifications, but also there exists wide differences in the AMPCE of the two caste groups. So the evidence on the distribution of households by levels of living supports our proposed hypothesis.

Table 3: Caste group-wise average monthly per capita consumer expenditure (AMPCE) (₹) in rural Punjab: 2011-12 (₹- standard deviation)

MPCE	Upper limit	Percentage		Average [₹]		Z ^{PSC-NSC}	Z ^{aSC-NSC}
		SC	Non-SC	SC	Non-SC		
Low	1428	51.3	17.6	1111.51 (210.119)	1127.08 (215.532)	14.413*	-0.715
Middle	2898	42.3	53.3	1895.75 (373.832)	2105.34 (421.913)	-4.305*	-7.007*
High	--	6.4	29.1	4060.24 (1239.607)	4398.43 (2166.959)	-12.669*	-1.621
Overall	--	100.0	100.0	1632.55 (852.557)	2600.48 (1709.862)	--	-14.657*

Note: 1. The caste group SC includes all the Scheduled castes of Punjab State. 2. The caste group Non-SC includes BC/OBC and General. 3. Z^{PSC-NSC} is the computed Z value for the difference of proportion between the SC and non-SC. 4. Z^{aSC-NSC} is computed Z value for the difference of mean MPCE between the SC and non-SC. 5. * indicate value significant statistically at 1%, level of significance.

Source: Calculated from Unit Level data, National Sample Survey Organization (NSSO) 68th Round (2011-12).

Table 4: Caste group-wise average monthly income, consumption expenditure, savings, and investment in productive assets (₹) per agricultural household for each size class of land possessed: 2012-13 (Season: combined)

Size class of Land possessed (Hectares)	Income		Consumption expenditure		Savings		Net investment in productive asset	
	SC	Non-SC	SC	Non-SC	SC	Non-SC	SC	Non-SC
<0.01	7019	-271	9590	9735	-2571	-10006	-2	335
0.01 - 0.40	8112	8016	9205	11029	-1093	-3013	95	451
0.41 - 1.00	7945	14599	9361	12520	-1416	2079	290	1515
1.01 - 2.00	12381	17045	15559	12667	-3178	4378	434	-827
2.01 - 4.00	11715	28731	9612	17326	2103	11405	740	3993
4.01 - 10.00	27126	44436	12915	21290	14211	23146	3721	13673
10.00+	-20958	98971	19042	27021	-40000	71950	83	7350
All size (inc. n. r.)	8574	22239	9573	14727	-999	7512	196	3463

Note: 1. The caste group SC includes all the Scheduled castes of Punjab State. 2. The caste group Non-SC includes BC/OBC and General. 3. inc. n.r.- including not reported.

Source: NSS Report No.576: Income, Expenditure, Productive Assets, and Indebtedness of Agricultural Households in India, 2012-13.

Information on income, consumption, savings, and net investment per agricultural household for each size class of land possessed provided in Table 4 brings out another important dimension of the differences across caste-based classes. Like Table 3, it is found that the average monthly consumption of the non-SC households is one and half times greater than that of the SC households for all sizes as well as for 4.01 - 10.00 hectares size class of land possessed. The average monthly income of the non-SC group households for the said size classes of land possessed is approximately two and a half times and one and a half times larger than that of the SC households respectively.

The consumption spending of the non-SC group households exceeds the SC households by 1.8 times for the 2.01 - 4.00 hectares size class of land possessed. For other size classes of land possessed, similar kinds of differences are observed. Further to validate the income and consumption differences between the SC and non-SC households, results regarding savings and net average monthly investment in productive assets are presented in Table 4. It is observed that for almost all size classes of land possessed, the SC households have a much lower level of income as compared to their

consumption expenditure. This leads to dis-savings or borrowing by them to meet their consumption requirements. In contrast with this, except for households that own land size up to 0.40 hectares, all of the non-SC group households earn a relatively higher income than their consumption spending, thus resulting in more savings by them. More savings implies more investments and therefore, result in more income. For this purpose, the household's average net monthly investment in productive assets is analyzed. The picture is not different from what we expected. It is observed that the non-SC household's average net monthly investment in productive assets is approximately eighteen times higher than that of the SC households. This difference is the highest in the case of 10.00+ hectares size class of land possessed where non-SC household's average net monthly investment is 88.6 times greater than that of the SC households. Similar types of differences are found in the rest of the size classes of land possessed. Evidence validates our proposed hypothesis that SC households are suffering from a relatively low level of income and a poorer standard of living compared with that of non-SCs households.

Conclusion

The study looked at the problem of caste-based economic discrimination in rural Punjab in the form of economic disparities. Although the economic disparities have numerous forms, for this study, they were examined as variations in the standard of living between caste groups in rural Punjab. The presented hypotheses receive support from the univariate analysis. The average wage gap between the selected occupations demonstrates that, for equivalent occupations, the SC are paid one and a half times less than the non-SC. The caste group-wise average monthly income per agricultural household for each size class of land possessed proves that not only the income earned by the SC households is approximately two and a half times lower than the non-SC households, but also that wages are the major source of income for them. Contrarily, in rural Punjab, agriculture is the primary source of income for non-SC households. Therefore, the proposed hypothesis that the income earned by the SC households is lower than the non-SC households, stands accepted. The average monthly per capita consumer expenditure (AMPCE) of the households is used to analyze differences in the level of living between different caste groups. The AMPCE of SC households is discovered to be considerably lower than that of non-SC families. When monthly average income, consumer spending, savings, and net investment in productive assets per agricultural household for each size class of land possessed are examined for different caste groups, similar types of inequalities emerge. While SC households have an average monthly income that is almost two and a half times lower than the non-SC group, they also have an average monthly consumption expenditure that is one and a half times lower. Also, the net investment in productive assets of the SC households is eighteen times lesser than that of non-SC households. Thus, the analysis satisfies the proposed hypothesis that SC are suffering from a poor standard of living in relation to the non-SC groups. Therefore, it is necessary to review the government's policy initiatives taken to address the issue of wage and income disparities in relation to standards of living amongst caste groups.

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