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Vinoj Abraham

1 Introduction

Discrimination against marginalized groups, be it social groups such as deprived castes, or minority religious communities, or subjugated genders, labour market is one of the prominent institutions through which this social action has been manifested. This particular social action of discrimination in the labour market manifests both as a source of inequity and as an expression of inequality. While there are many ways in which labour market discrimination occurs, the most important one is of course the age-old and conventionally practiced entry and exit barriers based on ascriptive status (Thorat and Newman, 2007) into particular labour markets in the country. While these institutional rigidities have been dismantled through constitutional provisions, still the practice of discrimination persists. Discrimination in the labour market occurs through three important modes, one is through barriers to entry into particular labour markets, the other is through restrictive occupational mobility within the internal labour markets and third is by way of discriminating on returns to work for same occupation. While social exclusion into labour markets acts as a direct entry barrier into particular labour markets, wages and earnings discrimination provides a 'premia for tastes' and acts as a signaling mechanism towards discouraging marginalized communities to participate in particular labour markets.

Understanding wage and earnings discrimination, its composition, its causes and its effects is crucial to decipher the position and mobility of individuals in these social groups. The depth of this understanding depends crucially on the statistical data that is available for analysis. This paper is an attempt to survey the database available for understanding wages and earnings discrimination, and to suggest directions for the statistical systems to answer emerging issues of research in this area.

The paper is organised in the following manner. After the introduction, Section 2 summarizes the major databases available in India for analyzing wage inequality. This is followed by a description of the availability of data on wages of social groups and religious minorities and their limitations in Section 3. Section 4 provides an overview of the trends in wage discrimination followed by a literature review on attempts towards explaining these observed trends in Section 5. Drawing from the literature and analysis of data, we identify emerging issues of research but are limited by data constraints in Section 6. Finally, in the last section, a few suggestions are attempted towards improving the statistical system available for understanding wage discrimination.

2 Major Data Sources on wages and their scope

The workforce in country can be classified as wage labour and self employed workers. In India, 51 percent of the workers are self employed while the remaining are in wage labour, of which 33.5 percent are casual wage workers and 15.5 percent are regular employees as per 2009-10 NSS employment unemployment survey. We get wage information of the regular and casual workers, but we don't get any information on earnings of the self employed from any data source. Hence, the discussion in this paper is mostly relevant to the wage workers only, except in the last section on suggestions.

Estimates on wages per person-day are arrived at mainly through two methods. One is a direct survey of workers on wages and earnings, and the other is an estimate of wages generated from the total wage bill of a firm, divided by total person-days of work. Estimates using the second method mentioned are arrived from firm level data with minimal worker characteristics. For the indirect methods of estimation of wage from wage bill, a number of surveys are available such as the Annual Survey of Industries, Census of Small Scale Industries, NSSO rounds on unorganized manufacturing and services. In all of these surveys the unit of data collection is the firm and not the worker. But all these surveys collect data on total wage bill, total workers including classification of total males and females. So it is possible to estimate average wage per worker. Though some surveys do provide some details of the labour composition such as gender composition, yet it is not possible to make any estimation of wage differentials across

gender, social groups or religious groups since these surveys do not collect wage bills separately for these groups. For the purpose of understanding wage discrimination these surveys cannot contribute much. Hence I shall stick to a discussion on the direct survey sources that are relevant to this paper.

1. The Employment-Unemployment Surveys of the NSSO: The single most important data source on wages is available from the quinquennial employment and unemployment surveys undertaken by the National Sample Survey Organization of Central Statistical Organization (NSS-EUS). The reports of the survey are available from 1973, though the unit level information is available only from 1983. The data is taken from the current weekly status data on wages and is usually represented as wages per week or wages per day. The data is available for regular workers and casual workers. The sample is drawn based on a stratified random sampling procedure The survey covers an entire year divided into four sub-rounds of three months each. Estimates can be generated at the sub round level as well as for the country as a whole. A wide degree of disaggregation is possible at the unit level data. The data can be analyzed at the NIC industrial classification and/or at the NCO classification for rural/urban sectors. Since the data is at the individual level it can be used to explore individual characteristics associated with wages.

2. *Rural Labour Enquiry:* The rural labour enquiry is the successor of the Agricultural Labour Enquiry (ALE) in 1950-51 and 1956-57, which was specific to agricultural workers. Thereafter, the scope of the subsequent enquiries was enlarged to cover all rural labour households and was rechristened as Rural Labour Enquiry (RLE) with the survey in 1963-65 and 1974-75. However, in 1977-78, the RLE was integrated with the quinquennial surveys of the NSS-EUS. So, currently RLE is a subset of information from the NSS-EUS specific to manual work in the rural areas following the same methodology as that of NSS for employment unemployment and wages. To provide comparability with previous rounds of RLE the RLE gives information for both rural workers and agricultural workers separately.

3. *Occupational Wage Surveys:* The objective of OWS was to support building of wage index for major industries. It provides information of occupation wise wage, employment, earnings, DA, HRA and other perks for the industries from different geographic regions chosen for the survey. The average wage information is provided for males, females, adolescents and children. The Labour Bureau has been entrusted with the conducting of these surveys ever since the first round in 1958-59. Till date six rounds have been completed. The OWS first round in the year 1958-59 covered 44 industries comprising 37 manufacturing, 4 mining and 3 plantation industries. The second Occupational Wage Survey was during the period 1963-65 and the third OWS in 1974-79 in 81 industries. The fourth round was in 1985-92 covering 53 industries. The Fifth Round was undertaken in 1993-2001 covering all the 53 selected industries of the Fourth Round. The Sixth Round was taken up in the year 2002 and 56 selected industries was covered during this round under different sectors (45 Manufacturing, 4 Mining, 3 Plantation and 4 Service Sectors).

The survey is done for firms in the organized sector, ie firms that are registered under the Factories Act 1948. Occupation-wise wage data are collected for those workers who conform to the definition of worker defined under the Factories Act, 1948. However, managerial, technical and clerical staff, though may be covered by the Act as workers, is excluded from the scope of the survey. Yet, if the supervisory personnel, whose duties besides supervision, generally involve considerable element of manual work then they are covered under the survey. Similarly, regular, badli and casual workers who have worked continuously for a period of at least one month preceding the reference date have also been covered under the survey. Contract workers working in the premises of the unit are also taken into consideration. As per recommendation of the Study Group on Labour Statistics, part-time workers and apprentices have also been included in the survey.

4. *Wage Rates in Rural India:* This data is collected by NSSO and compiled by the Labour bureau. The main objective of the collection of this database is to work out the cost of cultivation for the purpose of fixation and revision of support/procurement prices of Kharif and Rabi crops, The wage rate data for rural workers who are doing daily manual

work (implying casual workers) are collected on a continuous monthly basis for 11 agricultural and 7 non-agricultural occupations from a fixed set of 600 sample villages spread over 66 N.S.S. regions of 20 States since July, 1986. These data are being compiled and published from the year 1995-96 annually, the latest being in the year 2009-10. The data collected is presented as average occupation wages for each month for males and females across different states.

Table 1 Sources of information on Wages

Name of Data Source	NSS EUS	OWS	RLI	WRRI
Publisher	NSS-CSO	Labour Bureau	NSS-CSO	NSS-Labour Bureau
Setting of Market information	National estimates	Particular industry in organized sector	Rural Sector	Rural Sector
Data collection process	Two stage random Sampling	Two stage random Sampling	Two stage random Sampling	600 sample villages in 66 NSS regions
Periodicity	Once in 5 years approx	Irregular intervals of many years	Once in 5 years approx	Yearly
Information on caste, gender, religion	Caste, gender, religion	Gender	Caste, gender, religion	Gender
Unit of data collection	Household/individual s	Firm/workers	Household/individual s	Farm

3. The Data on marginalized groups in the Major data sources and their limitations:

Though there are multiple sources of information for wages in India, there is limited information in understanding wage differentials of marginalized groups. The most detailed information is available with the NSS-EUS surveys.

The NSS –EUS collects household level information of the social group status such as SC, ST and OBC. It also provides the household level information of religious categories of Hindus, Muslim, Christians, Sikh, Jain, Buddhists, Zoroastrianism and others. Further

it collects individual information of gender as well. Given that this information is available at the unit records level of household and individual level, it is possible to isolate the wage estimates of each of these groups separately and in combinations of these groups. While the religious groups and gender classification had been consistent through out all quinquennial surveys the social groups classification has undergone various changes that creates inter-temporal comparison problematic.

Firstly, The data on NSS marginalized groups , especially castes are not consistent across different rounds. The Scheduled Castes(SC) and Scheduled Tribes (ST) categories have stayed on since earliest quinquennial surveys. But an additional classification that remained was neo-Buddhists till 1987-88. Thereafter with the amalgamation of Buddhists as a social group with the scheduled castes in 1990[1] this as an analytical category lost relevance and it was dropped, with the neo-Buddhist being added to SC. So the SC categorization prior to the 50th round does not include neo-buddhists, while since 50th round neo-buddhists are largely accounted within SC category. Therefore the aggregate wages of SCs before the 50th round and after the round are affected by the inclusion of wages of neo-buddhists. As can be seen in Table 3 the neo-Buddhists had an average daily wage rate lesser than the SC and ST in the rural areas, while in the urban areas it was higher for male neo-Buddhists as per the 38th round. Now it can be expected that the inclusion of this category since the 50th round has downwardly biased the average wages of SCs in rural areas, while it has upwardly biased that of the urban SCs.

Secondly the problem we have at hand is the inclusion of OBC in 'others' since 1983 to 1993-94. Based on The Second Backward Classes Commission report known as the Mandal Commission report identified socially and educationally backward communities to be included in the new list of Other Backward Classes (OBC). The OBC list is declared at the state level and can vary across different states. A large share of the SC that converted to Islam and Christianity are also included within this group. Within the NSS questionnaire the OBC as a separate category appeared in the 55th round in 1999-2000

[1] Neo-Buddhists were accorded scheduled caste status through an amendment of Para 3 of Article 341 in 1990 to include them in the Presidential Order of Scheduled Castes and Scheduled Tribes Order 1950.

following the implementation of the Mandal Commission recommendations. Prior to the 55th round the deprived caste converts from Hinduism to other faiths was excluded from SC lists and hence probably continued to report as part of "Others". Since the others category also included these communities during this period , it is not possible to compare 'Others' of period 1999-2000 and later to the earlier period of 1983 to 1993-94. The available option is to include OBCs in 'Others' for later years too at the severe cost of losing disaggregation and that too of a group of people of very relevant social categorization.

Thirdly, even the commonly available comparison of inter-group earnings disparity is also problematic. As Deshpande (2005) states the benchmark group of "others" is again a heterogeneous group of jatis, some of whom are very close to SCs in economic and social position. Others is a residual term which renders underestimation of the gap between the top and bottom end of the caste hierarchy. Therefore, sub classification of 'Others' is also a necessity to make meaningful comparison of the SCs with Others.

Fourhtly, With regard to religious groups Hindus account for about 80 percent of the labour force while Muslims account for another 14 percent. The balance is made up of a variety of religions including Sikhs, Christians and Buddhists. Since each of these other religious groups individually account for a small share of the labour force – no more than 2 percent – they have limited representation within the samples. For purpose of disaggregated analysis at various stages (like industry and occupation) this would imply very few samples available from each religious group. Since wages are averages that would be based on this poor size of sample for this religious groups, we may end up with biased figures than a true representation of the relevant population group.

Table 2 Marginalised Groups: Data availability and comparisons from NSS

	1983	**1987-88**	**1993-94**	**1999-2000**	**2004-05**	**2009-10**
Social groups	SC	SC	SC	SC	SC	**SC**
	ST	ST	ST	ST	ST	ST
				OBC	OBC	OBC
	Neo-Buddhists	Neo-Buddhists				
	Others (OBC included)	Others (OBC included)	Others (OBC included)	Others	Others	Others

Despite the inter-temporal comparability problems present in the NSS-EUS on marginalized groups, this survey continues to be used as the single most popular database for wages and earnings, along with employment patterns. This is so because none of the other surveys mentioned above provide information on caste and religion, apart from the Rural Labour Enquiry. But since RLE is generated from the NSS surveys the problems discussed above on NSS would be equally relevant for RLE as well. OWS and WRRI do collect information on gender, but not on caste or religious groups.

4. Trends in wage inequality

Keeping in mind the unavailability of any other reliable source than the NSS-EUS on wages for the social and religious groups here I take stock of what have been the trends in wages for the various social and religious categories using NSS-EUS. Here only the two end periods of the data available is taken to provide a cursory view of wage movements. It is not the intention of the paper to get into a detailed analysis of wages; rather it is to provide a background to the discussion on the data requirements for further research. The daily wages is calculated by dividing total wages reported during the week divided by the number of days of work in the weekly activity intensity given in the current weekly status and is reported in current prices without converting to real prices.

As can be seen from Table 3 the average daily wages for SC, ST and neo Buddhists in 1983 was much lower than 'Others' for both males and females in urban areas and rural areas. This trend is reflected in totals as well. Since OBC classification was not available for the period it is not accounted. It may be noted that the wages were lowest for neo-buddhists as a category in 1983, followed by SC, in rural areas. While in Urban areas the neo-buddhists had a higher wages than both SC and ST. Also, the wages for SC and ST were more or less similar in both rural and areas, the SC wages being marginally lower than the ST wages.

After more than a quarter century in 2009-10 the wage discrimination is still visibly large. Clearly the wages of SC, ST and the new category OBC is much lower than that of

Others. The SC still continue to have the lowest average daily wage compared to ST and the new category of OBCs in rural areas and urban areas.

More interesting to note is the fact that compared to the others, the growth rate of daily wages has been higher for the ST in rural males, urban males and urban females, while for SCs the growth rates had been lower than the Others in all the categories. This essentially has meant that there is a tendency towards convergence of wages in case of STs while there is a case of divergence in case of SC from the Others.

Table 3 Average Daily Wages of Social Groups and Growth Rates in current

		1983			2009-10			CAGR 1983-2009-10		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Rural	ST	48.9	29.2	41.5	208.2	127.5	187.7	4.90	4.99	5.11
	SC	46.6	28.5	41	155.8	92.1	140.9	4.07	3.95	4.16
	OBC	NA	NA	NA	184.4	102.7	163.0	NA	NA	NA
	Neo Buddhists	43.9	21.3	34.3				NA	NA	NA
	Others	67.7	33.3	57.9	244.9	170.8	231.8	4.34	5.55	4.69
	Total	59.3	31.1	50.7	195.1	115.5	176.3	4.01	4.43	4.20
Urban	ST	99.5	48.6	87.6	336.3	272.8	321.6	4.10	5.86	4.39
	SC	92.5	48.1	82.1	220.3	135.2	201.4	2.91	3.47	3.01
	OBC	NA	NA	NA	256.6	182.0	242.5	NA	NA	NA
	Neo Buddhists	114.8	50.1	104.2				NA	NA	NA
	Others	135.7	74.5	125.9	380.4	349.1	375.0	3.46	5.23	3.67
	Total	128.7	68.1	118.2	305.5	238.8	292.7	2.90	4.23	3.04
Total	ST	58.6	31.2	48.9	246.4	167.2	226.8	4.86	5.70	5.20
	SC	58.3	32.3	50.8	180.3	107.8	163.7	3.80	4.06	3.94
	OBC	NA	NA	NA	218.0	131.6	198.1	NA	NA	NA
	Neo Buddhists	72.8	25.7	56.6	NA	NA	NA	NA	NA	NA
	Others	103	47.4	90.5	326.8	277.0	318.1	3.89	6.00	4.24
	Total	89.4	41.1	77.2	246.7	165.2	229.1	3.41	4.70	3.66

As an indicator towards convergence the ratio of daily wages of each social category to Others is calculated. Table 4 shows that while the SC wages was 71 percent that of Others in 1983 , in 2009-10 the gap widened and was only 61 percent. On the other hand the ST gap declined from 72 percent to 81 percent in rural areas. Similarly in the urban areas, the ST gap declined from 70 percent to 86 percent , while for SCs the gap widened from 65 percent to 54 percent in 2009-10 For OBCs the gap with others was 70 percent in 2009-10 in rural areas and 65 percent in urban areas.

Table 4 : Ratio of Daily Wages of Marginalized Social Groups to "Others"

		1983			2009-10		
		Male	Female	Total	Male	Female	Total
Rural	ST	0.72	0.88	0.72	0.85	0.75	0.81
	SC	0.69	0.86	0.71	0.64	0.54	0.61
	OBC	NA	NA	NA	0.75	0.60	0.70
	Others	1	1	1	1.00	1.00	1.00
Urban	ST	0.73	0.65	0.7	0.88	0.78	0.86
	SC	0.68	0.65	0.65	0.58	0.39	0.54
	OBC	NA	NA	NA	0.67	0.52	0.65
	Others	1	1	1	1.00	1.00	1.00
Total	ST	0.57	0.66	0.54	0.75	0.60	0.71
	SC	0.57	0.68	0.56	0.55	0.39	0.51
	OBC	NA	NA	NA	0.67	0.48	0.62
	Others	1	1	1	1.00	1.00	1.00

Now, within each of these social groups there is considerable wage gap between males and females. The male wages across all social groups were considerably higher than female wages. Table 5 shows female wages as a proportion of male wages in their respective social groups. Overall the gender gap declined from 52 percent in 1983 to 59 percent in 2009-10 in rural areas and from 53 percent to 78 percent in urban areas. It is also noted that in 1983 among all categories, Others had the widest gender gap in rural areas, while in urban areas it had the least. The least gap in gender ratio was for the SC and ST in 1983 in rural areas. But during the period 1983 to 2009-10 the gender wage gap declined marginally from 60 to 61 percent for STs and for SCs it deteriorated from 61 to 59 percent. This trend is similar in the case of urban regions as well. The fact that gender gap was high in Others in 1983 may be also partially be due to inclusion of OBCs

in the others. Evidence for this comes from the fact that in 2009-10, while the gap for Others declined to 65 percent, for OBCs was 54 percent, highest among all groups in 2009-10.

Table 5: Gender Ratio of Daily Wages by Social Groups

		1983	2009-10
Rural	ST	0.60	0.61
	SC	0.61	0.59
	OBC	NA	0.56
	Neo Buddhists	0.49	NA
	Others	0.49	0.70
	Total	0.52	0.59
Urban	ST	0.49	0.81
	SC	0.52	0.61
	OBC	NA	0.71
	Neo Buddhists	0.44	NA
	Others	0.55	0.92
	Total	0.53	0.78
Total	ST	0.53	0.68
	SC	0.55	0.60
	OBC	NA	0.60
	Neo Buddhists	0.35	NA
	Others	0.46	0.85
	Total	0.46	0.67

A classification of the workers further into socio-religious groups provides a more disaggregated view of social groups within religious communities (For wage differences across religious communities see Table A1 in Appendix) . The ST is a group with no particular religious connotations, implying that tribal people of all religious persuasions may be included as STs. But, for SCs the constitution allows only deprived caste members of Hindu, Buddhists or Sikhism to be included in the SC list. The OBC again is a marker for socially and educationally backward, implying that such people of all faiths may be included in this list.

Though the constitutional provisions does not allow members of any other religious groups than Hinduism, Sikhism or Buddhism to be accounted as SCs, there do exist a large number of low caste converts from Hinduism to other faiths, largely to Islam and

Christianity. There are very strong popular movements that have taken up the cause of "Dalit Muslims" and "Dalit Christians", to be included within the SC list but there is very little empirical evidence of these groups as there is no statistical data collection of them as a social group.

Even though there is no constitutional standing for such groups, since the NSS collects data on the basis of self reporting, large number of people does report themselves as SC from all other faiths as well than stipulated by the constitution. For instance, from the NSS sample, we get a few samples of SC,ST and OBCs from all religious groups (See Appendix Table A2 and A3) However, it is often the case that there are self reporting errors as well. Deshpande (2008) remarks that it is possible that a large number of the 'Dalit' groups in other faiths report themselves as OBCs though they may not have been officially included in their state list for OBCs. Nevertheless as Deshpande (2008) suggests NSSO is the only data source that can give any information about socio-religious groups. So here we attempt to explore the wage differences across socio-religious groups.

As can be seen from Table 6 there are considerable variations in wage rates across socio-religious groups. For instance, in 2009-10 among Hindu others, the average daily wage was Rs 346.9 while for SC Hindus it was less than half at Rs.148. Another feature in specific is that while the Sikh Others recorded the highest wages across all groups in 2009-10, the Sikh SC groups recorded one of the lowest among all socio-religious groups in 2009-10, and also the lowest wage growth among all SC religious groups during 2009-10. Also, even while Christian community records high wages the wages of SC Christians is very low and comparable to other SC groups. But the lowest SC wages is that of Islam SC groups, which is much lower than that of even Hindu SC groups. Moreover as a group they have very low growth in wage during the period 1983 to 2009-10.

Table 6 Average Daily Wages by Socio-Religious Groups and CAGR in current prices Rupees

		Hinduism	Islam	Christianity	Sikhism	Buddhism	others	Total
1983	ST	46.72	105.45	69.68	64.59	99.38	74.50	48.88
	SC	49.99	53.23	53.42	71.18	58.28	46.94	50.79
	OBC	NA	NA	NA	NA	NA	NA	NA
	Others	91.83	72.75	99.91	147.34	106.43	77.37	90.46
	Total	76.31	72.81	92.58	112.32	62.68	71.58	77.16
2009-10	ST	148.4	351.7	302.4	754.8	326.9	398.7	222.9
	SC	162.9	132.8	185.1	163.0	181.6	277.5	163.8
	OBC	199.0	179.3	253.0	193.0	224.4	290.1	198.6
	Others	346.9	202.5	332.4	382.6	233.5	251.7	315.8
	Total	223.4	197.6	294.7	248.0	240.3	375.4	228.1
CAGR	ST	3.89	4.06	4.97	8.46	4.01	5.70	5.14
	SC	3.98	3.07	4.19	2.77	3.82	6.04	3.94
	OBC	NA	NA	NA	NA	NA	NA	NA
	Others	4.49	3.44	4.05	3.20	2.63	3.97	4.22
	Total	3.61	3.35	3.90	2.65	4.54	5.63	3.64

From the above brief analysis, what comes out clearly is that wage discrimination exists and persists for along period of time across social groups. However wage discrimination is not uniformly felt across different social groups. The worst affected are the SCs. The STs are affected but they seem to be on a path of mobility, unlike SCs. Moreover, gender based wage discrimination within social groups are rampant and worsening. Further social groups are not a homogenous set but heterogenous, as seen in the analysis of socio-religious communities. Also, we find that though SC of different religious persuasions and faiths do exist, they seem to have similar experiences of wage discrimination.

Now we proceed to review the literature on wage discrimination and wage inequality across social and religious groups in a view to apprise about the composition and factors that explain away this aggregate picture of wage discrimination.

5. A summary of literature on earnings and wage discrimination and inequality

Studies in India on wages and earnings discrimination or inequality had focused on two sets of issues, namely the existence of inequality, which gives a static dimension of the problem. The second issue is the persistence of inequality, which is a comparative static

or dynamic dimension. A number of studies have repeatedly marked the existence and persistence of wages and earnings discrimination in India against these marginalized sections of the country as has been explained in the previous section. Most studies using secondary data on wages across marginalized groups have been done till now using data from the NSSO Employment unemployment survey rounds.

The questions that are often answered in the static analyses are; to identify the extent of earnings discrimination across caste and religious groups; to decompose the earnings discrimination into discrimination in wage, employment opportunities and occupational choices that explains earnings discrimination; and to analyse the factors that affect wage discrimination, the most prominent being education, though studies do attribute other causes such as geographical isolation and spatial segregation, presence of upper caste population, etc.

Madheswaran and Attwell (2007) analyses the caste discrimination in urban labour market by examining inequalities in employment, occupation and earnings between SC/ST, OBC and forward caste Indians using the NSS EUS . They take OBC as a separate category from 1999-2000 and before this period the category is included in Others. They use the Blinder_Oxaca decomposition to partition the observed wage gap to "endowment effect' and "discrimination" or "coefficient" effect with a refinement to allow for occupational discrimination and wage discrimination in same jobs. They conclude that earnings differentials do exist and a large share of that come from differences in human capital endowments, while about 15 % is also due to discrimination in market place. Further, occupational discrimination is more pronounced than wage discrimination.

Das and Dutta (2007) similar to Madheswaran and Attwell (2007) conclude that caste is still a determining factor in how individuals are remunerated in the wage labor market. They identify that amongst regular workers the extent of the wage gap is substantial at about 0.37 log points, of which between a third is attributable to unequal treatment of scheduled caste workers relative to general caste workers. The wage gap among casual workers is very low and almost entirely accounted for by differences in characteristics.

Deininger, Jin and Nagarajan, (2011) use a nationally representative household survey conducted by NCAER to quantify the magnitude of discrimination, both caste based and gender based, in casual labour markets. To seek answers for the future course of discrimination they compare between high income and low income villages. They conclude that discrimination in the informal labour market is more severe than formal market, however, this is entirely concentrated in gender based relations while there is no evidence of caste based discrimination in informal labour market. Discrimination do express in occupational choices and wages for same occupation. Further, the study also notes that higher income levels do not diminish gender based discrimination.

Dutta, (2004) using the NSS_EUS studied the caste and religion effect on wage inequality and measured the extent of wage discrimination during the period 1983-1999-2000 in the Indian labour market. She too finds that wage discrimination does exist across categories and religious categories. She take support from other literature that probably this discrimination is more occupation based earnings differences rather than wage differences for same occupation. Interestingly this study makes contrary claims of that of the previous study. She concludes that belonging to a scheduled caste (or tribe) or being Muslim significantly decreases the wage received by regular workers (formal sector workers to a large extent)in all three periods while the opposite is the case for casual workers (informal sector workers to a large extent) .

Bhaumik and Chakraborty, (2009) use National Sample Survey household-level data for 1987-88 to 2004-2005 to study earnings differential between Hindus and Muslims and their causes. They conclude that substantial earnings differential exist between the two groups, but this is not because of differences in returns to education, rather it is due to differences in education itself.

On the question of persistence of discrimination the studies have mostly analysed wage discrimination in a comparative static form.
Jacob, (2006) using NSSO data again does the familiar exercise of decomposing wage gaps of different social groups based on Blinder-Oxaca decomposition. However, here

she finds that the wage gap attributable to discrimination has decreased over time and also within discrimination gap itself wage discrimination component has decreased over time and the job discrimination component is statistically insignificant.

Majumdar (2007) using NSS data states that the relative earnings of the excluded group (SC/ST) has been decreasing over the years, with the worst affected year being 2004-05. Also upward mobility to higher wage class had been slower for these workers compared to other workers, rendering widening earnings differentials with the others. The lack of mobility has been mainly due to preponderance of excluded workers in low wage occupations, rather than wage difference in same occupations.

Hnatkovska et .al., (2010) is the only study that deals with the issue of inter-generational mobility using NSS data from 1983 to 2004-05 to analyze patterns of occupation choices, education attainment and wages of both SC/ST and non-SC/ST households. They conduct a time series evolution of SC/STs versus non SC/STs in terms of education, occupation and industry choices and wages in the same age cohorts. They also look into intergenerational persistence of education, occupation, industry of employment and wage levels of SC/ST and non- SC/ST households. In general they conclude that though difference does exist in occupation, education and wages, there seems to be convergence in the twenty year period. Specific to wages, the median wage premium of non-SC/STs relative to SC/STs declined systematically from 17 percent in 1983 to 3 percent 2004-05. Also, correspondingly, the elasticity of wages of children with respect to the wages of their parent has also declined relatively faster forSC/ST.

In summary, though there are not many studies on earnings or wage discrimination the overwhelming evidence tend to affirm that wage discrimination against SC/ST is real. Further, the role of wage discrimination for same occupation seems to be lower while it is the occupational discrimination that is generating the wage discrimination. However, we get contra-indications from different studies with regard to the presence of caste based discrimination in the formal versus informal sector. Further, there is contra-indications on the question of wage convergence of SC/ST to others, some studies indicating a convergence while the other studies claim widening inequality.

6 Issues that needs further research attention for policy intervention

It has been established from available data sources beyond doubt that wages discrimination across caste groups and some religious groups does exist. But understanding caste discrimination at this generalized broad level conceals more than it reveals. Again the issue that needs to be addressed can be conceptualized as three types, depending on their analytical structure, namely static, comparative static and dynamic. The static analysis provides with greater insights into the nature of discrimination. The comparative static largely would give us the effects of different external shocks such as policy intervention, trade liberalization etc. Dynamic analysis would provide us the paths of mobility.

First we discuss that needs to be address from a static point of view.

Group Heterogeneity: The castes, tribes and OBC are treated as if they are homogenous groups, while in reality they are heterogeneous. The scheduled caste largely consists of many *jati* and *upajati* within the fourth *varna* , *Shudras*, and the large number of communities that are excluded from the *varna* system itself. The scheduled tribe on the other hand consists of a large number of communities that were spatially excluded from development. The OBC is a much more fluid term that refers to socially and educationally backward classes, determined by their relative position in their community. While the clubbing of these numerous castes, tribes and classes into the three fold division of SC, ST and OBC makes it empirically tractable, it has also suppressed the intra-group differences within these broad groups. A number of issues remain unaddressed due to this homogenous treatment of heterogeneous groups.

Firstly, a relevant question that needs to be answered on the issue is that of inter-group versus intra-group inequality. It is of immense policy relevance to address this issue to identify target groups for intervention. Micro level studies such as that of Swaminathan and Rawal (2011) does address this question. They do a comparison of dalit and non-dalit households across eight Indian villages. While the study identifies that income inequality is substantial between dalits and non-dalits the more relevant aspect for this

paper is the manuevatiblity that they achieve by breaking into different dalit groups within the scheduled caste itself. They are able to identify within group inequality and between group inequality distinctly and argue clearly on the dominance of between group inequality share as upto 50 % of the total inequality index using entropy measures.

Secondly, While caste mobility[2] may not be possible economic mobility has been successfully achieved by many castes and tribes (Srinivas, 1962). So, while still the overwhelming majority of these groups are suffering lack of mobility some communities seems to have achieved economic mobility. It is important to know the means of economic mobility of these smaller groups. Who are these groups? How did they overcome the barrier of caste to achieve economic mobility? Research into these issues would throw light on the possible policy strategies that could be imbibed to enable other poor communities to achieve economic mobility. There is need to understand economic mobility of these groups using large scale datasets.

Understanding Wage inequality in Socio-religious groups: A second set of issues pertain to understanding earnings and wage discrimination within socio-religious groups. Our current understanding of wage discrimination within social groups within religious groups is rather scanty due to two reasons. One we do not have any other database than the NSS-EUS that look into this aspect. And two, within the NSS-EUS database the simple size of some of the social groups within religious groups are too thin and hence subject to sample biases. But this is an important dimension that needs attention. There has been mounting pressure on the government to include non-Hindu SC groups in policy interventions for the SCs. Earnings inequality within the labour market is considered as a telltale sign of social discrimination. Table 6 above also demonstrates that substantial wage inequality exists across social groups within religious communities. Hence studies that address issue of wage inequality within socio-religious groups would throw light on caste practices within other religious groups as well.

[2] Srinivas also has argued that lower castes do indeed strive for caste mobility as well through the now famous sanskritisation process (Srinivas, 1962)

Understanding gender dimensions of socio-religious groups: Another dimension of importance, but less attended is the issue of gender discrimination within different social groups. As has been shown in Table 5 gender discrimination within social groups is high. But more interesting is the aspect that while Others and ST categories have achieved substantial progress in reducing gender based wage discrimination in case of SCs this aspect seems to persist and worsen in some cases. It is important to understand how this mobility was achieved in case of ST and others, while how it eluded the SCs. Is it policy intervention? If so how did it have differential impact? Was it that women in some social groups achieved greater occupational mobility and hence wage mobility? Answering these issues would help unravel the multiple and overlapping effects of the institutions of gender and caste

Next we discuss a set of issues that needs to be addressed from a comparative static analysis. Comparative Static analysis would provide us a picture of what happened before and after an external shock in the system. We take up two relevant cases that affect wages and earnings of individuals, namely, policy interventions and new economic policies of the economy.

Policy interventions: Policy interventions for the uplift of the deprived social groups have been mainly in the areas of education and employment, by providing reservations in public funded institutions. Firstly, the expectation is that socially deprived groups would be able to achieve earnings mobility through both these interventions. Reservation in education would provide them with the skills for occupational mobility while reservation in employment would insure against wage discrimination and facilitate occupational mobility within public institutions. While reservations in employment would be implemented only through public funded institutions, reservations in education would have an economy wide effect, by supplying skilled labour in both public and private sector. Secondly, it is also expected that the benefits of reservations in education and employment provides for inter-generational earnings mobility.

*Impact of Reservations***:** Now the questions of relevance are: *Firstly,* Did reservations in education and employment help in reducing the earnings and wage discrimination? Micro studies indicate persistence of wage inequality. For instance, Chakravarty and

Somanathan (2008) studied the 2006 batch of IIM-Ahmedabad MBA graduates and found that SC/ST graduates get significantly lower wages than those in the general category. However the wage discrimination is attributable to the lower GPA scores that they achieved suggesting that the large wage difference is due to the weaker (on average) academic performance of SC/ST candidates and hence suggests stronger policy intervention for educational attainment among the deprived groups.

Again, Table 4 shows that wage discrimination seems to have declined for the STs while it seems to have widened for the STs and for OBCs discrimination exists. Now if wage discrimination among STs declined is it due to reservations? How it is that wage mobility was achieved by the STs, through educational reservation and occupational mobility, or through declining wage discrimination, or through gender parity in wages. If STs achieved mobility through reservations why did reservation not have the same effect on SCs and OBCs?

*Inter-Generational Transfer of Benefits***:** Secondly, does reservation provide for transfer of its benefits to the next generation and if so at what rate? Hnatkovska et .al., (2010) using NSS data had concluded, using a wage cohort study, that the elasticity of wages of children-generation with respect to the wages of their parent-generation has also declined relatively faster forSC/ST compared to others during the period 1983 to 2004-05. However, whether this was an effect of reservation is not known. Does education and employment reservations have differential effects on generational transfer of reservation benefits? What transfers the benefits the best? Is it education or employment or a combination of both? Answering this set of questions would give the policy makers on where to put the resources most efficiently to achieve the goal of reduction in disparity.

Economic Liberalization and privatization: Ever since the liberalization and privatization of the economy, the issue of wage discrimination has come to occupy a more important dimension. With the emergence of private sector as the dominant player in the economy, and the relative reduction of the role of public sector, the possibilities of employment based reservations would also shrink. On the other hand, it is possible that reservations in education would have a greater role to play, by eliminating skill differences and potential occupational differences. But experimental studies do show (Thorat, and Attewell , 2007; Deshpande and Newman 2007) that entry to the private

sector is rift with discriminatory practices. Similarly new employment opportunities are opening in new sectors that have emerged due to the globalization of the economy. However, entry to such sectors of certain occupations in such sectors is restricted by not only educational discrimination but also employer preferences. Moreover, recruitment in private sector is encouraged through social networks, hence more prone to such practices. Further studies on these aspects would open up dimensions of discriminatory practices that are newly emerging within the economy.

The third set of issues relate to earnings mobility of individuals and groups over a period of time.

Earnings Mobility: While the comparative static approach could tell us the aggregate effects of external shocks, their effects have a time dimension. The effects reveal over a period of time. Moreover, these effects are played within the board parameters of the macro-economy that are ever changing. Hence the changes in earnings and their effects may not be similar for different social groups. Hence, the need to track households and individuals within these social groups over a period of time so that all other effects on these households are controlled. For instance, Lanjouw and Rao (2010) using repeat sample data identified that in Palanpur village while in general all caste achieved income mobility the largest caste group did not. They also remark in this study that it is the panel structure of the data that help unravel this within group effect.

7<u>Some Suggestions for improvement of Database for further research on the area.</u>

While there are very pertinent issues that are of impending policy relevance, at present the research in the area based on large scale secondary data has been limited mainly due to the limitations of the available data and unavailability of data. Policy decisions have also been constrained owing to the unavailability of information on issues of national relevance in this area. In the light of this background the following suggestions are made.

1. Case for a longitudinal Panel : Some of the most important questions on wages and earnings of social groups pertains to their mobility, both in terms of occupation and

wages. Currently there are very limited studies of this type done in India due to the lack of reliable data. To quote Gary Fields (2011), a pioneer in the study of earnings mobility

> *"A newer approach in the development literature is to study the distributional consequences of economic growth (or non-growth) by using data for the same recipient units for two or more points in time to analyze changes in total income ("income mobility") and in income from paid employment and self-employment ("earnings mobility")"*

Micro level studies of longitudinal panel data such as the SPARC data used by Swaminathan (1998) in Mumbai, or the ones by Djurfeltd et al(2008) in Tamil Nadu are an indication in this direction. Also there are larger longitudinal sample databases in India such as the ICRISAT village studies, the NCAER data sets on Rural Economic and Demographic Surveys etc. Large sample data for Income in US is being collected by the University of Michigan since 1968, called The Panel Study of Income Dynamics. Studies on racial discrimination and race mobility have been one of the core dimensions of the PSID survey. Since this survey a number of countries, both in the developed world and developing world, have adopted this model of household panels for studying mobility across social and religious groups. It is time that we develop a panel data that can explore the issues of earnings and occupational mobility across social and religious groups. A large sample panel data would answer a number of questions related to effectiveness of policy interventions, inter-group mobility, intra-group mobility

However, most longitudinal studies are done by research institutions and rarely taken up by national statistical agencies. In this regard may be IIDS itself can initiate a longitudinal study with the support of CSO.

2. *Accounting for Self Employment*: Almost fifty percent of working population are self employed. There is no earnings information for this part of the working population in the NSS data or any other data source. But for the marginalized religious groups and workers in OBC self employment consists of a larger share of workers than that of general category workers. The only information that is available from NSS is the perception of

satisfaction of self employed workers. But the veracity of this information is doubtful, due to the fact that the response would be subjective and also there may be tendency to over-report on the query on the "amount to be considered as satisfactory" and under-report on "whether you are satisfied". So essentially all the discussion on wage inequality using the NSS data is restricted to wage employment, while a larger segment of the population lie outside the purview of wage labour. Any discussion of earnings discrimination cannot be but made without including this large population, largely dependent on small and marginal farming in the rural areas and retail trade and informal services in the urban areas. While wage information may not be available for such workers it is possible to arrive at some measure of their earnings either through assets/wealth accumulated or through consumption expenditure, which is available in the NSS data. But again we may not get any mobility information from this data. This could again be achieved through a longitudinal survey to capture earnings mobility as suggested earlier.

2. Suggestions on NSS data

a. Account for caste heterogeneity both within the deprived social groups and others- Bringing in further caste and tribe categories within the broad SC , ST , OBC and Other categories would allow accounting at least partially for the vast heterogeneity that is masked in the NSS data set now. This is certainly a very sensitive issue as we had seen in the case of census data collection. May be the NSS can use the same list of castes and tribes as identified in the Census list of SC/ST. But the census doesnot have an entry on OBCs, which needs to be rectified in case of NSS.

b. To understand the effect of reservation on wages additional queries on reservations may be included for both education and employment. Additional information eliciting information on whether the individual has enjoyed the benefits of reservation either in education or employment could render capturing the effects of reservation possible from the NSS data. This would also enhance the understanding reservations, especially within public sector employment and also differences in reservation on private and public sector.

3. *Suggestions on OWS and WRRI*

1. Two other data sources that collect data on wages are the OWS and WRRI. OWS pertains to the various industries and occupation within the organized sector. However the OWS does not collect information on the social group or religion. Since the survey is conducted at the firm level with individual workers as units it is possible to address these questions. Additional queries on social groups in this data set could bring better understanding of occupational and wage discrimination within the organized sector. The OWS can provide us with important information on occupational segregation and also can help us answer issues on wage differentials across same occupations in the formal sector. But there is need to bring in some uniformity in the scope of survey with regard to industries and geographical coverage and periodicity. Similarly WRRI can also include additional categories of social groups.

References

Bhaumik, Sumon Kumar & Chakrabarty, Manisha, 2009. "Is education the panacea for economic deprivation of Muslims?: Evidence from wage earners in India, 1987-2005," Journal of Asian Economics, Elsevier, vol. 20(2), pages 137-149, March.

Chakravarty, S and E. Somanathan (2008) Discrimination in an Elite Labour Market? Job Placements at the Indian Institute of Management – Ahmedabad Discussion Paper 08-01

Das, Maitreyi Bordia and Puja Vasudeva Dutta (2007) Does caste matter for wages In the indian labor market?

Deshpande, Ashwini (2005) Affirmative Action in India and the United States, background papers to EQUITY & DEVELOPMENT World Development Report 2006 *Revised: January 2005*

Deshpande, Ashwini Katherine Newman (2007) Where the Path Leads: The Role of Caste in Post-University Employment Expectation, Economic and Political Weekly, October

Deshpande, Satish (2008) Dalits in the Muslim and Christian Communities: A Status Report on Current Social Scientific Knowledge prepared for the National Commission for Minorities; Government of India www.**ncm.nic.in/pdf/**report**%20**dalit**%20%20reservation.pdf** accessed on 14-2-2012

Djurfeldt, Göran Venkatesh Athreya, N Jayakumar, Staffan Lindberg, A Rajagopal, R Vidyasagar (2008) Agrarian Change and Social Mobility in Tamil Nadu**,** Economic & Political Weekly, November

Dutta,Puja Vasudeva (2004)The structure of wages in India, 1983-1999, PRUS Working Paper no. 25, *Poverty Research Unit at Sussex, University of Sussex*

Government of India: *Agricultural Wages in India*, Directorate of Economics and Statistics, Ministry of Agriculture, New Delhi. (Various Issues)

Government of India: *Rural Labour Enquiry*, Labour Bureau, Shimla (Various Issues)Government of India: *Report on Employment and Unemployment*, National Sample Survey Organisation (NSSO), (Various Issues)

Guhan, S. (2001): "Comprehending Equalities" reprinted in S. Subramanian (ed.) "India's Development Experience", Oxford University Press, New Delhi, 2001.

Feilds, Gary S.(2011)What We Know (and Want to Know) About Earnings Mobility in Developing Countries
http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1153&context=workingpapers

Himanshu (2005) "Indian Journal of Labour Economics", Volume 48, Number 2, April-June.

Hnatkovska, Viktoria,Lahiri, Amartya & Paul, Sourabh Bikash, (2010). "Castes and Labor Mobility," UBC Departmental Archives viktoria_hnatkovska-2010-, UBC Department of Economics, revised 22 Oct 2010.

Jacob, M. (2006). "Changes in the wage gap of gender and caste groups in India." PhD Dissertation. College Park. MD: University of Maryland,June 23, 2010

Klaus Deininger, Songqing Jin, Hari Nagarajan (2011) Wage Discrimination in India's Informal Labor Markets: Exploring the Impact of Castes and Gender, NCAER Working Papers on Decentralisation and Rural Governance in India No. 6

Lakshmanasamy, T. and Madheswaran, S. (1995): "Discrimination by community: evidence from Indian Scientific and technical labor market", Indian Journal of Social Sciences, Vol 8, No. 1, pp.59-77.

Lanjouw,Peter and Vijayendra Rao(2010) Revisiting Between-group Inequality Measurement: An Application to the Dynamics of Caste Inequality in Two Indian villages. Policy Research Working Paper 5337, World Bank

Madheswaran, S and Paul Attewell (2007) Caste Discrimination in the Indian Urban Labour Market: Evidence from the National Sample Survey, Economic and Political Weekly October 13, 2007

Madhura Swaminathan, 1997. "The determinants of earnings among low-income workers in Bombay: An analysis of panel data," The Journal of Development Studies, vol. 33(4), pages 535-551

Majumder, Rajarshi (2007) Earnings Differentials Across Social Groups : Evidence from India , Indian Journal of Labour Economics, Vol 50 No.4

Sethi, Rajiv and Rohini Somanathan (2010) Group Identity and Social Mobility in India
Srinivas, M.N (1962) Caste in Modern India and other essays , Asia Publishin
Srinivas, M. N. (*1962*) Caste in Modern India: And other essays Asia Publishing House, Bombay.

Swaminathan, M and Rawal, V (2011a): 'Is India Really a Country of Low Income-Inequality? Observations from Eight Villages', Review of Agrarian Studies, 1 (1): 1-22, http://www.ras.org.in/index.php?Article=1_1_1.

Thorat, Sukhadeo & Katherine, Newman (2007), Caste and Economic Discrimination: Causes, Consequences and Remedies, Economic & Political Weekly, October.

Thorat, S.K. & Paul, Attewell (2007), The Legacy of Social Exclusion: A Correspondence Study of Job Discrimination in India, Economic & Political Weekly, Vol. XLII, No.41.

Appendix

Table A 1 Average Daily Wages Per Capita by Religious Categories

		1983			**2009-10**			CAGR 1983-2009-10		
	Religion	Male	Female	Total	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
	Hinduism	58.1	30.4	49.3	185.8	105.9	165.9	3.9	4.2	4.1
	Islam	59.3	30.3	53.8	186.9	106.7	175.3	3.9	4.2	4.0
	Christianity	69	51.8	63.4	277.4	204.6	259.6	4.7	4.6	4.8
	Sikhism	93.9	56.9	90.4	189.9	152.0	185.1	2.4	3.3	2.4
	Buddhism	46.3	20.2	35.4	273.4	164.6	243.9	6.0	7.2	6.6
	others	55.1	27	46.8	342.5	213.8	316.4	6.2	7.1	6.5
Rural	Total	59.3	31.1	50.7	195.1	115.4	176.3	4.0	4.4	4.2
	Hinduism	132.1	66.5	120.7	312.3	228.2	295.8	2.9	4.2	3.0
	Islam	100.4	47.1	92.6	223.4	203.1	220.9	2.7	4.9	2.9
	Christianity	137.7	105.9	128.5	358.1	326.5	350.1	3.2	3.8	3.4
	Sikhism	159.6	136.8	156.2	349.0	361.6	351.0	2.6	3.3	2.7
	Buddhism	115.6	66.2	105.5	245.4	196.8	231.9	2.5	3.7	2.6
	others	106.8	48.1	99.6	487.3	385.1	463.1	5.1	7.1	5.2
Urban	Total	128.7	68.1	118.2	305.4	238.7	292.6	2.9	4.2	3.0
	Hinduism	89.5	39.5	76.3	244.5	153.6	224.0	3.4	4.6	3.6
	Islam	80	37.4	72.8	206.0	153.0	198.9	3.2	4.8	3.4
	Christianity	100.8	74.4	92.6	313.5	260.6	300.4	3.8	4.2	4.0
	Sikhism	114.8	92.6	112.3	250.5	245.8	249.9	2.6	3.3	2.7
	Buddhism	78.4	31.1	62.7	262.2	177.8	239.1	4.1	5.9	4.5
	others	82.2	32.7	71.6	399.5	289.3	375.6	5.4	7.5	5.6
Total	Total	89.4	41.1	77.2	246.7	165.2	229.1	3.4	4.7	3.7

Note: For Females the sample size for all other religions than Hinduism is less than 250. Hence the averages need to be inferred cautiously**.** For Jainism and Zoroastrianism, the sample size is negligible hence aggregated to "others" category

Table A2 Sample size for wage workers as socio-religious groups

HHreligion	ST	SC	OBC	Others	Total
Hinduism	5739	14492	23209	15162	58602
Islam	269	140	3067	4851	8327
Christianity	3353	282	764	973	5372
Sikhism	6	742	194	525	1467
Jainism	4	0	8	118	130
Buddhism	387	552	57	21	1017
Zoroastrian	2	1	0	9	12
others	446	18	55	32	551
Total	10206	16227	27354	21691	75478

Table A3 Sample size of households as socio-religious groups

HHreligion	ST	SC	OBC	Others	Total
Hinduism	6526	14687	31681	24029	76923
Islam	277	130	4882	7141	12430
Christianity	4738	226	771	1207	6942
Sikhism	19	654	337	1142	2152
Jainism	4	0	20	258	282
Buddhism	532	455	63	49	1099
Zoroastrian	2	2	0	17	21
others	828	27	116	67	1,038
Total	12,926	16,181	37,870	33,910	100,887