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Social Exclusion and Caste Discrimination in Public and Private Sectors in India: A Decomposition Analysis

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SOCIAL EXCLUSION AND CASTE DISCRIMINATION IN PUBLIC AND PRIVATE SECTORS IN INDIA: A DECOMPOSITION ANALYSIS

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Abstract

This paper provides an empirical analysis of caste discrimination in regular salaried urban labour market in India. A separate analysis has been done for the public and private sector workers because the affirmative action policy of India confined only to the minuscule of the public sector and excluded the vast private sector. We have used 50th, 61st and 68th rounds of Employment and Unemployment Survey data of NSSO in order to examine the wage gap between the forward-caste (others) and lower-caste (Scheduled Castes - SC) workers. The main conclusions based on decomposition methodology are: (a) the contribution of endowment difference to raw wage gap is more than that of discrimination. So expansion of educational opportunity can be a useful strategy to reduce such discriminatory treatment against SCs; (b) discrimination causes 19.4 and 31.7 percent lower wages for SCs in the public and private sectors respectively as compared to equally qualified forward castes (c) occupational discrimination-unequal access to jobs- being considerably more important than wage discrimination in both public and private sectors in India. The empirical findings provide strong evidence for the extension of Affirmative Action policy to the private sector.

JEL Codes: *J16, J31, J71, C21*
Keywords: *Wage decomposition, Caste discrimination, India*

1. Introduction

India today is caught in the grip of a querulous debate over developing reservation policies for groups and communities suffering from economic exclusion associated with the caste identity. In this regard, two policy directions have emerged – 'Economic Empowerment' and 'Equal Opportunity' policy (Newman and Thorat, 2007). The policy of economic empowerment is essentially directed towards improving the ownership of assets like agricultural land, capital for business, entrepreneurial skills, and education. There is reasonable degree of consensus over the legitimacy of this strategy. However, when it comes to providing equal opportunity through instruments like reservations, considerable disagreement can be seen among private sector leaders.

The intense discrimination and inequalities associated with the caste system in India have made explicit use of affirmative and positive action policy (or what is called the reservation policy) in employment, education and other spheres with respect to discriminated groups such as Scheduled Castes (SCs), Scheduled Tribes (STs), and Other Backward Castes (OBCs). However, this policy is confined to a tiny government sector and the vast private sector has remained outside the purview of the reservation policy (Thorat 2007). In other countries, the affirmative action policy has been put into practice for both the public and private sectors. With the narrowing down of the public sector and unintended (back-door) de-reservation, there is growing demand for some sort of affirmative action policy in the private sector. The issue has also appeared in the election manifestoes of political parties and found approval in the Common Minimum Programme of the Central (federal) government. Views

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have been expressed both in favour of and against reservation in the private sector. The Employers' Associations have particularly opposed this move.

Many commentators acknowledge the prevalence of caste inequality in rural India, but believe that caste discrimination is much less important in urban India. Others believe that caste discrimination occurs primarily in operative jobs, but not in salaried white-collar positions. This paper focuses on inequality in the regular salaried urban labour market in India, and pays special attention to caste-related income and employment gaps among highly educated employees.

This paper is structured as follows: Section 2 discusses the theoretical insights and economic implications of discrimination. Section 3 gives empirical evidence of caste discrimination in public and private sectors in India. The sources of data and econometric methodology are discussed in Sections 4 and 5. The empirical results are discussed in Section 6 and Section 7 concludes the paper and provides policy implications.

2. Theoretical Insights and Economic Implications of Discrimination

Becker's (1971) theory of discrimination with testable behavioural implications based on a competitive labour market is often referred to as the 'neo-classical theory of discrimination'. In his theory, the motivation for discrimination is based on a non-pecuniary variable, generally designated as 'taste for discrimination' against a group. Employers with a taste for discrimination against Blacks feel that the real burden is more than the money wage burden. The dissatisfaction felt by the presence of Blacks in their firm is an additional burden. In the neo-classical theory, it is not only the employers, but even the employees and consumers who discriminate against a group. In India, higher-caste employers discriminate against Harijan (so-called 'untouchable') workers. Discrimination by consumers occurs when consumers dislike purchasing goods and services produced by a group, which may be that of Scheduled Castes (SCs) or Blacks. Here the discriminatory behaviour is not based on any objective criteria like quality or price.

Defending Becker's theory, Arrow (1972, 1973) defined discrimination in terms of the employer's perception or reality. For him, employers discriminate not because of their 'taste to discriminate' but because of uncertainty. Arrow has shown theoretically, using the consumer choice theory and theory of the firm, that firms wherein employers discriminate against, say females, would be paying them less than the male workers. A very similar discussion has been presented by Phelps (1972) though he prefers to call his theory the 'statistical theory of discrimination'. Arrow and Phelps developed the theory of discrimination on the basis of lack of information about job applicants. In addition, there are few other causes for the discriminatory behaviour, like social customs (Akerlof 1976, 1980) and monopsony in the labour market (Madden 1975). According to the view on social customs, discrimination as a phenomenon occurs due to certain social conventions maintained among the employers. Akerlof incorporates the social structure into his model to explain the economic phenomenon of income distribution and resource allocation. He assumes that utility depends not only on consumption but also on an individual's prestige and reputation in the society. Hence, a socially conscious individual would discriminate against the group that traditionally faces discrimination as per the prevalent social customs. His theory specifically deals with caste-based discrimination. Birdsall and Sabot (1991) note

that an employer's behaviour based on social customs is quite indistinguishable from that based on taste or prejudice.

The above-mentioned economic theories of labour market discrimination are invariably based on the micro-economic foundation and have centred on the explanation of the causes for the discriminatory behaviour. Among the various causes elicited, the most probable are those emanating from the taste of some individual (Becker 1971); uncertainty in the labour market (Arrow 1972, Phelps 1972); social customs (Akerlof 1976); and monopsony in the labour market. Only a few of these theories then further delve into the effects of discrimination on the economy. Tzannatos's (1987) general equilibrium model made the first attempt to estimate the discrimination and its effects on income. The main aim of his study is to find out what would happen to wages and profits if the wage differentials by sex were deliberately changed.

A few economists have tried to grapple with the issue of caste and untouchability-based economic exclusion and discrimination in India. In social science literature, the concept of social exclusion is defined as "the process through which individuals belonging to some groups are wholly or partially excluded from full participation in the society in which they live" (de Haan 1997). In this context, two defining attributes of exclusion are particularly recognised: (i) the multiple aspects of discrimination and the societal processes, and (ii) the institutions that are implicated in deprivation. Sen (2000) draws a distinction between the situation wherein some people are being kept out (at least left out) and wherein some people are being included (may even be forced to be included) in deeply unfavourable terms. The two situations are described as 'unfavourable exclusion' and 'unfavourable inclusion'. The 'unfavourable inclusion', particularly of those with unequal treatment or unacceptable arrangement, may carry the same adverse effects as the unfavourable exclusion does. The notion of unfavourable inclusion appears to be quite close to the concept of 'market discrimination' developed in the mainstream economic literature, which is related to race and gender (Becker 1971). Discrimination thus manifests a situation, which involves exclusion or outright restriction on various forms of market entry and/or selective inclusion with unequal and unfavourable treatment in participation in various market transactions.

Why are the governments in developed and developing countries concerned about economic discrimination? Is discrimination only an equity issue? or does it also involve economic costs to the society? Are the costs it imposes on the society more social and political than economic? The insights of mainstream economic theory of discrimination indicate that economic discrimination, particularly market discrimination, hampers economic growth, leads to unequal income distribution and deprivation for discriminated groups and creates a potential situation for inter-group conflict (Birdsall and Sabot 1991). Thus, concern about exclusion and discrimination arises not only because of its consequences on economic inequality and the deprivation that it brings to the excluded and discriminated groups, but also due to their adverse consequences on economic development. Discrimination also affects productivity by reducing the magnitude of investment in human capital by the discriminated group and the return on this investment (Birdsall and Sabot 1991).

The policy implication of neo-classical theory calls for market intervention to overcome the consequences of market failure associated with market discrimination. This also implies that market

interventions in some form are necessary not in the labour market alone, but also in other markets like those of land, capital, products and social services such as education and housing, if certain groups face discrimination in exchange carried through markets and non-market channels. It is these insights from the theories which have induced and justified the adoption of various types of affirmative and positive action policies in favour of the discriminated groups in USA and other Western countries.

Let us now turn to the situation in the Indian context. When the anti-discrimination policy was first introduced in 1931 and formalised later in 1950, it was advocated mostly on the consideration of the violation of citizen/human rights, particularly of low-caste untouchables. Efforts for the affirmative action policy began in 1919, became formalised in 1931 under the Poona Pact, and finally acquired definite legal shape in 1950. Ambedkar, who pioneered the affirmative action policy, based most of his arguments on the human rights perspective, drawing largely from theoretical development in political science. Therefore, during the latter period, the discussion and debate on affirmative action policy in India is, by and large, devoid of economic logic and justification. This is in contrast to the large body of literature on the analysis of economic discrimination of race, ethnicity and gender in the Western world (Darity 1997). Ambedkar developed a general theory of caste as far back as in 1916, but economic underpinnings were elaborated in detail much later in the 1940s and 1950s (and appeared in print only in the 1990s). It is only during the 1980s and later that some attempts were made, most surprisingly by the Western economists, to provide the economic interpretation and consequences of the caste system (Akerlof 1976, Scoville 1991, Lall 1991).

Since the main justification for the affirmative action policy in the West emanates from the mainstream theoretical economics, the discussion here is limited to this branch of writing. This theoretical strand generally agrees on three underlying principles and customary rules that govern and structure the production, organisation and distribution under the caste system. These three unique features of the traditional caste system are: (a) fixed occupation (property rights) for each member of the caste by birth and its hereditary continuation; (b) unequal distribution of economic and social rights related to occupation, property, employment, wages, education, etc. among different caste groups, and (c) the provision of a strong system of penalties to ensure enforcement of the system.

With labour being a part of production process, labour market discrimination is obviously a part of the exclusionary process of occupation. At a theoretical level, labour market exclusion and discrimination would be manifested in the: (a) exclusion or implicit restriction on employment from one caste-occupation to another, and (b) unfavourable inclusion, that is, access or entry to labour employment in another caste's occupation, but with unequal treatment in wage payment, and other terms and conditions of work. This would essentially mean unequal and lower wages (lower than market or lower than the wages of other groups with the same productivity level) to workers of discriminated groups, along with unequal working conditions governed by the caste-related customary coercive norms and obligations (Thorat 2000). In terms of consequences, the Akerlof–Scoville–Lall economic interpretation implies negative outcomes of caste-based market discrimination for economic growth and income distribution. This model would thus argue that, given the segmented and imperfect character of the labour market, the economic efficiency of the caste system would be lower than that

posited in the model of a perfectly competitive market, a second best alternative to the Pareto optimum.

Ambedkar, however, argued that the efficiency and productivity of labour are adversely affected by a number of other ways also, namely, due to the nature of the customary rules that regulate employment, wages, education, and dignity of labour under the caste system. In his view, the efficiency of labour suffers severely in another manner also. The economic pursuit in the caste system is not based on individual choice, individual sentiment, or preference. The principle of individual choice is violated in the caste system in so far as it assigns a task to an individual in advance, selected not on the basis of training or capacities, but on the social status of the parents. Social and individual efficiency require us to develop the capacity of an individual to the point of competency to choose and make one's own career. This is nearly absent in the scheme of the caste system. Furthermore, some of these occupations are considered polluting or impure, and therefore, socially degrading; the social stigma of impurity and pollution, in fact, reduce the social status of the persons engaged in them. Forced into these occupations on account of their caste origin, people do not derive job satisfaction, and indeed constantly provoke them to aversion, ill will, and the desire to evade. The caste system also puts a low value on 'physical' work as compared to 'mental' work, with the result that the dignity of physical labour is nearly absent in the work ethics of the caste system. Consequently, lack of dignity of labour adversely affects the incentive to work. Thus, in view of the standard mainstream theories of discrimination (and also Ambedkar 1936), judged by the standard criterion of economic efficiency, the caste system as an economic organisation lacks all those elements or assumptions, which are required to fulfil the conditions for an optimal economic outcome.

Besides the general negative impact on income distribution, another negative impact of labour immobility across occupations is the social stigma associated with certain occupations related to employment, which has been emphasised both by Ambedkar (1936) and Akerlof (1980). By restricting the mobility of labour across caste occupation and thereby not permitting re-adjustment of employment, caste becomes a direct cause of much of 'voluntary unemployment' among the high-caste persons and 'involuntary unemployment' among the low-caste persons. The high-caste Hindu would generally prefer to be voluntarily unemployed for some time than to take up an occupation not assigned to his caste. On the other hand, for the low-caste untouchables, the restrictions on taking up another caste's occupation compel them to remain involuntarily unemployed. Insights from economic theories indicate that market discrimination is a typical case of market failure, as it causes a great deal of economic inefficiency and adversely affects the prospects for economic growth besides also entailing unequal opportunities to the discriminated group, all of which jointly create a situation of high deprivation and poverty, particularly among the low-caste untouchables.

3. Empirical Evidence on Caste Discrimination in Public and Private Sectors in India

There are very few studies in India that have used decomposition method in order to decompose the caste wage gap into endowment component and discrimination component. The most pioneering work done by Madheswaran and Attewell (2007) clearly shows that discrimination against SC/ST workers is

higher in private sector than in public sector in regular urban labour market in India. The contribution of endowment difference to raw wage gap is higher in public sector. This implies public sector seems to have accommodated many more SCs/ STs, that are poorly endowed in human capital, i.e. low-skilled workers. The extent of job discrimination is more pronounced than wage discrimination in private sector; whereas the reverse happened in public sector. During 1993-94 to 2004-05, the extent of discrimination against SC/ST workers is growing over the years in both public and private sectors in India; however, it shows a slight decline in 1999-2000. The review of estimates of past studies that have used decomposition method is given below in Table 1.

Table 1: Review of studies using Different Approaches of Decomposition Method: SCs Vs Non-SCs (In Percentage)

Study	Methodology	Sample, country	Period under study	Public Sector		Private Sector	
				Earnings differential explained by		Earnings differential explained by	
				Endow-ment Difference	Discrimina-tion	Endow-ment Difference	Discrimina-tion
Madheswaran and Attewell (2007)	Oaxaca-Blinder Decomposition	National sample Survey, India	1993-94	82.0	18.0	69.0	31.0
			1999-00	86.0	14.0	70.1	29.9
Madheswaran (2008)			2004-05	77.0	23.0	59.0	41.0
Madheswaran (2011)	Expanded Decomposition		2004-05	35[a] 30[b]	20[c] 15[d]	20[a] 19[b]	25[c] 36[d]

Note: [a] Wage Explained, [b] Job Explained, [c] Wage Discrimination, [d] Job Discrimination

4. Sources of Data

The present study uses unit level data collected by National Sample Survey Organization (NSSO), India. The employment and unemployment surveys are conducted during 1993-94 (July 1993 to June 1994), 2004-05 (July 2004 to June 2005), 2011-12 (July 2011 to June 2012). These quinquennial rounds are referred to as 50th round, 61st round and 68th round respectively. For more information on survey and sample design, see NSSO (2014).

The sample of individuals is divided into three mutually exclusive categories using current daily status: (i) non-wage earners (i.e., non-participants in the labour market, the self-employed and the unemployed), (ii) regular wage employment (iii) casual wage employment. The wage distribution is trimmed by 0.1 percent from the top and bottom tails, in order to get rid of outliers and potentially anomalous wages at the extreme ends of the distribution. The daily wage rate of workers is calculated taking into consideration the total wages in cash and kind receivable for the work done in the reference week by the total number of days reported working in wage work in that week. The wage data used in the study is measured in rupees (Rs.) term.

The nominal daily wages are deflated to 2001 prices by using the official state-level monthly consumer price indices of agricultural labour (base year 1960) for rural wages and consumer price indices of industrial workers (base year 1982) for urban wages (Labour Bureau, various years). The Consumer Price Index data is collected for states like Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa,

Punjab, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh and West Bengal. Our analysis used sample of SC and others/forward caste wage workers belonging to the 15-65 age groups in these 18 major states of regular urban India.

5. Econometric Methodology

In prior research, one finds three different empirical approaches for studying caste discrimination. The first predicts earnings from the characteristics of all workers while including caste as a predictor (a single-equation technique). Unfortunately, this approach yields a biased result because it assumes that the wage structure is the same for both NSCs (Non-Scheduled Castes/Forward Castes) and SCs (Scheduled Castes). In other words, it constrains the values of coefficients on explanatory variables, such as education and experience, to be the same for SCs and Non-Scheduled Castes (Gunderson 1989, Madheswaran 1996)[3].

A second approach employs a 'decomposition technique' to partition the observed wage gap between an 'endowment' component and a 'coefficient' component. The latter is derived as an unexplained residual and is termed the 'discrimination coefficient'. This method was first developed by Blinder (1973) and Oaxaca (1973) and later extended to incorporate selectivity bias (Reimers 1983, 1985) and to overcome the index number problem (Cotton 1988, Neumark 1988, Oaxaca and Ransom 1994).

The expanded decomposition method incorporates the occupational distribution into the earnings estimation. One advantage of using this method is that both job discrimination (differential access to certain occupational positions) and wage discrimination (differential earnings within the same job) can be estimated simultaneously.

We have employed all these methods mentioned above to estimate the extent of discrimination against lower caste workers in urban India. In the following sections, we will lay out the mathematical logic of this decomposition:

5.1. Blinder – Oaxaca (1973) Decomposition Method

The decomposition method enables one to separate the wage differential into differences that can be explained by differences in characteristics and those that cannot be explained by differences in characteristics. The gross wage differential can be defined as

$$G = \frac{Y_{Nsc} - Y_{sc}}{Y_{sc}} = \frac{Y_{Nsc}}{Y_{sc}} - 1 \qquad (1)$$

Where Y_{Nsc} and Y_{sc} represent the wages of Non-SC and SC individuals, respectively. In the absence of labour market discrimination, the Non-SC and SC wage differential would reflect pure productivity differences (Q):

[3] This approach allows only the intercept to vary by caste, but not the slope. In order to overcome this problem, we present earnings functions separately by caste.

$$Q = \frac{Y^0_{Nsc}}{Y^0_{sc}} - 1 \tag{2}$$

Where, the superscript denotes the absence of market discrimination. The market discrimination coefficient (D) is then defined as the proportionate difference between G+1 and Q+1, such that

$$D = \frac{Y_{Nsc} / Y_{sc} - (Y^0_{Nsc} / Y^0_{sc})}{(Y^0_{Nsc} / Y^0_{sc})} \tag{3}$$

Equations (1) – (3) imply the following logarithmic decomposition of the gross earnings differential

$$\ln(G+1) = \ln(D+1) + \ln(Q+1) \tag{4}$$

This decomposition can be further applied within the framework of semi-logarithmic earnings equations (Mincer 1974) and estimated via OLS such that

$$\ln \overline{Y}_{Nsc} = \sum \hat{\beta}_{Nsc} \overline{X}_{Nsc} + \varepsilon_{Nsc} \quad \text{(Non-SC wage Equation)} \tag{5}$$

$$\ln \overline{Y}_{sc} = \sum \hat{\beta}_{sc} \overline{X}_{sc} + \varepsilon_{sc} \quad \text{(SC wage Equation)} \tag{6}$$

Where, $\ln \overline{Y}$ denotes the geometric mean of earnings, $\overline{X}$ the vector of mean values of the regressors, $\hat{\beta}$ the vector of coefficients and ε is the error term. Within this framework, the gross differential in logarithmic term is given by

$$\ln(G+1) = \ln(\overline{Y}_{Nsc} / \overline{Y}_{sc}) = \ln \overline{Y}_{Nsc} - \ln \overline{Y}_{sc}$$

$$= \sum \hat{\beta}_{Nsc} \overline{X}_{Nsc} - \sum \hat{\beta}_{sc} \overline{X}_{sc} \tag{7}$$

The Oaxaca Decomposition simply shows that Equation (7) can be expanded. In other words, the difference of the coefficients of the two earnings functions is taken as a priori evidence of discrimination. If, for the given endowment, SC individuals are paid according to the Non-SC wage structure in the absence of discrimination, then the hypothetical SC earnings function would be given as

$$\ln \overline{Y}_{sc} = \sum \hat{\beta}_{Nsc} \overline{X}_{sc} \tag{8}$$

Substituting Equation (8) in Equation (7), we get

$$\ln \overline{Y}_{Nsc} - \ln \overline{Y}_{sc} = \sum \hat{\beta}_{Nsc} (\overline{X}_{Nsc} - \overline{X}_{sc}) + \sum \overline{X}_{sc} (\hat{\beta}_{Nsc} - \hat{\beta}_{sc}) \tag{9}$$

Alternatively, the decomposition can also be done as

$$\ln \overline{Y}_{Nsc} - \ln \overline{Y}_{sc} = \sum \hat{\beta}_{sc} (\overline{X}_{Nsc} - \overline{X}_{sc}) + \sum \overline{X}_{Nsc} (\hat{\beta}_{Nsc} - \hat{\beta}_{sc}) \tag{10}$$

In Equations (9) and (10) above, on the right hand side, the first term can be interpreted as endowment differences. The second term in these equations has been regarded in literature as the discrimination component. Studies use either of these alternative decomposition forms (Equation 9 or 10) based on their assumptions about the wage structure that would prevail in the absence of discrimination. This kind of problem is called “the index number problem”.

5.2. Cotton, Neumark and Oaxaca/Ransom Decomposition Method

To solve the index number problem, Cotton (1988), Neumark (1988) and Oaxaca and Ransom (1994) have proposed an alternative decomposition. They have extended the wage discrimination component further. The discrimination component comprise two parts-one, representing the amount by which NSC characteristics are overcompensated relative to their marginal product and the other representing the amount by which SC characteristics are under compensated.

This extension of decomposition allows the sources of discrimination to be developed from the Becker (1971) model of discrimination. In Becker's neo-classical model individuals whether they be employers, employees, or consumers can hold discriminatory 'tastes' against certain people or groups of people. If we discuss this theory in the context of Indian caste system, we can offer the following explanation. Employee discrimination is characterized by an overpayment to workers, assumed to be Non-SC, since they require a financial compensation for working alongside SC workers because of their taste for discrimination. Employer nepotism is also characterized by Non-SC worker overpayment, with the Non-SC employer gaining a greater non-monetary benefit from employing Non-SC rather than SC workers, which increases the demand for Non-SC workers. Finally, employer discrimination is inferred when SC workers are underpaid because this compensates the discriminatory employers taste.

The true non-discriminatory wage would lie somewhere between the NSC and SC wage structure. The Cotton logarithmic wage differential is written as

$$\ln \bar{Y}_{Nsc} - \ln \bar{Y}_{sc} = \sum \beta^{*}(\bar{X}_{Nsc} - \bar{X}_{sc}) + \sum \bar{X}_{Nsc}(\hat{\beta}_{Nsc} - \beta^{*}) + \sum \bar{X}_{sc}(\beta^{*} - \hat{\beta}_{sc}) \quad (11)$$

The first term on the RHS of equation (11) above is skill differences between SC and Non-SC, while the second term represents the overpayment relatively to NSC due to favoritism, and the third term refers to the underpayment to SC due to discrimination. The β^{*} is the reward structure that would have occurred in the absence of discrimination. The theory of discrimination provides some guidance in the choice of the non-discriminatory wage structure. In Cotton (1988) decomposition, the assumption is operationalised by weighting the NSC and SC wage structures by respective proportions of Non SC and SC in the labour force. The estimator β^{*} is defined as

$$\beta^{*} = P_{Nsc}\hat{\beta}_{Nsc} + P_{sc}\hat{\beta}_{sc} \quad (12)$$

where P_{Nsc} and P_{sc} are the sample proportions of Non-SC and SC population, and $\hat{\beta}_{Nsc}$ and $\hat{\beta}_{sc}$ are the Non-SC and SC pay structures respectively.

The non-discriminatory or pooled wage structure proposed by Neumark (1988) and Oaxaca and Ransom (1994) is written below:

$$\beta^{*} = \Omega\hat{\beta}_{Nsc} + (I - \Omega)\hat{\beta}_{sc} \quad (13)$$

Where I is the identity matrix, Ω is a weighting matrix, which is specified by

$$\Omega = (X'X)^{-1}(X'_{Nsc}X_{Nsc}) \quad (14)$$

Where X is the observation matrix for the pooled sample, X_{Nsc} is the observation matrix for the Non SC sample. The interpretation of Ω as weighting matrix is readily seen by noting that

$$X'X = X'_{Nsc}X_{Nsc} + X'_{sc}X_{sc} \tag{15}$$

Where, X_{sc} is the observation matrix of the SC sample. Given $\hat{\beta}_{Nsc}$, $\hat{\beta}_{sc}$ and Equation (13), any assumption about β^* reduces to an assumption about Ω.

5.3. Expanded Decomposition to Estimate Wage and Job Discrimination

The Oaxaca (1973), Cotton (1988) and Neumark (1988) methods can be criticized on the grounds that they do not distinguish between wage discrimination and job discrimination. Brown *et al* (1980) incorporate a separate model of occupational attainment into their analysis of wage differentials. Banerjee and Knight (1985) used this decomposition by introducing a multinomial logit model which could estimate both wage and occupational discrimination for migrant labourers in India, where the latter is defined as 'unequal pay for workers with same economic characteristics which results from their being employed in different jobs'. In the following section, we combine elements from Oaxaca and Ransom (1994) and Brown *et al* (1980) to from a more detailed decomposition analysis of occupational and wage discrimination. We believe that this represents a theoretical advance in terms of examining discrimination as the combined consequence of unequal access to certain jobs and unequal pay within jobs.

We have seen that Equation (7) was used (following Oaxaca 1973) to estimate the gross logarithmic wage differentials between caste groups. Our concern is with estimating occupational discrimination as well as wage discrimination. The proportion of Non-SCs (P_{iNsc}) and the proportion of SCs (P_{isc}) in each occupation *i* are included in the decomposition. Equation 7 is thus expanded to:

$$\ln(G+1) = \sum P_{isc} \ln \bar{Y}_{iNsc} - P_{isc} \ln \bar{Y}_{isc} \tag{16}$$

Using the method in Brown *et al* (1980), Moll (1992, 1995), Banerjee and Knight (1985), this can be further decomposed as:

$$\ln(G+1) = \sum_i \ln \bar{Y}_{iNsc}(P_{iNsc} - P_{isc}) + \sum_i P_{isc}(\ln \bar{Y}_{iNsc} - \ln \bar{Y}_{isc}) \tag{17}$$

The first term on the right hand side of the equation represents the wage difference attributable to differences in the occupational distribution and the second term is attributable to the difference between wages within occupations. Each of these terms contains an explained and unexplained component. If we define $\hat{P}_{isc}$ as the proportion of SC workers that would be in occupation *i* if they had the same occupational attainment function as NSC, then decomposing Equation (17) further yields:

$$\ln(G+1) = \sum_i \ln \bar{Y}_{iNsc}(P_{iNsc} - \hat{P}_{isc}) + \sum_i \ln \bar{Y}_{iNsc}(\hat{P}_{isc} - P_{isc}) + \sum_i P_{isc}(\ln \bar{Y}_{iNsc} - \ln \bar{Y}_{isc}) \tag{18}$$

Where the first term represents the part of the gross wage differential attributable to the difference between the observed Non SC occupational distribution and the occupational distribution that SC workers would occupy if they had the Non-SCs' occupational distribution; the second term is the component of the gross wage differentials attributable to occupational differences not explained on the basis of personal characteristics, and may be termed job discrimination; and the third term represents the within-occupation wage differential. The proportions $\hat{P}_{iNsc}$ and $\hat{P}_{isc}$ are estimated using a multinomial logit model. First we estimate an occupational attainment function for Non-SC and then we use these estimates to predict the proportion of SC workers that would be in occupation (i) if they had the same occupational attainment function as Non-SC. This predicted probability of SC occupation is used in the further decomposition.

The third term in Equation (18) represents the within occupation wage differential and is normally decomposed into a wage discrimination and a caste productivity term. However, instead of doing this, the term can be decomposed into a Non-SC over payment term, an SC underpayment term, and a within occupation wage differential explained by productivity characteristics of the two groups. In order to calculate these three terms, the 'pooled' methodology of Oaxaca and Ransom (1994) is used. Equation (19) presents the within–occupation gross caste wage differential defined as:

$$\sum_i P_{isc} \ln(G+1) = \sum_i P_{isc}[\ln \overline{Y}_{iNsc} - \ln \overline{Y}_{isc}] \tag{19}$$

The actual proportion of SC workers in each occupational group is dropped for simplicity until the final equation is derived. It will be noted that Equation (19) is identical to Equation (7) but for the occupational subscript. Following the methodology of Oaxaca and Ransom (1994), within-occupation gross wage differential is decomposed into a productivity differential and an unexplained effect that may be attributed to within–occupation wage discrimination. The within-occupation logarithmic productivity differential is defined as $\sum_i \ln(Q+1)$, where 'Q' is the gross unadjusted productivity differential. In order to calculate the logarithmic term, a non-discriminatory or 'competitive' wage structure is required so that:

$$\sum_i \ln(Q+1) = \ln \overline{Y}^*_{iNsc} - \ln \overline{Y}^*_{isc} \tag{20}$$

In order to calculate the pooled wage structure, the Non-SC and SC logarithmic wage structures are estimated using an earnings function, with the assumption that:

$$\ln \overline{Y}_{ir} = \tilde{\beta}_{ir}(\overline{X}_{ir}) \tag{21}$$

Where $\ln \overline{Y}^*_{ir}$ is the average non-discriminatory wage structure for caste 'r' in occupation *I*; and $\tilde{\beta}_r$ and $\overline{X}_r$ are the vector of coefficients and average productivity characteristics of the different caste workers, estimated by OLS. The calculation of the non-discriminatory wage structure depends on the weighting given to the Non-SC and SC wage structures. We have discussed in Equations (13) and (14) the pooled wage structure developed by Oaxaca and Ransom (1994). Given the pooled wage

structure in equation (13), within-occupation logarithmic wage discrimination is calculated by subtracting Equation (20) from Equation (19) to give us,

$$\sum_i \ln(D+1) = (\ln \overline{Y}_{iNsc} - \ln \overline{Y}^*_{iNsc}) + (\ln \overline{Y}^*_{isc} - \ln \overline{Y}_{isc}) \quad (22)$$

The gross wage differential is thus decomposed into productivity and a discriminatory term, meaning that the final within occupation gross logarithmic wage differential is equivalent to:

$$\sum_i P_{isc}(\ln(G+1) = \sum_i P_{isc}[\ln \overline{Y}^*_{iNsc} - \ln \overline{Y}^*_{isc}] + \sum_i P_{isc}[\ln \overline{Y}_{iNsc} - \ln \overline{Y}^*_{iNsc}] + \sum_i P_{isc}[\ln \overline{Y}^*_{isc} - \ln \overline{Y}_{isc}] \quad (23)$$

Substituting Equation (23) for the third component in Equation (18), yields the final decomposition of the gross logarithmic wage differential,

$$\ln(G+1) = \sum_i \ln \overline{Y}_{iNsc}(P_{iNsc} - \hat{P}_{isc}) + \sum_i \ln \overline{Y}_{iNsc}(\hat{P}_{isc} - P_{isc}) + \sum_i P_{isc}(\ln \overline{Y}^*_{iNsc} - \ln \overline{Y}_{iNsc}) + \sum_i P_{isc}(\ln \overline{Y}_{iNsc} - \ln \overline{Y}^*_{iNsc}) + \sum_i P_{isc}(\ln \overline{Y}^*_{isc} - \ln \overline{Y}_{isc}) \quad (24)$$

Hence a multinomial logit non-discriminatory model can be calculated which can distinguish between within–occupation SC underpayment, within–occupation Non-SC overpayment, and occupational discrimination. Finally, to estimate this model, Equations (21) and (13) are substituted into Equation (24) to give final extended decomposition as

$$\ln(G+1) = \sum_i \tilde{\beta}_{iNsc}(\overline{X}_{iNsc})(P_{iNsc} - \hat{P}_{isc}) \quad \text{(Job Explained)}$$

$$+ \sum_i \tilde{\beta}_{iNsc}(\overline{X}_{iNsc})(\hat{P}_{isc} - P_{isc}) \quad \text{(Job Discrimination)}$$

$$+ \sum_i P_{isc}[\tilde{\beta}^*_i(\overline{X}_{iNsc} - \overline{X}_{isc})] \quad \text{(Wage Explained)}$$

$$+ \sum_i P_{isc}[\overline{X}_{iNsc}(\tilde{\beta}_{iNsc} - \tilde{\beta}^*_i)] \quad \text{(Wage overpayment to NSC)}$$

$$+ \sum_i P_{isc}[\overline{X}_{isc}(\tilde{\beta}^*_i - \tilde{\beta}_{isc})] \quad \text{(Wage underpayment to SC)}$$

(the last two terms together: Wage Discrimination)

6. Caste Discrimination in the Public and Private Sectors: Empirical Evidence

6.1. Oaxaca-Blinder Decomposition Results

We initially adopt a single equation method. Due to space constraints, all the econometric results have not been produced in the paper. We found that in public sector, compared to forward caste (FC) employees, SC workers earned 5% less in 1993-94, 11% less in 2004-05 and 9% less in 2011-12. Besides, including occupation variable in the model, we found that earnings of SCs are lower than that of forward castes by 6% in 2011-12. Similarly, in private sector, compared to forward caste employees, SC workers earned 11% less in 1993-94, 17% less in 2004-05 and 18% less in 2011-12. Besides, including occupation variable in the model, we found that earnings of SCs are lower than those of forward castes by 15% in 2011-12. These coefficients are all statistically significant. Thus, in private

sector, wage gap between SCs and forward castes has increased in the post-liberalization period. This reduction in wage gap with inclusion of occupation variable in the model implies that discrimination partially operates through occupational segregation.

A single equation approach assumes that the slope coefficients are the same for all social groups. In order to overcome the above limitations and also since the reservation system which sets aside a certain proportion of jobs for SC/ST applicants, operates only within the public sector of the Indian economy, we estimated separate earnings functions for the public and private sectors for each social group (see Appendix Table 2 and 3), and then decomposed the earnings differentials between forward castes and SCs for each sector. It is useful to look at the caste-based wage inequalities separately for the public and private sectors in regular urban labour market in India. The result of the decomposition analysis is given in following Table 2.

Table 2: Oaxaca-Blinder Decomposition Results for Public & Private Sectors

SCs Vs FCs (in percent)

Year→	**1993-94**		**2004-05**		**2011-12**	
Components↓	**Public Sector**	**Private Sector**	**Public Sector**	**Private Sector**	**Public Sector**	**Private Sector**
Endowment Difference	85.4	70.4	70.1	67.4	75.8	67.6
Discrimination	14.6	29.6	29.9	32.6	24.2	32.4

Source: Authors Calculation

The SC workers are discriminated against in both the public and the private sectors, but the discrimination effect is smaller in the public sector. The Government policy of protective legislation seems to be partly effective. Discrimination still arises in the public sector in part because the reservation quota for lower-caste applicants is close to full only in the less-skilled class C and D jobs but is far from filled in the higher category A and B jobs, wherein the higher castes predominate. The evidence provided by these decompositions contradicts the argument that there is no discrimination in the private sector. Claims that discrimination does not occur in the Indian urban private sector are based neither on economic theory nor on empirical facts.

The large endowment difference, observed in the case of social groups, suggests that pre-labor market discriminatory practices with respect to education, health, and nutrition are more crucial in explaining wage differentials than labor market discrimination (Madheswaran and Attewell 2007). However, it may be noted that the whole part of discrimination component cannot be attributed to current discrimination. It has been argued that unequal labour market outcomes have their roots in discrimination in the past that has caused more harm to deprived backgrounds of the disadvantaged workers. Pre-labour market discrimination affects earnings indirectly by means of lower out of school investments, poor quality of education, field of study, accessibility to higher education, poorer nutrition and health status, and lower social capital. These may result in lower endowments and persistent wage differentials over time (Altonji and Blank 1999, Das and Dutta 2007). Further, the discrimination in access to schooling and to wage employment cannot be controlled for and explained through this analysis.

We also assessed the relative contribution of each independent variable to the observed wage gap. The results given in Table 3 shows which part of the wage gap can be attributed to differences in endowments and which part is due to differences in rewards (discrimination) in the earnings function. If we look at the total difference column, the proxy for experience- the age variable was favourable to forward castes in public sector, while it is favourable for SCs in private sector. Note that the large contribution of age for SCs in private sector is more than offset by the constant term, which is in favour of forward castes. Education variable is favourable for SCs in public sector in almost all levels of education except for graduation and above level; while in private sector, only primary and middle education is favourable for SCs. Women are in a disadvantaged situation as the male dummy is negative and favourable to SCs in both public and private sectors. Being married and in permanent job is favourable for forward castes both in public and private sectors. Finally, region variable is favourable for forward castes in public sector, while it is favourable for SC in private sector.

Table 3: Relative Contribution of Specific variables to Decomposition in Public and Private Sectors of Regular Urban LM: Oaxaca-Blinder Decomposition Method, FCs Vs SCs, 2011-12

Variables	Explained Difference (E)	Unexplained Difference (D)	Total Difference (TD)	%E	%D	%TD
Public						
Age	0.04	0.01	0.05	9.2	3.4	12.6
Primary	-0.01	-0.00	-0.01	-1.7	-1.0	-2.7
Middle	-0.02	0.00	-0.01	-4.0	0.2	-3.8
Secondary	-0.00	-0.02	-0.02	-1.1	-4.2	-5.3
Higher Secondary	0.00	-0.01	-0.01	0.2	-3.7	-3.5
Diploma	-0.00	-0.01	-0.01	-0.2	-3.3	-3.5
Graduate and above	0.22	-0.01	0.21	55.8	-2.8	53.1
Male	0.00	-0.07	-0.07	-0.2	-18.2	-18.4
Married	0.00	0.07	0.08	0.7	18.9	19.6
Permanent	0.06	0.09	0.15	14.3	23.0	37.3
Region	0.01	0.00	0.01	2.7	-0.3	2.4
Constant	-	0.05	0.05	-	12.2	12.2
Sub-total	0.30	0.09	0.39	75.8	24.2	100
Private						
Age	0.02	-0.35	-0.33	3.5	-69.4	-65.9
Primary	-0.01	0.00	0.00	-1.2	0.8	-0.4
Middle	-0.01	-0.00	-0.02	-2.5	-0.8	-3.3
Secondary	0.00	0.01	0.01	0.1	1.1	1.1
Higher Secondary	0.01	0.00	0.01	1.2	0.7	2.0
Diploma	0.01	0.00	0.02	2.2	0.8	3.1
Graduate and above	0.26	0.03	0.30	52.5	6.8	59.3
Male	0.03	-0.06	-0.03	6.6	-12.3	-5.7
Married	0.01	0.09	0.09	1.0	17.3	18.3
Permanent	0.01	0.03	0.04	1.6	5.8	7.4
Region	0.01	-0.02	0.00	2.6	-3.2	-0.6
Constant	-	0.42	0.42	-	84.7	84.7
Sub-total	0.34	0.16	0.50	67.6	32.4	100

Note 1: A positive number indicates advantage to Forward Castes (FC).

A negative number indicates advantage to Scheduled Castes.

Source: Computed from NSS data.

6.2. Cotton, Neumark and Oaxaca/Ransom Decomposition Results

We calculated decomposition results using the Cotton (1988), Neumark (1988), Oaxaca and Ransom (1994) approach. Of these three estimates, which one is least objectionable? To answer this question, we estimated standard errors for each. The pooled method (Oaxaca and Ransom) has a smaller standard error and should probably be preferred. When this method is used, the discrimination coefficient is somewhat smaller in magnitude, but there is still clear and substantial evidence of discrimination in the labor market against Scheduled Castes.

Table 4 shows that the wage difference due to skill is 80.6 percent in public sector and 68.3 percent in private sector. This skill or productivity advantage is estimated as it would have been in the absence of discrimination. The forward caste (FC) treatment advantage (benefit of being in the labour market) is 5.3 per cent and 8.1 percent in public and privates sector respectively. This is the difference in wages between what the forward castes currently receive and what they would receive in the absence of discrimination. The treatment disadvantage (cost of being in the labour market) component for SCs is about 14.1 percent and 23.6 percent in the public and private sectors respectively. This is the difference in the current SC wage and the wage they would receive if there were no discrimination. This form of the decomposition procedure yields more accurate estimates of the wage differential but it also models the true state of differential treatment by estimating the "cost" to the group discriminated against as well as the "benefits" accruing to the favoured group. The cost of being SCs in the labour market is very high and they ended up with huge underpayment.

Table 4: Cotton-Neumark –Oaxaca/Ransom Approach- FCs Vs SCs: Public and Private Sector of Regular Urban LM, 2011-12 (In Percentage)

Components	Reimer/ Cotton (w=0.5)	Oaxaca/Ransom Pooled method (w = omega)	Oaxaca-Blinder Using Male means as weight (w=1)	Oaxaca-Blinder Using Female means as weight (w=0)
Public Sector				
Explained/ Endowment Difference	76.5 (0.0196)	80.6 (0.0195)	75.8 (0.0209)	77.1 (0.0223)
Unexplained difference/ Discrimination	23.5 (0.0222)	19.4 (0.0189)	24.2 (0.0236)	22.9 (0.0243)
Overpayment to FC	11.4 (0.0122)	5.3 (0.0053)	-	-
Underpayment to SC	12.1 (0.0117)	14.1 (0.0141)	-	-
Private Sector				
Explained/ Endowment Difference	59.8 (0.0146)	68.3 (0.0152)	67.6 (0.0158)	51.9 (0.0167)
Unexplained difference/ Discrimination	40.2 (0.0178)	31.7 (0.0160)	32.4 (0.0182)	48.1 (0.0201)
Overpayment to FC	24.1 (0.0100)	8.1 (0.0041)	-	-
Underpayment to SC	16.2 (0.0091)	23.6 (0.0117)	-	-

Note: (1) Unexplained Component = overpayment + underpayment component.

(2) Figures in Parentheses indicate standard errors.

Source: Computed from NSS data.

6.3. Expanded Decomposition Results: Combining Wage and Job discrimination

In previous analysis, we found that with inclusion of occupational variables in the earnings equation, the final calculation of the discrimination coefficient was reduced at least by 10.2 per cent in the public sector and 4.7 per cent in the private sector. It implies that discrimination partially operates through occupational segregation. This result motivated us to estimate job discrimination by using the expanded decomposition method. Further, we analysed occupational attainment equation within the framework of a multinomial logit model. Using the occupation attainment results, a predicted occupational distribution for SC $(\hat{P}_{sc})$, and for Forward Castes/Non-SC $(\hat{P}_{Nsc})$ was obtained. The earnings functions by occupation are needed to complete the decomposition based on the full model. The detailed decomposition results are given in following Table 5 and 6.

In public sector, job discrimination against SCs is more pronounced than wage discrimination in all categories of occupations except in elementary occupation; whereas in private sector, job discrimination against SCs is more pronounced than wage discrimination in all categories of occupations except in clerical and elementary occupation. The magnitude of job discrimination is higher in private sector than in public sector except in clerical, production and trade related occupations. The treatment disadvantage (cost of being SCs in the labour market) component for SCs is higher than the treatment advantage of forward castes irrespective of types of occupation and sectors except in elementary occupation of public sector. In spite of reservation in public sector, the prevalence of caste discrimination shows inefficient policy of the Government of India.

In conclusion, discrimination in labour market accounts for a large part of the gross earnings difference, with job discrimination (inequality in access to certain occupations) being considerably more important than wage discrimination (unequal pay within a given occupation, given one's educational and skill level) in both public and private sector of India. This result is consistent with the Madheswaran (2011) study which supports the argument that job discrimination against SCs occurs both in white-collar and operative jobs.

Table 5: Full Decomposition of Gross Earnings difference between SC and Forward Caste Workers in Public Sector of Regular Urban LM: 2011-12

	Observed Occupational Distribution		Predicted Occupational Distribution		Observed Difference	Explained Difference		Residual Difference		
	P_{Nsc}	P_{sc}	$\hat{P}_{Nsc}$	$\hat{P}_{sc}$	$P_{Nsc}-P_{sc}$	$P_{Nsc}-\hat{P}_{sc}$		$\hat{P}_{sc}-P_{sc}$		
	(1)	(2)	(3)	(4)	(5)	(6)		(7)		
Administrative &Professionals	0.5458	0.3517	0.5458	0.3788	0.1942	0.1670		0.0271		
Clerical	0.1909	0.1430	0.1909	0.1560	0.0479	0.0349		0.0130		
Service & Sales	0.1130	0.1456	0.1130	0.1705	-0.0326	-0.0574		0.0248		
Production	0.1075	0.1270	0.1075	0.1733	-0.0195	-0.0659		0.0463		
Elementary	0.0427	0.2327	0.0427	0.1214	-0.1900	-0.0787		-0.1113		
	$G=\ln\bar{Y}_{Nsc}-\ln\bar{Y}_{sc}$	$E=\beta^{*}(\bar{x}_{Nsc}-\bar{x}_{sc})$	$D_1=\bar{x}_{Nsc}(\hat{\beta}_{Nsc}-\beta^{*})$	$D_2=\bar{x}_{sc}(\beta^{*}-\hat{\beta}_{sc})$	$P_{sc}\times E$ (WE)	$P_{sc}\times D$ (WD)	$P_{sc}\times D_1$ (WD_1)	$P_{sc}\times D_2$ (WD_2)	$(P_{Nsc}-\hat{P}_{sc})\times \ln\bar{Y}_{Nsc}$ (JE)	$(\hat{P}_{sc}-P_{sc})\times \ln\bar{Y}_{Nsc}$ (JD)
	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Administrative &Professionals	0.1700	0.1127	0.0111	0.0462	0.0396	0.0202	0.0039	0.0163	0.9915	0.1610
Clerical	0.1478	0.1178	0.0065	0.0234	0.0169	0.0043	0.0009	0.0034	0.1996	0.0743
Service & Sales	0.2135	0.1106	0.0333	0.0697	0.0161	0.015	0.0049	0.0101	-0.3156	0.1365
Production	0.2126	0.1541	0.0178	0.0407	0.0196	0.0075	0.0023	0.0052	-0.3745	0.2635
Elementary	0.2681	0.1760	0.0615	0.0305	0.0410	0.0214	0.0143	0.0071	-0.3919	-0.5546

Note 1: WE-Wage Explained, WD-Wage Discrimination, WD_1=Wage Overpayment to FC, WD_2= Wage Underpayment to SC, JE –Job Explained, JD-Job Discrimination.

Note 2: WD= (WD_1+WD_2).

Source: Computed from NSS data.

Table 6: Full Decomposition of Gross Earnings difference between SC and Forward Caste Workers in Private Sector of Regular Urban LM: 2011-12

	Observed Occupational Distribution		Predicted Occupational Distribution		Observed Difference	Explained Difference		Residual Difference		
	P_{Nsc}	P_{sc}	$\hat{P}_{Nsc}$	$\hat{P}_{sc}$	P_{Nsc}-P_{sc}	P_{Nsc}-$\hat{P}_{sc}$		$\hat{P}_{sc} - P_{sc}$		
	(1)	(2)	(3)	(4)	(5)	(6)		(7)		
Administrative &Professionals	0.3389	0.1368	0.3389	0.1729	0.2020	0.1660		0.0361		
Clerical	0.0896	0.0641	0.0896	0.0642	0.0256	0.0254		0.0001		
Service & Sales	0.1784	0.1911	0.1784	0.2282	-0.0127	-0.0499		0.0371		
Production	0.2832	0.3415	0.2832	0.3628	-0.0582	-0.0796		0.0213		
Elementary	0.1099	0.2666	0.1099	0.1719	-0.1566	-0.0620		-0.0947		
	$G=\ln\bar{Y}_{Nsc}-\ln\bar{Y}_{sc}$	$E=\beta^{*}(\bar{x}_{Nsc}-\bar{x}_{sc})$	$D_1=\bar{x}_{Nsc}(\hat{\beta}_{Nsc}-\beta^{*})$	$D_2=\bar{x}_{sc}(\beta^{*}-\hat{\beta}_{sc})$	$P_{sc}\times E$ (WE)	$P_{sc}\times D$ (WD)	$P_{sc}\times D_1$ (WD_1)	$P_{sc}\times D_2$ (WD_2)	$(P_{Nsc}-\hat{P}_{sc})\times \ln\bar{Y}_{Nsc}$ (JE)	$(\hat{P}_{sc}-P_{sc})\times \ln\bar{Y}_{Nsc}$ (JD)
	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Administrative &Professionals	0.5518	0.2776	0.0332	0.2409	0.0380	0.0375	0.0045	0.0330	0.8933	0.1940
Clerical	0.1951	0.0783	0.0226	0.0943	0.0050	0.0074	0.0014	0.0060	0.1258	0.0007
Service & Sales	0.2398	0.1108	0.0346	0.0944	0.0212	0.0246	0.0066	0.0180	-0.2199	0.1637
Production	0.2347	0.1105	0.0363	0.0879	0.0377	0.0424	0.0124	0.0300	-0.3736	0.1002
Elementary	0.1954	0.0552	0.0637	0.0766	0.0147	0.0374	0.0170	0.0204	-0.2591	-0.3956

Note 1: WE-Wage Explained, WD-Wage Discrimination, WD_1=Wage Overpayment to FC, WD_2= Wage Underpayment to SC, JE –Job Explained, JD-Job Discrimination.

Note 2: WD= (WD_1+WD_2).

Source: Computed from NSS data.

Comparison of Our Results with Other Studies

Whatever the econometric results presented above corroborates with Papola's (2005) study on the modes and mechanisms practised by industries in the Indian private sector, which amply demonstrate the prevalence of social exclusion and discrimination in the system throughout the period of modern industrial development. Recently, a collaborative project undertaken by the Princeton University and the Indian Institute of Dalit Studies (IIDS), 2007 argued that there is serious evidence of continued discriminatory barriers in the formal, urban labour market even for highly qualified Dalits and Muslims based on field level study. Thorat *et al* (2007) provide the results of a field experiment, which found that low-caste and Muslim applicants, who are equally or better qualified than high-caste applicants, are significantly less likely to pass through hiring screens among employers in the modern, formal sector in India. Jodhka and Newman (2007) present the results of a qualitative interview-based study of human resource managers, focusing on hiring practices. This research suggests that managers bring to the hiring process a set of stereotypes that make it difficult for very low-caste and very high-caste applicants to succeed in the competition for positions, while the advantage falls to the middle level castes. Deshpande and Newman (2007) focus on the experiences of equally qualified Dalit and non-Dalit cohort-mates from three major universities who are moving out into the labour market at the same time. This longitudinal project, which is still ongoing, shows that despite similar qualifications, the two groups expect and, true to form, experience divergent outcomes in the labour market. Dalit students bring weaker connections to the task and are far less likely to find jobs in the private sector.

Coupled with the shrinking size of the public sector, all the empirical observations have prompted us to argue in favour of extending reservations or some form of affirmative action to the private sector. As Jodhka and Newman (2007) make it clear, this is firmly opposed by the private sector leaders, partly because they prefer avoiding any form of regulation over hiring, but also because they are convinced that there is no problem of caste or religious prejudice in modern India. We believe that the debate over policy remedies should proceed in the light of empirical evidence.

7. Concluding Observations and Policy Implications

While from the very beginning other countries have used various affirmative action policies in both public and private sectors, India confined such a policy only to the minuscule public sectors and excluded the vast private sector. In this background, different rounds of National Sample Survey data are used in order to examine the wage gap between forward-caste (FC) and lower-caste (Scheduled Castes-SC) workers in the regular salaried urban labour market. The main conclusions based on decomposition methodology are: (a) Discrimination causes 19.4 and 31.7 percent lower wages for SCs in the public and private sectors respectively as compared to equally qualified forward castes; but the discrimination effect is much larger in the private sector; (b) The cost (underpayment) of being SC in the private sector labour market is 23.6 percent compared to 14.1 percent in the public sector; (c) the contribution of endowment difference to gross wage differential is larger than the discrimination coefficient. It has been argued that unequal labour market outcomes have their roots in discrimination in the past that has caused more harm to deprived backgrounds of the disadvantaged workers. Pre-labor market discrimination affects earnings indirectly by means of lower out of school investments,

poor quality of education, field of study, accessibility to higher education, poorer nutrition and health status, and lower social capital; (d) discrimination accounts for a large part of the gross earnings difference between the two caste groups in the public and private sector of regular salaried urban labour market, with occupational discrimination – unequal access to jobs – being considerably more important than wage discrimination – unequal pay in the same job. Irrespective of the methodology we use, there is clear empirical evidence, which indicates that the degree of discrimination against the disadvantaged group is very high in the private sector. Therefore, the empirical findings of the paper provides strong evidence for the extension of affirmative action policy in private sector in India and suggest that the federal government could enact "Equal Opportunity Law" to provide legal safeguards against discrimination.

In the light of empirical results, this paper suggests the following policy implications: The reason for the demand for reservations in the private sector is that the Government provides safeguards to private sector units to promote their business, thereby creating better situations for the encouragement of business and trade. The foreign policy and export–import policy of the Government contributes to the betterment of the businesses set up by individuals in the private sector. Foreign investors also invest in the private sector by purchasing shares, which is made possible by the policies of the Government. The private sector, in turn, is expected to fulfill its social responsibility. The uplift of the weaker sections is a stated objective of our country, and thus the implementation of reservations in the private sector is part of the social responsibility of both the Government as well as the private sector. In fact, it is merely the fulfillment of the Constitutional agenda of distributive justice enshrined in various articles and clauses of the Constitution. If, however, the private sector is not fulfilling its social responsibility, the Government should make such provisions through legislative measures. Even though the private sector uses public money via public financial institutions, it does not enforce reservations for SCs, STs and OBCs.

While the discursive debate about providing reservation in the private sector is on, there are some concerned citizens who are calling for systematic planning and enforcement of some measures that would contribute both to nation-building and improving the lives of the marginalised communities. It is suggested that an Employment Opportunity Commission be constituted to review and ensure that the weaker sections find their representation at all levels. Further, special provisions should be made for higher education, responsive training and multi-skilling of the Tribals and Dalits so that they are able to compete with the forward castes for jobs. The National Commissions for SCs and STs should be empowered so that they can work as pressure groups, exerting pressure on both the government and the private sector to promote the right to participatory development. Finally, a nationwide debate should be held on these issues and the necessary Constitutional amendments should be introduced to enact AA at all levels in the private sector.

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Appendix Table 1: Descriptive Statistics of Variables used in Augmented Earnings Function (2011-12)

Variables	Description of Variables	Public				Private			
		SC		FC		SC		FC	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Real Daily Wage	Real Daily Wage	282.19	189.27	389.64	225.80	103.06	102.25	189.86	207.29
Ln_Real_Daily Wage	Natural Logarithm of real daily wage (in Rupees)	5.38	0.80	5.77	0.69	4.35	0.73	4.84	0.87
Age	Age in Years	41.50	10.04	43.19	9.50	33.24	10.84	34.88	10.93
Age Sq	Age Square (in years)	1823.29	826.11	1955.98	804.13	1222.61	804.63	1336.12	841.51
Primary	If the worker has completed primary education =1;0 otherwise	0.08	0.27	0.02	0.14	0.13	0.34	0.09	0.28
Middle	If the worker has completed middle school =1;0 otherwise	0.13	0.33	0.06	0.23	0.21	0.41	0.15	0.35
Secondary	If the worker has completed secondary school=1;0 otherwise	0.14	0.35	0.13	0.34	0.15	0.36	0.15	0.36
HSC	If the worker has completed higher secondary school=1;0 otherwise	0.13	0.34	0.14	0.34	0.10	0.31	0.12	0.32
Diploma	If the worker has completed diploma =1;0 otherwise	0.06	0.23	0.06	0.23	0.03	0.17	0.04	0.20
Grad and above	If the worker has completed graduate and above degree=1;0 otherwise	0.32	0.47	0.58	0.49	0.13	0.33	0.35	0.48
Male	If the individual sex is Male=1; 0 otherwise	0.79	0.41	0.78	0.41	0.74	0.44	0.81	0.39
Married	If the individual is currently married=1; 0 otherwise	0.84	0.36	0.87	0.33	0.64	0.48	0.67	0.47
Permanent	If the individual working in permanent job =1; 0 otherwise	0.89	0.32	0.95	0.21	.62	0.49	0.66	0.47
South	If the individual belong to Southern region=1; 0 otherwise	0.24	0.43	0.14	0.34	0.29	0.45	0.18	0.38
East	If the individual belong to Eastern region=1; 0 otherwise	0.24	0.43	0.25	0.43	0.17	0.38	0.17	0.38
West	If the individual belong to western region=1; 0 otherwise	0.18	0.38	0.14	0.35	0.21	0.41	0.32	0.47

Appendix Table 2: Estimates of Augmented Earnings Equation for FC and SC in Public Sector of Regular Urban LM, 2011-12

Variables	FC		SC	
	Coeff.	z-stats	Coeff.	z-stats
Age	0.05	4.56	0.04	2.81
Age Sq	-0.00	-2.64	-0.00	-1.25
Primary	0.11	1.09	0.16	2.02
Middle	0.23	2.78	0.22	3.12
Secondary	0.44	5.95	0.55	8.19
HSC	0.54	7.27	0.65	9.30
Diploma	0.74	9.12	0.97	10.88
Grad and above	0.85	12.19	0.88	14.88
Male	0.16	6.04	0.25	5.30
Married	0.09	2.44	0.00	-0.01
Permanent	0.82	15.91	0.72	12.02
South	-0.07	-2.33	-0.14	-3.02
East	-0.07	-2.53	-0.03	-0.67
West	-0.10	-3.07	-0.05	-0.89
constant	2.79	13.30	2.74	9.65
R squared	0.31		0.47	
Number of observation	3035		1130	

Note: Dependent variable is the natural logarithm of real daily wage.

Source: Author's Calculation.

Appendix Table 3: Estimates of Augmented Earnings Equation for FC and SC in Private Sector of Regular Urban LM, 2011-12

Variables	FC		SC	
	Coeff.	z-stats	Coeff.	z-stats
Age	0.04	6.87	0.06	7.24
Age Sq	-0.00	-5.86	-0.00	-6.39
Primary	0.13	3.10	0.10	2.17
Middle	0.20	5.20	0.21	5.04
Secondary	0.35	9.46	0.32	6.88
HSC	0.50	12.57	0.46	8.79
Diploma	0.89	16.40	0.75	8.59
Grad and above	1.17	35.83	0.91	18.34
Male	0.47	19.29	0.55	16.62
Married	0.15	6.10	0.02	0.51
Permanent	0.20	9.96	0.15	5.43
South	0.08	2.94	0.16	4.51
East	-0.14	-5.04	-0.07	-1.70
West	0.20	8.84	0.11	2.85
constant	2.72	24.96	2.30	15.57
R squared	0.40		0.37	
Number of observation	5367		1840	

Note: Dependent variable is the natural logarithm of real daily wage.

Source: Author's Calculation.

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