DISCUSSION PAPER SERIES

IZA DP No. 2008

Earnings Inequality in India: Has the Rise of Caste and Religion Based Politics in India Had an Impact?

Sumon Kumar Bhaumik
Manisha Chakrabarty

March 2006

Forschungsinstitut
zur Zukunft der Arbeit
Institute for the Study
of Labor

Earnings Inequality in India: Has the Rise of Caste and Religion Based Politics in India Had an Impact?

Sumon Kumar Bhaumik
Brunel University and IZA Bonn

Manisha Chakrabarty
Keele University

Discussion Paper No. 2008
March 2006

IZA

P.O. Box 7240
53072 Bonn
Germany

Phone: +49-228-3894-0
Fax: +49-228-3894-180
Email: iza@iza.org

IZA Discussion Paper No. 2008
March 2006

ABSTRACT

Earnings Inequality in India: Has the Rise of Caste and Religion Based Politics in India Had an Impact?*

Since 1989, there has been a sharp increase in the role of caste and religion in determining political fortunes at both state and federal levels in India. As a consequence, significant inter-caste and inter-religion differences in earnings have the potential to stall the process of economic reforms. Yet, the patterns and determinants of such differences remain unexplored. We address this lacuna in the literature, and explore the determinants of the differences in inter-caste and inter-religion earnings in India during the 1987-99 period, using the 43rd and 55th rounds of National Sample Survey (NSS). Our results suggest that (a) earnings differences between "upper" castes and SC/ST have declined between 1987 and 1999, (b) over the same period, earnings differences between Muslims and non-Muslims have increased, to the detriment of the former, and (c) inter-caste and inter-religion differences in earnings can be explained largely by corresponding differences in educational endowment and returns on age (and, hence, experience). However, differences in returns on education do not explain inter-caste and inter-religion earnings differences to a great extent.

JEL Classification: O15, O17

Keywords: inequality, caste, religion, India

Corresponding author:

Sumon Bhaumik
Brunel University
Brunel Business School
Social Sciences Building
Uxbridge UB8 3PH
United Kingdom
Email: Sumon.Bhaumik@brunel.ac.uk

* The authors would like to thank Ralitza Dimova and seminar participants at Keele University for their helpful comments. They remain responsible for all remaining errors.

1. Introduction

The trepidations about the economic reforms in India have given way to optimism, as the economy continues to grow at over 7 percent per annum, despite high oil prices, and despite having successive coalition governments at the central or federal level. Indeed, it is argued that, with the exception of a handful of issues like privatization of state-owned enterprises, there is a broad consensus about the continuation of reforms among political parties across the ideological spectrum. However, there was a strong debate about the possible impact of the (presumably) reforms-driven economic growth on the incidence of poverty.

Specifically, it was argued that the economic growth witnessed in the immediate aftermath of the 1991-92 reforms initiatives had not played a role in reducing poverty. Datt and Ravallion (1997) argued that while the incidence of poverty in India had increased sharply in the immediate aftermath of the macroeconomic crisis of 1991, poverty declined to pre-1991 levels soon after 1991, thereby negating the hypothesis that reforms had brought about a structural break in India's poverty levels. Their argument is consistent with the official statistics released by the Government of India (2001) that suggests that the incidence of poverty declined from 38.9 percent in 1988 to 26.1 percent in 1999, the rate of decline being similar for urban India (38.2 percent to 23.6 percent) and rural India (39.1 percent to 27.1 percent).

However, while research about the extent of poverty reduction in post-1991 India, and the correlates of poverty in the post-1991 period have spawned a literature,[1] there has been very little discussion about the impact of the reforms on earnings inequality in India. The classical literature suggests that economic growth and inequality has an inverted U relationship (Kuznets, 1955), and that, therefore, some increase in inequality in inevitable during the early stages of economic development. However, it has been argued that inequality is harmful for growth in the long run, especially in democratic political environments, because "it leads to policies that do not protect property rights and do not allow full appropriation of returns from investment" (Persson and Tabellini, 1994, pp. 617). Hence, it is important to identify sources of income inequality, and to explore the possibilities of reducing the inequality as far as possible, using appropriate policy measures.

[1] See, e.g., Datt and Ravallion, 2002; Meenakshi and Ray, 2002; Datt, Kozel and Ravallion, 2003; Gupta and Mitra, 2004; Krishna, 2006.

Deaton and Dreze (2002) argued that while India has traditionally witnessed lower income inequality than many other developing countries, consumption inequality in the country had increased during the 1990s. The increase in inequality might well have been on account of the income of the households in the upper income percentiles during the 1980s and 1990s (Banerjee and Picketty, 2003). A detailed study comparing the nature of income inequality of male urban workers during the 1980s and the 1990s found that inequality during the 1980s was driven by unequal distribution of observed skills, whereas inequality during the 1990s was a consequence of unequal returns on observed skills (Kijima, forthcoming). Related research has explored gender differences in returns to education (e.g., Duraisamy, 2000).

However, with one exception (Gang, Sen and Yun, 2002),[2] the existing literature has ignored two oft-discussed aspects of the political economy in India, namely, caste and religion, that have emerged as the cornerstones of India's politics since the late 1980s. While caste has been an integral part of India's social fabric for dozens of centuries, politics in post-independence India was traditionally dominated by the upper castes, especially in the Hindi-speaking heartland that account for a majority of the seats in India's Parliament. The adoption of the recommendations of Mandal Commission Report by the Government of India[3] in 1990 triggered events that have led to significant political empowerment of lower castes in India, both at the state/regional and, on account of coalition politics, at the central or federal level.[4] This was accompanied by a sharp polarization of sections of the electorate along religious lines, as the Bharatiya Janata Party (BJP) rose to power during the 1990s, using as its tool

[2] Their paper explores the determinants of the differential rates of incidence of poverty among scheduled castes, scheduled tribes and non-scheduled castes in India. The main conclusion of the paper is that the underlying reasons for poverty differs across castes. The study takes into consideration neither religion nor the rise of the other backward castes as a political and class entity since 1990.

[3] The Mandal Commission, which submitted its report in 1980, re-examined the policy of positive discrimination in favor of lower/backward castes, which was enshrined in the policy to reserve 22.5 percent of all public sector jobs for people belonging to the Scheduled Castes and Scheduled Tribes (SC/ST). The Commission recommended that the reservation policy be extended to *other* backward castes (OBC). Specifically, using a 11-point criteria it identified 52 percent of the population as belonging to OBC, and recommended that 27 percent of jobs and seats in educational institutions be reserved for them. The Indian constitution prohibits reservations of more than 50 percent at any institution of employment or education.

[4] Since the early 1990s, the SC/ST (including *dalits*, the lowest of castes) and OBC have voted largely for political parties whose mandate is to lobby for and implement policies that benefit this segment of the electorate. As a consequence, political power in the (erstwhile) states of Bihar, Uttar Pradesh and Madhya Pradesh have shifted to these political parties.

hard line pro-Hindu rhetoric.[5] The political debate of the country has since been redefined, and (anti-) secularism has become the benchmark that defines political parties.

The ability to pursue economic reforms in India, therefore, depends not only on the ability of the government to co-opt various economic classes, especially those that are largely disadvantaged, but also on the distribution of the gains of these reforms across castes and religions. It is easily seen that the emergence of caste and religion-based politics can have a significant impact on inter-caste and inter-religion differences in earnings. For example, implementation of the recommendations of the Mandal Commission might have brought more people belonging to OBC into the formal sector, thereby increasing the returns on their characteristics like experience and education. This would reduce the earnings gap between OBC and the "upper" castes. But, at the same time, it might increase the gap between OBC and SC/ST. The rise of religious politics might, similarly, have an ambiguous effect on the inter-religion difference in earnings, in aggregate. While religious minorities might face discrimination under some political regimes, any such discrimination might be (more than) offset by more secular political regimes. The ambiguity is further enhanced by the fact that the federal and state governments might be of different political persuasions.

In deference to this new dynamics in India's political economy, we explore the determinants of the differences in inter-caste and inter-religion earnings in India during the 1987-99 period, using the 43rd and 55th rounds of National Sample Survey (NSS). Our results suggest that (a) earnings differences between "upper" castes and SC/ST have declined between 1987 and 1999, (b) over the same period, earnings differences between Muslims and non-Muslims have increased, to the detriment of the former, and (c) inter-caste and inter-religion differences in earnings can be explained largely by corresponding differences in educational endowment and returns on age (and, hence, experience). However, differences in returns on education do not explain inter-caste and inter-religion earnings differences to a great extent.

[5] The BJP's political ascent began when it emerged as a key coalition partner of the V.P. Singh government that took oath of office in 1989. When the Congress party came back to power in 1991, the BJP chose as its political strategy the endorsement of a hard line pro-Hindu ideology. The most memorable act associated with this pro-Hindu rhetoric was the demolition of the Babri mosque in Uttar Pradesh in December 1992. Since then, the BJP and its coalition partners were in power at the federal level for more than half of the time. At the state level, it has emerged as either the party in power or the key contender in (erstwhile) Bihar, Gujarat, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Rajasthan and Uttar Pradesh.

The rest of the paper is organized as follows: In Section 2, we describe the data. The *prima facie* evidence about inter-caste and inter-religion earnings differences are discussed in Section 3. In Section 4, we formally decompose inter-caste and inter-religion differences in earnings. Section 5 concludes.

2. Data

We use Indian National Sample Survey employment-unemployment data for the urban sector for the years 1987 and 1999, i.e., from the 43rd round and the 55th round of the survey. This allows us to compare the nature of inter-caste and inter-religion variations in earnings inequality before and after the adoption of the Mandal Commission report in 1990 and the rise of religious politics on account of the BJP from 1989.

For each individual included in the sample, the data provides information about weekly earnings, demographic characteristics of individuals like age and gender, educational attainment, sector of occupation, and state of residence. However, it suffers from one important shortcoming: a large proportion of the self-employed people do not report any earning for the week for which data are collected. As such, by the very nature of self-employment, this is not surprising. However, this poses a problem for empirical analysis because we can neither assign zero earnings for these individual for that week, nor can we infer from other information what their average weekly earnings might be. Hence, any empirical analysis involving earnings has to ignore these individuals, thereby making the effective sample somewhat restrictive. Kijima (forthcoming), for example, used data on only males who worked in the formal sector. In keeping with this precedence, we drop from our sample all self-employed individuals. However, unlike Kijima, we retain women and casual labourers who work in the public and private sectors.[6] The range of age of individuals in our sample is 21-60.

After accounting for missing values, our 1987 sample includes 24,529 Hindus, 3,548 Muslims, and 2,641 people of other religious denominations. Of the Hindus, 4,596 are SC/ST while 19,933 belong to the other castes. In the 1999 sample, there are 22,773 Hindus, 3,273 Muslims and 3,259 people from other religions. Of the Hindus, 4.563 are SC/ST, 6,610 are OBC, and 11,600 belong to other castes. To recapitulate, “other backward castes” (OBC)

[6] Some of the individuals employed in the formal sector reported being sick during the week of the survey, but reported weekly earnings nevertheless. They were included in our sample.

entered the political lexicon and emerged as a social and political force only after the adoption of the Mandal Commission's report in 1990. Hence, the 1987 data reports the caste of an individual as only SC/ST or other (i.e., "higher"). The 1999 data, by contrast, classifies an individual as SC/ST or OBC or other.[7]

The descriptive statistics for all individuals in our sample who report (weekly) earnings and are employed in the public or the private sector are presented in Table 1. Both the rounds of the survey provide detailed information about the religion of the individuals. Hindus and Muslims, who constitute about 80 percent and 12 percent of the population, respectively, are the two largest religious groups, and others like Buddhists, Christians, Jains and Sikhs each account for less than three percent of the population. Hence, we club together individuals belonging to all these non-Hindu and non-Muslim religions and categorise them as "other".

INSERT Table 1 about here.

To begin with, let us compare the earnings of the different castes and religious groups both during a time period and across time. We have defined earnings to include all types of wages and salaries and income in kind (Yang, 2005), and all earnings are expressed in 1999 prices.[8] The data suggest the following:

(a) Both during 1987 and 1999, other castes enjoyed higher earnings than the SC/ST. In 1987, the average earnings of SC/ST was 61 percent less than those of the other castes, and the corresponding figure for 1999 was 41 percent. The data for 1999 further refines this observation and suggests that among the non-SC/ST individuals, the OBC have lower earnings than the "higher" castes. These are consistent with anecdotal evidence about the high correlation between caste and class in India. Interestingly, however, the OBC had a marginally higher average earning in 1999 than the SC/ST.

(b) The data for the religious groups confirm the popular wisdom that the Muslims in India have lower average earnings than people of other religious denominations. However, it is interesting to note that individuals belonging to the "other" religions

[7] Note that all people who declare castes are, by definition, Hindus because other religions do not have a built-in caste system. Hence, an inter-caste comparison of earnings is essentially an intra-Hindu analysis. This will hold true for the rest of this analysis.

[8] The consumer price index for industrial workers was used to convert 1987 earnings into "real" values that are comparable with the 1999 earnings of the individuals.

have higher earnings than the Hindus. In 1987, the average earnings of Muslims and other non-Hindus were 77.5 percent and 111.35 percent, respectively, of the average earning of the Hindus. In 1999, the corresponding figures were 75 percent and 113.81 percent.

(c) There was an increase in the earnings of all castes and religious groups between 1987 and 1999, an observation that is consistent with the 2-4 percent growth in per capita GDP during much of the 1987-99 period. But this growth in earnings clearly varied across castes and religions. The growth was about 73 percent for the SC/ST individuals, and about 52 percent for the other castes (which includes the OBC). The increases in earnings of the Hindus, Muslims and people of other religions beliefs were about 54 percent, about 49 percent and about 57 percent, respectively.

The data also confirms other received wisdom about variation in educational attainment and women's labour force participation across castes. For example, Muslim women are less likely to be part of the formal labour force than women of other religious denominations. Women constituted just about 10 percent of the Muslim sample that reported earnings, the corresponding numbers being over 15 percent for the Hindus and over 25 percent for the "other" religions. Similarly, SC/ST individuals were less educated, on average, than people belonging to other castes. People belonging to the "higher" castes, 48 percent of whom reported having general tertiary education in 1999, were much more educated, on average, than people belonging both to OBC (25 percent) and SC/ST (17 percent). At the same time, Muslims, 21 percent of whom had tertiary education, were less educated, on average than both Hindus (35 percent) and other non-Hindus (40 percent).

In the next section, we explore in some detail the nature of earnings inequality across castes and religions in India, and changes in the patterns of inter-caste and inter-religion differences in earnings between 1987 and 1999.

3. Earnings inequality

To begin with, we take a look at the differences, if any, in the distributions of real earnings of the various castes and religions. The kernel distributions for these earnings are presented in Figures 1 and 2. In Figure 1, we present the distributions of earnings for each caste, for 1987 and 1999. In Figure 2, we present the distributions of earnings for each religious group, for the same years. Since less than 2 percent of the individuals reported earnings of more than

INR 5,000 per week, we restrict out kernel plots to the 0-5000 earnings range for all castes and religions, in order to facilitate a more clear depiction of the underlying distributions.

INSERT Figures 1 and 2 about here.

The upper (1987) and lower (1999) panels of Figure 1 are not strictly comparable because, in 1987, people belonging to OBC were subsumed in the other (i.e., non-SC/ST) caste. Nevertheless, Figure 1 is instructive, and indicates that the earnings distributions for all castes are skewed towards the lower tail. This is consistent with the fact that despite a high growth rate since the 1990s, the per capita GDP of India continues to be less than USD 700 per annum. It also indicates that a much higher proportion of the SC/ST (and, in 1999, also OBC) individuals were in the lower earnings categories than those belonging to the "upper" castes. It is interesting to note, however, that while the "upper" castes have a greater proportion of their people in the middle earnings groups than the "lower" castes, there is no discernible difference in the upper tails of the earnings distributions of the various castes.

Figure 2 confirms the fact that most people in India, irrespective of their religious beliefs, have relatively low earnings such that the earnings distributions of all these religious groups are skewed towards the lower tail. However, it is worth noting that by 1999 a larger proportion of the population of all religious denominations had entered the middle earnings categories. The transition seems to be the highest for the people belonging to the "other" religious group. Both in 1987 and 1999, the distributions are consistent with the inter-religion differences in the mean value of earnings, reported in Table 1: people in the "other" religious groups are likely to have a smaller proportion of people in the low earnings categories than the Hindus who, in turn, have a smaller proportion of people in those categories than the Muslims.

INSERT Figure 3 about here.

Next, by way of Figure 3, we compare inter-caste and inter-religion differences in (log real) earnings for each earnings decile, for 1987 and 1999. In order to enable comparison between 1987 and 1999, for 1999, we have clubbed together the OBC and "upper" castes into the other castes category. In panels (a) and (b), since SC/ST and Muslims have lower earnings, on average, than other (or "upper") castes and Hindus, respectively, a rising curve indicates

that the earnings differential between the two groups being compared increases with the earnings decile.[9] In panels, (c) and (d), on the other hand, a *declining* curve indicates higher inequality for higher earnings deciles, because people belonging to "other" religions have higher earnings, on average, than both Hindus and Muslims.[10]

Figure 3 suggests three things: First, earnings inequality is low for the lowest (i.e., 10^{th}) decile, rises thereafter, is highest around the median, and declines from around the 60^{th} percentile. Second, for all earnings deciles, and for both the years, the differences in the log earnings of Muslims and other non-Hindu religions [panel (d)] are more striking than all other inter-religion [panels (b) and (c)] and inter-caste [panels (a)] differences. Third, the difference between log earnings of SC/ST and other castes declined between 1987 and 1999, while the differences in log earnings between any pair of religious groups increased over the same period.

A plausible scenario that fits in with the data reported thus far is as follows: In India, people in the highest earnings deciles are professionals who are relatively few in number, such that everyone belonging to that education cohort enjoys a high return on their education, irrespective of their castes or religious beliefs. People belonging to the lowest earnings deciles, on the other hand, have low educational endowment and compete with each other for jobs that do not necessarily require any skills. Their market determined earnings, therefore, are low and do not vary significantly across castes and religions. However, individuals who lie between these extremes work in formal or quasi-formal enterprises and the education they have are of heterogeneous quality. Hence, it is possible for a graduate of commerce from a reputed university to get a job as a bank official, thereby gaining access to a fairly substantial salary and associated perks, while someone with a degree in humanities from a relatively unknown university may end up working as a clerk at a small private enterprise, earning an income that is barely enough for survival.

The implications of this scenario are twofold: (i) The difference in earnings would be low across castes and religions for individuals with very low and very high levels of education,

[9] In panel (a), we measure on the vertical axis log earnings of other castes less the log earnings of SC/ST. In panel (b), we measure on that axis log earnings of Hindus less log earnings of Muslims.
[10] In panel (c), we measure on the vertical axis log earnings of Hindus less the log earnings of "other" religious groups. In panel (d), we measure on that axis log earnings of Muslims less log earnings of "other" religious groups.

and much higher in the intermediate range of education. (ii) The relatively high earnings differential around the median level of earnings could be on account of differences in observed factors such as proportion of people belonging to various castes and religions with a certain level of education, and also on account of differences in unobserved factors that yield different rates of return on education for people belonging to different castes and religions.

INSERT Table 2 about here.

The mean earnings of people with different educational endowments, and belonging to different castes and religions, are reported in Table 2. It can easily be seen that earnings unambiguously increase with level of education, for all castes and religions, and for both the years. This strong positive correlation between education level and earnings suggests that earnings differentials across castes and religions are likely to be influenced significantly by inter-caste and inter-religion differences in educational endowment.

However, it is not obvious as to whether inter-caste and inter-religion differences in earnings can be explained by differences in the returns to education across castes and religions. As highlighted in the aforementioned scenario, differences in returns to education are most likely to be observed for people with intermediate levels of education. Hence, if these returns are an important determinant of earnings differentials, after controlling for the level of education, then earnings differentials should be the lowest for the illiterate and professionals, and much higher for people with intermediate levels of education. However, it is evident from Table 2 that this is not the case. For example, in 1999, there was virtually no difference between the earnings of illiterate other (or "upper") castes and their illiterate SC/ST counterparts, and the corresponding difference between earnings of people belonging to these two castes with secondary education was 21 percent. But, the difference between the professionals belonging to these two castes was 37 percent.

INSERT Figure 4 about here.

In order to facilitate a comparison of differences in (log) earnings between castes and religions, across educational cohorts, we use Figure 4. Panels (c) and (d) indicate that there is not much of a difference between earnings of people belonging to "other" non-Hindu religions and Hindus and Muslims, for the different educational cohorts, except for people

with middle school education. We, therefore, will concentrate on panels (a) and (b). It is evident that, for each educational cohort, earnings differential between SC/ST and other (i.e., "upper") castes had declined between 1987 and 1999, while those between Hindus and Muslims had increased over the same period (with the exception of professionals). This is consistent with the findings reported in Figures (3a) and (3b), and Table 2.

Our analysis thus far suggests that inter-caste differences were declining between 1987 and 1999 while inter-religion differences were rising. There is once again evidence to suggest that education is likely to explain, at least in part, differences in earnings across castes and religions. To reiterate, while differences in levels of educational endowment almost certainly explain part of differences in earnings, it is not evident as to whether differences in returns on education play a role as well. Hence, we require a more formal decomposition of the inter-caste and inter-religion differences in earnings, and these are reported in the following section.

4. Decomposition analysis

4.1 Earnings equation

In this section, we report the findings from a formal decomposition analysis of inter-caste and inter-religion differences in earnings. For the purposes of the decomposition analysis, we model (log) earnings as a variant form of the stylised Mincerian equation:

$$\ln E_i = \alpha_0 + \alpha_1 age_i + \alpha_2 age_i^2 + \sum_k \beta_k S_{ik} + \sum_j \lambda_j X_{ij} + A_i^{'}\delta + \varepsilon_i \qquad (1)$$

where $\ln E_i$, the natural logarithm of the earning of individual i, is taken to be function of age;[11] level of education attainment by type of degree, denoted by S_{ik}, where k denotes levels of education; and personal characteristics such as gender and marital status, indexed by X_{ij}. In addition, we control for the location of the individual, using dummy variables for each of the Indian states,[12] and the industry in which the individual works.[13] Our specification

[11] In a traditional Mincer equation, log earnings is assumed to be a function of experience. This is typically measured as age of an individual less the sum of the number of years of schooling and five. However, our data do not provide information about the number of years of schooling, and any attempt to generate years of experience from the age of an individual would lead to measurement error. Since experience is a linear monotonic transformation of age, we retain the latter in the specification, instead of approximating the former.

[12] All the states of the north east, each of which individually accounts for a tiny proportion of the labour force and economic activity in India, have been clubbed together. Delhi is the omitted category.

allows the rate of return to vary across types of education level, which is consistent with the relevant literature (Heckman, Layne-Farrar and Todd, 1996; Münich, Svejnar and Terrell, 2005).

INSERT Table 3 about here.

The above Mincer equation is estimated using ordinary least squares (OLS), and appropriate measures have been taken to ensure that the standard errors are robust.[14] The regression coefficients are reported in Table 3. Note that, in order to enable comparison between 1987 and 1999, we estimated the model for non-SC/ST castes, for 1999, in two different ways. First, as reported in Table 2, we estimated the model separately for SC/ST, OBC and other (i.e., "higher") castes. We then re-estimated the model for the non-SC/ST castes by pooling together the individuals belonging to the OBC and other (i.e., "higher") castes.[15]

The regression results suggest the following:

1. Earnings have a quadratic relationship with age for all castes, and for Hindus, in both 1987 and 1999; earnings initially increase with age, and decreases once an average individual reaches about 40 years of age. This is also true for "other" (non-Hindu) religions for 1999. However, *ceteris paribus* earnings of Muslims increase monotonically with age. Such a monotonically increasing relationship was also observed for people belonging to "other" religions in 1987. While an inverted-U relationship between age and earnings is certainly not true for public sector employees and skilled labourers employed in the private sector, the result is an indicator of the strong impact of employees in quasi-organised sectors (e.g., retail trade, construction) on the aggregate profile of labourers in India.
2. In keeping with stylised results, women experienced lower earnings than men in both 1987 and 1999, and the negative impact was particularly high for Muslim women.

[13] The industries are as follows: mining; food manufacturing; textiles; leather; wood and wood products, paper and publishing; chemical, plastic, rubber; non-metallic mineral products; basic metal products; machinery and equipment; electrical and electronic machinery, and medical Instrument; transport and communication; utilities; construction; wholesale and retail trade; finance and insurance; and other.

[14] The use of OLS is fairly stylised and has been used by Kijima (forthcoming), among others. A defence for the use of OLS, as opposed to a Heckman-type model, can be found in Münich, Svejnar and Terrell (2005, pp. 283) and Puhani (2000).

[15] The latter regression, whose estimates have been used for the decomposition reported later in the paper, has not been reported on account of brevity, and can be provided by the authors upon request.

Marriage, however, had a positive impact on earnings. This can be explained by saying that marriage expands an individual's social network, thereby providing her with greater economic opportunities. Alternatively, in the presence of dual income families, and greater access to inter household private transfers, marriage can enable an individual to absorb higher search costs, leading to a higher paid occupation.

3. Not surprisingly, education and earnings were positively related to each other; the positive impact of education was evident as early as primary education. The relationship between these two variables was exponential in both 1987 and 1999. However, by 1999, the returns to all levels of education had declined somewhat.[16] Returns to education were, by and large, lower for SC/ST and Muslims relative to other (i.e., "upper") castes and non-Muslims, respectively.

The OLS models had R-square values in the 0.45-0.55 range, and the associated F- and t-statistics also suggested that the specification fit the data for each sub-sample quite well.

4.2 Oaxaca decomposition

Next, we use the coefficient estimates estimated for the Mincer equations to decompose the inter-caste and inter-religion differences in earnings into familiar endowment (or characteristics) and coefficient effects. Specifically, we use the stylised algorithm proposed by Oaxaca (1973). The Oaxaca decomposition algorithm suggests the following:

$$Ln\overline{E}_h - \ln \overline{E}_l = \overline{X}_l'(\hat{\beta}_h - \hat{\beta}_l) + (\overline{X}_h - \overline{X}_l)'\hat{\beta}_l + (\overline{X}_h - \overline{X}_l)'(\hat{\beta}_h - \hat{\beta}_l) \qquad (2)$$

where $\ln \overline{E}$ is the predicted mean (log) earning; *h* and *l* refer to the groups with higher and lower earnings, respectively; $\overline{X}$ is the mean vector of earning determining variables (human capital variables or endowments variable); $\hat{\beta}$ is vector of the estimated returns to the earning

[16] Returns to education might have increased significantly for a small fraction of the labour force who are employed in sectors like software and financial services. However, given that our categories are somewhat broad brush – e.g., professionals can include both software engineers working at multinational corporations and (say) mechanical engineers working at low growth traditional industries – it is perfectly plausible for an *average* individual in each of these education categories to have a lower return on education in 1999 than in 1987.

determinants; and the last term indicates the interaction effect.[17] The characteristics and coefficient effects associated with the key variables are reported in Tables 4 and 5.[18]

INSERT Tables 4 and 5 about here.

In the first column of Table 4, we report the decomposition of the difference in log earnings of SC/ST and other castes in 1987, when other castes include the OBC. In order to facilitate comparison between 1987 and 1999, we report in the second column the decomposition of the difference in log earnings of SC/ST and other castes in 1999, when the latter sample is constructed by pooling together the OBC and people belonging to "higher" castes. Finally, in the third, fourth and fifth columns, we decompose the difference in the 1999 log earnings of people belonging to SC/ST, OBC and the other-"higher" castes.

The results reported in Table 4 suggest that the difference between the log earnings of SC/ST and other castes declined between 1987 and 1999, from 0.43 to 0.32, when the other castes include the OBC. The finer caste classification available for 1999 indicates that the difference in the log earnings of SC/ST and OBC was negligible. The decomposition suggests the following:

- First, while differences in educational endowment accounted for about 28 percent of the difference in log income of SC/ST and other castes in 1987 (see first column) and 44 percent of this difference in 1999 (see second column), not nearly as much was accounted for by differences in the returns to education between these two caste groups. To the extent that the coefficient effect captures discriminatory behaviour, therefore, there is no evidence to suggest that either in 1987 or in 1999 there was any discrimination along caste lines.
- In 1987, differences in returns on age, and hence, presumably, experience, accounted for about 23 percent of the difference in the log earnings of SC/ST and the other

[17] Our decomposition assumes that the *high* earnings group is the reference or "no discrimination" group, such that the explained component of the decomposition comprises of the endowment effect and the interaction effect, while the unexplained component includes only the coefficients effect. See Oaxaca (1973) for details.

[18] The identification problem in Oaxaca decomposition regarding the coefficient effect of the intercept and dummy variable due to the choice of reference category, as mentioned by Oaxaca and Ransom (1999) and Yun (2005), has been dealt with by using *devcon* command in STATA which used to transform the coefficients of such 0/1 dummy variables so that they reflect deviations from the "grand mean" (in other words, the modified coefficients will sum up to zero over all categories) rather than deviations from the reference category.

castes (first column). The corresponding figure for 1999 was about 44 percent (second column). Given that returns to age and, therefore, experience are associated with the extent to which a person is upwardly mobile, this result precipitates a discussion about the role of glass ceilings in affecting earnings potential of some castes.[19]

The decomposition results reported in Table 5 indicate that the differences in (log) earnings between the Muslims and the non-Muslims rose between 1987 and 1999, to the detriment of the Muslims. The difference in the log earnings of Hindus and Muslims rose from 0.21 in 1987 to 0.26 in 1999, while the difference in log earnings of Muslims and the "other" religions rose from 0.36 to 0.43 over the same period. Once again the main drivers of the differences in log earnings are the endowment effect associated with education and the coefficients effect associated with age:

- For Hindus and Muslims, for example, the difference in educational endowment, for example, accounted for about 52 percent of the difference in log earnings in 1987, and 35 percent in 1999. The differences in the rates of return on education, on the other hand, accounted for (-)17 percent and 8 percent, respectively, for the two years. Note that, returns on education actually favoured the Muslims in 1987, and that this was reversed by 1999. The endowment (or characteristics) effect of education also explained to a significant extent the differences in log earnings between Muslims and "other" (non-Hindu) religions, while the associated coefficient effect remained weak.
- The coefficient effect associated with age (and, hence, experience) continued to be large. In 1987, this effect accounted for 166 percent of the difference in log earnings between Hindus and Muslims, and 218 percent of the difference in log earnings of Hindus and "other" religions, in both cases in favour of the Hindus. The corresponding figures for 1999 were 181 percent and 106 percent, in favour of the Hindus and people of the "other" religion, respectively. In the same year, the coefficient effect associated with age accounted for 149 percent of the difference in log earnings between Muslims and the "other" religions, in favour of the latter. There is some evidence, in other words, that age and experience contributed to upward

[19] Note, for example, that the coefficient effect of age plays a major role in explaining the (small) difference in log earnings of OBC and SC/ST in 1999 (see third column in Table 4). To recapitulate, during the 1990s, the emergence of the OBC political parties, which have been in positions of power and patronage both at the state level in the "Hindi" belt, as also at the federal level by way of coalitions, have been more meteoric than the rise in the political fortunes of the SC/ST. Hence, it is plausible that the pro-OBC coefficient effect of age in 1999 is a reflection of fewer glass ceilings for OBC.

socio-economic mobility of people belonging to “other” religions between 1987 and 1999, but the Muslims were unable to benefit from similar socio-economic movements.

Interestingly, even though the unobserved effects associated with the constant term are relatively small for inter-caste differences in log earnings, these effects are large for inter-religion differences in the same. At best, we can hazard a guess about the nature of these unobserved effects, and these might reflect factors such as social norms that have implications for mobility and networks that often have an impact on returns to characteristics.

The policy implications for these results are not straightforward. To begin with, they suggest that differences in educational endowment, as opposed to differences in returns on education, play an important role in determining differences in both inter-caste and inter-religion earnings. In other words, the ability of the government to reduce these differences by effecting laws that promote non-discrimination along lines of caste and religion, or even positive discrimination in favour of certain castes and religions is limited. At the same time, while the government can promote education by way of appropriate levels of investment, and while it can encourage people to educate themselves and their family members, in a democratic context, its role is limited and perhaps even secondary to the role of socio-economic forces that shape the decisions of individuals and households.

The government can perhaps play a bigger role in the context of the coefficients effect associated with age, to the extent that this effect reflects glass ceilings for some castes and religions that are a manifestation of discrimination. However, *ceteris paribus*, the higher returns to age and, hence, experience, for some of the castes and religions than those accruing to others might also reflect factors like choice of career paths (e.g., technocrat vs. managerial executive) and private social networks over which the government has little control. Nevertheless, this is an issue that demands a more in-depth look, and should be revisited by researchers in the future.

5. Concluding remarks

The Indian economy has attracted a lot of attention in the recent years, largely on account of its high rate of growth. Since the mid 1990s, there has been some evaluation of the impact on poverty of the market-oriented reforms that presumably caused this growth. However, a

serious analysis of inequality, especially as it is reflected in inter-caste and inter-religion differences in earnings, is conspicuous by its absence. At the same time, however, the rise of caste and religion as political forces in India since 1989 sharpened the possibility that noticeable inequality across castes and religions would slow down economic reforms considerably, to the detriment of economic growth. Hence, a thorough examination of inter-caste and inter-religion differences in earnings, and the patterns and determinants of these differences is imperative, and our paper aims to address this lacuna in the literature.

Using NSS data for about 30,000 individuals for both 1987 and 1999, we examine these differences in a variety of ways. Our analysis confirms the popular wisdom that the "upper" castes are better off, on average, than SC/ST and OBC. We also find that Hindus are better off than the Muslims, while those belonging to "other" religions are better off than the Hindus. While the inter-caste differences in earnings declined between 1987 and 1999, there was an increase in the differences in the earnings of Muslims and non-Muslims, in favour of the latter. Our analysis further suggests that inter-caste and inter-religion differences in educational endowment and the returns to age (and, hence, experience) explain much of the corresponding differences in (log) earnings. However, from the coefficient effects of education, there is no evidence in favour of caste- or religion-based discrimination. The policy implications for our results are discussed in Section 4.

An important shortcoming of our paper is our inability to take into consideration the self-employed individuals who constitute as much as 40 percent of the work force in urban India. This is on account of unavailability of earnings data for all but a handful of the self-employed respondents. This is what forced Kijima (forthcoming), for example, to restrict his sample to urban workers who were employed at formal sector organisations. However, given the reasonable assumption that a self-employed person in urban India is more likely to be at the lower end of income distribution than at the upper end, their omission from the sample makes it difficult to forcefully discuss the government's policy options in ameliorating the effects of earnings inequality. The exclusion of the self-employed people from the sample also affects an analysis of inter-caste and inter-religion differences in earnings because Muslims, SC/ST and OBC are over-represented in the sample of self-employed individuals. Collection of better data on these individuals, to facilitate research with greater policy implications, therefore, remains an important future endeavour.

References

Banerjee, A., Piketty, T. (2003) Indian top incomes, 1956-2000. Mimeo. Massachusetts Institute of Technology.

Datt, G., Ravallion, M. (1997) Macroeconomic crises and poverty monitoring: A case study for India. Review of Development Economics **1**, 135-152.

Datt, G., Ravallion, M. (2002) Why has economic growth been more pro-poor in some states of India than in others? Journal of Development Economics **68**, 381-400.

Datt, G., Kozel, V., Ravallion, M. (2003) A model based assessment of India's progress in reducing poverty in the 1990s. Economic and Political Weekly ….

Deaton, A., Dreze, J. (2002) Poverty and inequality in India: A re-examination. Economic and Political Weekly of India **37**, 3729-3748.

Duraisamy, P. (2000) Changes in returns to education in India, 1983-94: By gender, age-cohort and location. Working paper no. 815, Economic Growth Center, Yale University.

Gang, I.N., Sen, K., Yun, M.S. (2002) Caste, ethnicity and poverty in rural India. Discussion paper no. 694, IZA, Bonn.

Government of India (2001) Economic survey. New Delhi: Ministry of Finance.

Gupta, I., Mitra, A. (2004) Economic growth, health and poverty: An exploratory study for India. Development Policy Review **22**, 193-206.

Heckman, J.J., Layne-Farrar, A., Todd, P. (1996) Human capital pricing equations with applications to estimating the effects of schooling quality on earnings. Review of Economics and Statistics **78**, 562-610.

Kijima, Y. (forthcoming) Why did wage inequality increase? Evidence from urban India 1983-99. Journal of Development Economics.

Krishna, A. (2006) Pathways out of and into poverty in 36 villages of Andhra Pradesh. World Development **34**, 271-288.

Kuznets, S. (1955) Economic growth and income inequality. American Economic Review **45**, 1-28.

Meenakshi, J.V., Ray, R. (2002) Impact of household size and family composition on poverty in rural area. Journal of Policy Modeling **24**, 539-559.

Münich, D., Svejnar, J., Terrell, K. (2005) Is women's human capital valued more by markets than by planners? Journal of Comparative Economics **33**, 278-299.

Oaxaca, R. (1973) Male-female wage differentials in urban labor markets. International Economic Review **14**, 693-709.

Oaxaca, R.L., Ransom, M.R. (1999) Identification in detailed wage decompositions. The Review of Economics and Statistics **81**, 154-157.

Persson, T., Tabellini, G. (1994) Is inequality harmful for growth. American Economic Review **84**, 600-621.

Puhani, P.A. (2000) The Heckman correction for sample selection and its critique: A short survey. Journal of Economic Surveys **14**, 53-68.

Yang, D.T. (2005) Determinants of schooling returns during transition: Evidence from Chinese cities. Journal of Comparative Economics **33**, 244-264.

Yun, M.S. (2005) A simple solution to the identification problem in detailed wage decomposition. Economic Inquiry **43**, 766-772.

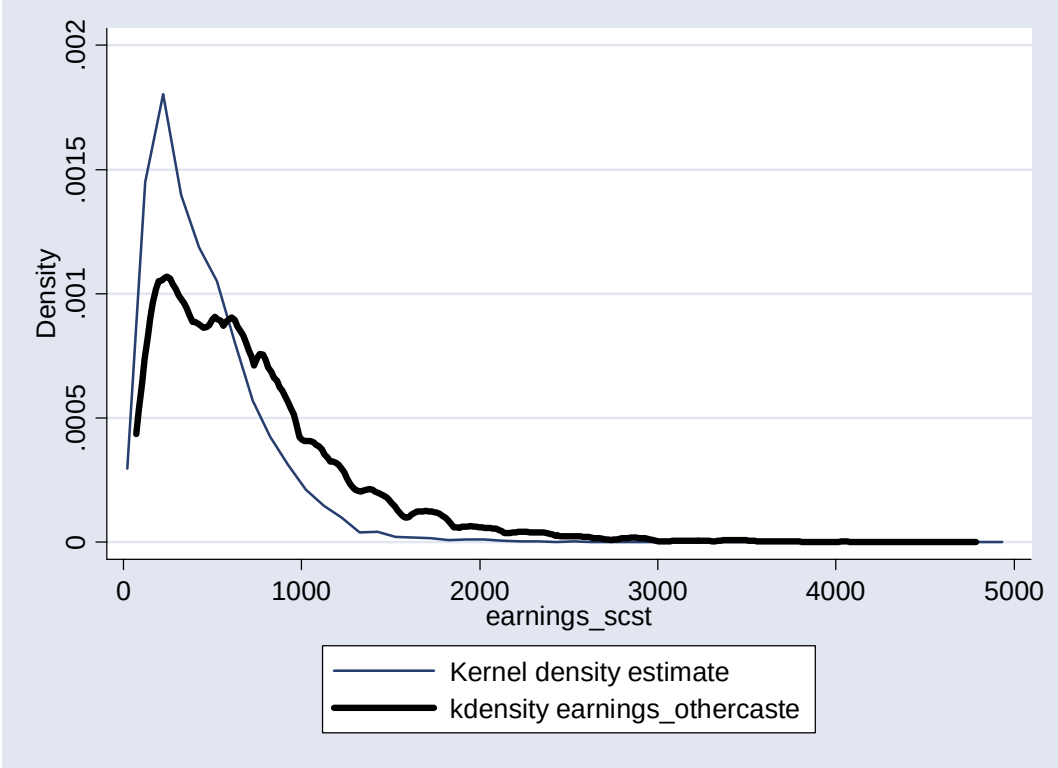
Table 1
Descriptive statistics

1987						
	Caste			**Religion**		
	SC/ST	**OBC**	**Other**	**Hindu**	**Muslim**	**Other**
Weekly earning (INR)	453.93 (336.03)		728.76 (607.13)	677.26 (576.36)	524.72 (396.10)	754.14 (587.49)
Age (years)	36.08 (9.92)		36.84 (10.01)	36.70 (10.00)	35.89 (9.98)	36.33 (9.92)
Female	0.21 (0.41)		0.15 (0.36)	0.16 (0.37)	0.10 (0.30)	0.25 (0.43)
Married	0.84 (0.37)		0.79 (0.40)	0.81 (0.40)	0.80 (0.40)	0.75 (0.44)
Illiterate	0.43 (0.49)		0.13 (0.33)	0.19 (0.39)	0.30 (0.46)	0.10 (0.31)
Primary education	0.27 (0.45)		0.21 (0.41)	0.23 (0.42)	0.31 (0.46)	0.20 (0.40)
Middle education	0.13 (0.33)		0.13 (0.34)	0.13 (0.34)	0.13 (0.33)	0.13 (0.34)
Secondary education	0.11 (0.32)		0.28 (0.45)	0.25 (0.43)	0.17 (0.38)	0.35 (0.48)
General tertiary	0.05 (0.22)		0.22 (0.41)	0.19 (0.39)	0.09 (0.28)	0.19 (0.40)
Professional education	0.002 (0.05)		0.02 (0.16)	0.02 (0.15)	0.01 (0.10)	0.02 (0.15)
Nobs	4596		19933	24529	3548	2641
1999						
	Caste			**Religion**		
	SC/ST	**OBC**	**Other**	**Hindu**	**Muslim**	**Other**
Weekly earning (INR)	787.76 (665.74)	821.25 (699.47)	1272.35 (976.66)	1044.32 (877.93)	782.45 (693.75)	1188.56 (882.27)
Age (years)	36.83 (9.83)	36.78 (9.93)	38.15 (10.01)	37.49 (9.97)	35.97 (10.09)	37.77 (9.84)
Female	0.16 (0.37)	0.13 (0.34)	0.15 (0.36)	0.15 (0.36)	0.08 (0.27)	0.26 (0.44)
Married	0.83 (0.40)	0.79 (0.40)	0.81 (0.39)	0.81 (0.39)	0.81 (0.40)	0.76 (0.43)
Illiterate	0.29 (0.45)	0.14 (0.34)	0.05 (0.22)	0.12 (0.33)	0.21 (0.41)	0.07 (0.25)
Primary education	0.24 (0.43)	0.21 (0.41)	0.11 (0.31)	0.17 (0.37)	0.27 (0.44)	0.14 (0.34)
Middle education	0.16 (0.37)	0.19 (0.39)	0.13 (0.34)	0.16 (0.36)	0.17 (0.38)	0.16 (0.37)
Secondary education	0.12 (0.33)	0.19 (0.39)	0.20 (0.40)	0.18 (0.39)	0.14 (0.35)	0.22 (0.42)
General tertiary	0.17 (0.38)	0.25 (0.43)	0.48 (0.50)	0.35 (0.48)	0.21 (0.41)	0.40 (0.49)
Professional education	0.005 (0.07)	0.01 (0.12)	0.04 (0.19)	0.03 (0.16)	0.01 (0.10)	0.02 (0.14)
Nobs	4563	6610	11600	22773	3273	3259

Note: The values within parentheses are standard deviations.
In 1987, the "other" castes included the OBC.

Figure 1
Comparison of earnings distributions across caste
(Kernel density plots)

(a) 1987



(b) 1999

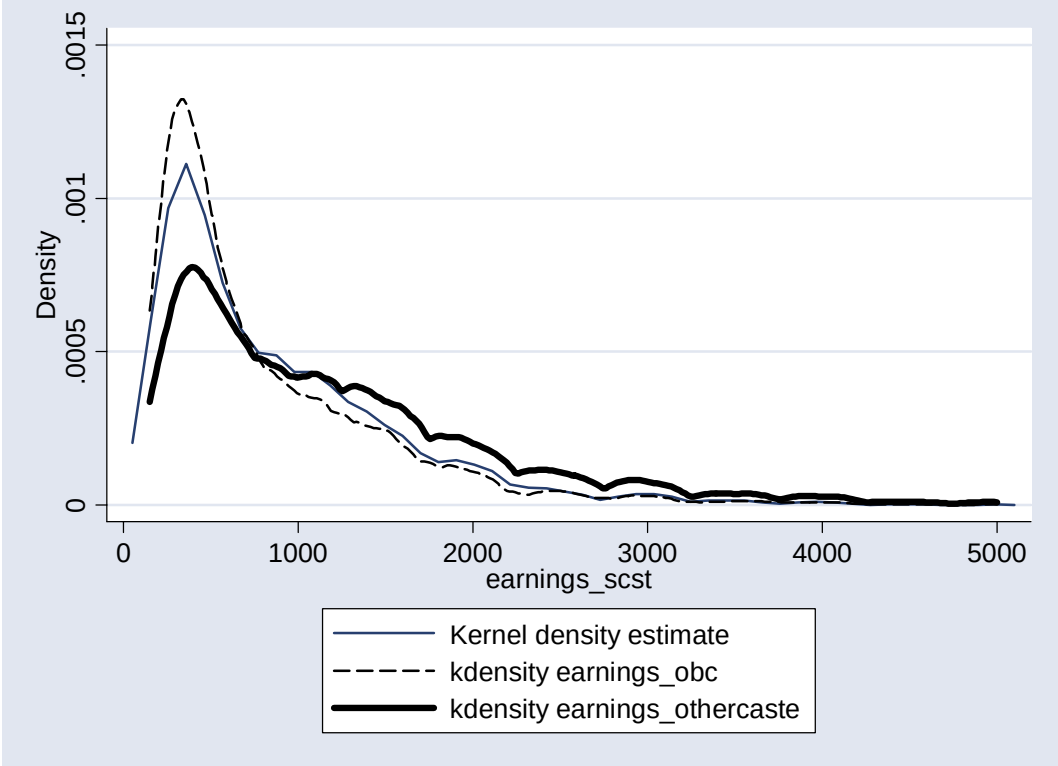
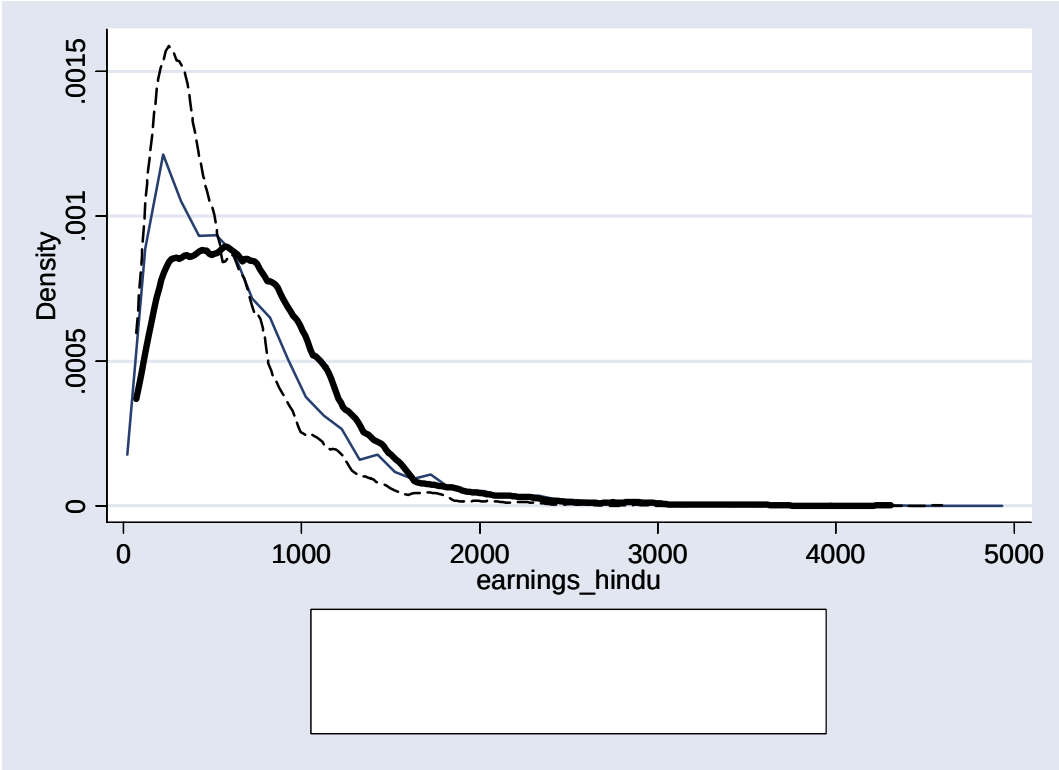


Figure 2
Comparison of earnings distributions across religion
(Kernel density plots)

(a) 1987



(b) 1999

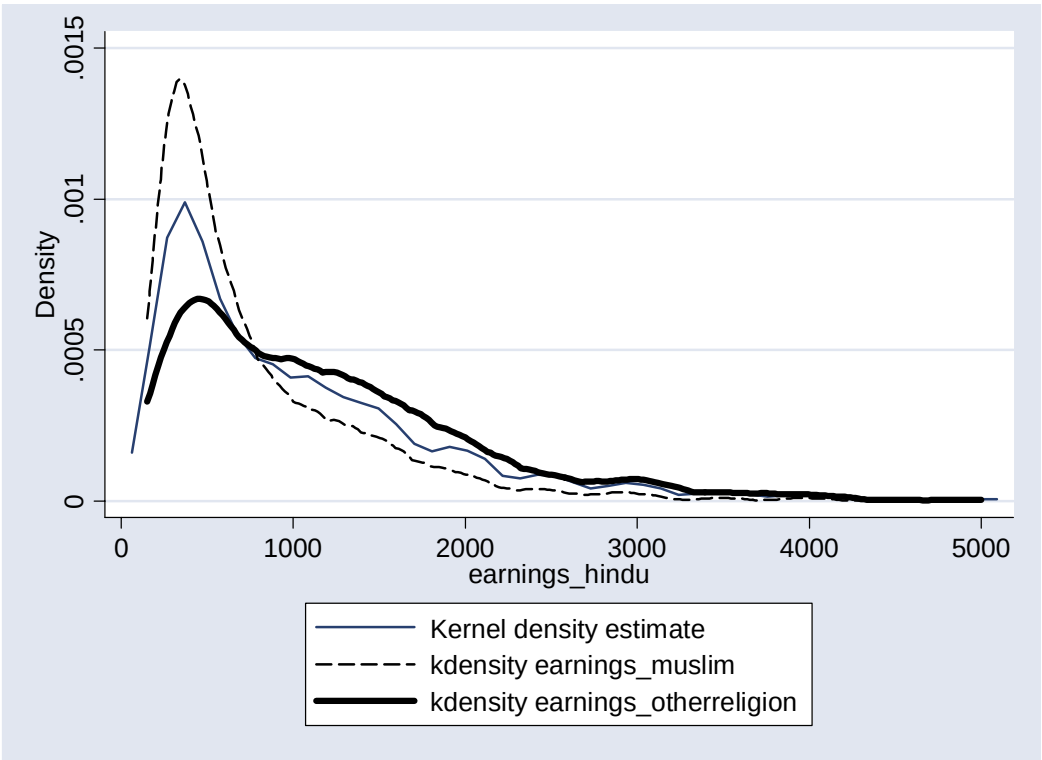
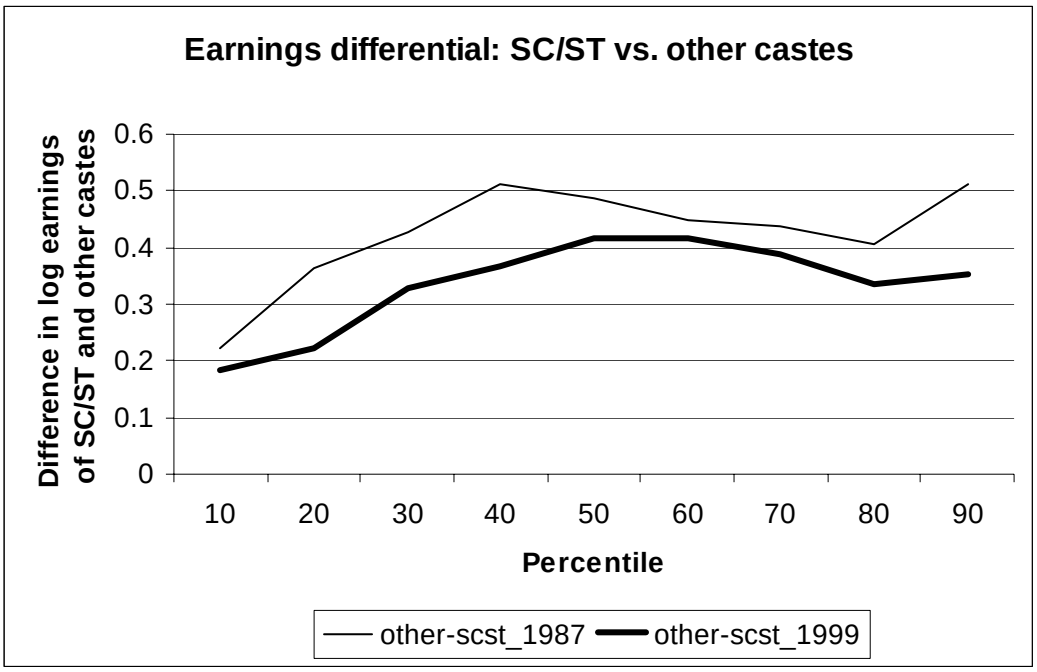
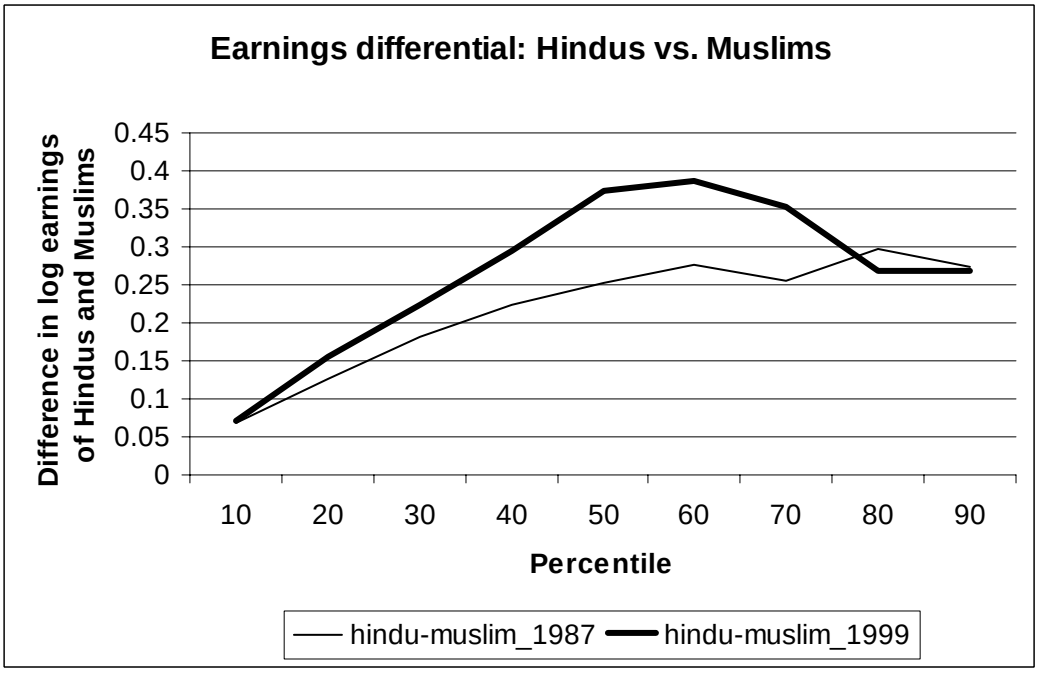


Figure 3
Earnings differential across castes and religions by percentile

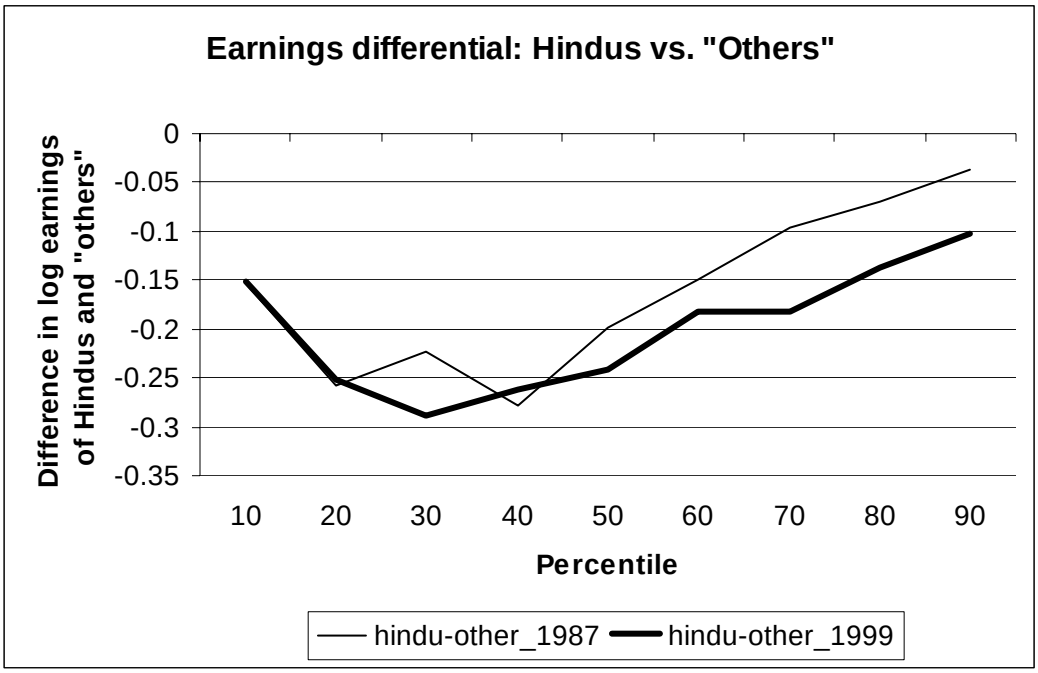
(a)



(b)



(c)


Earnings differential: Hindus vs. "Others"
Difference in log earnings of Hindus and "others"
0
-0.05
-0.1
-0.15
-0.2
-0.25
-0.3
-0.35
10
20
30
40
50
60
70
80
90
Percentile
hindu-other_1987
hindu-other_1999

(d)

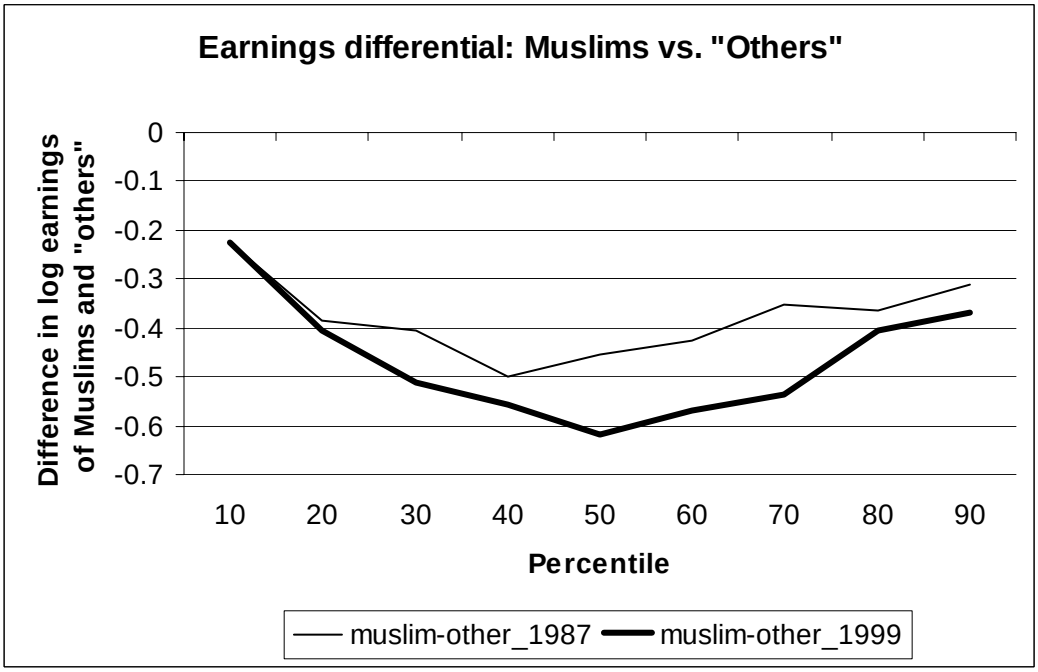

Earnings differential: Muslims vs. "Others"
Difference in log earnings of Muslims and "others"
0
-0.1
-0.2
-0.3
-0.4
-0.5
-0.6
-0.7
10
20
30
40
50
60
70
80
90
Percentile
muslim-other_1987
muslim-other_1999

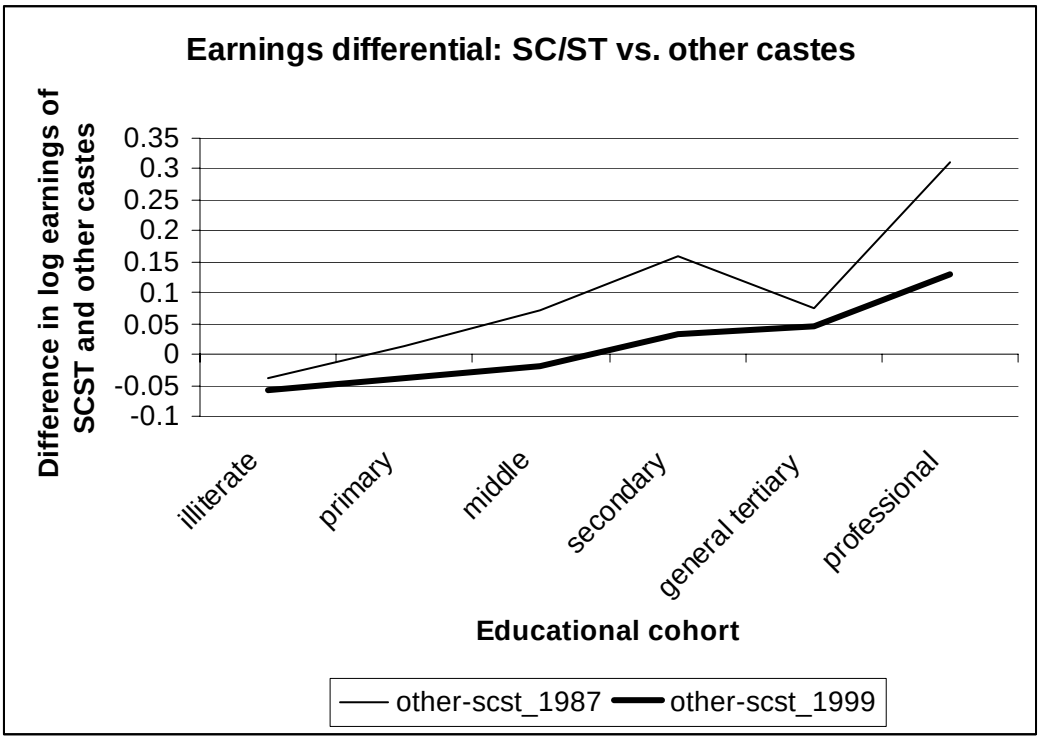
Table 2
Earning difference within and across education groups

1987						
	Caste			**Religion**		
	SC/ST	**OBC**	**Other**	**Hindu**	**Muslim**	**Other**
Illiterate	325.87		326.74	326.36	322.36	355.91
	(239.24)		(361.59)	(314.31)	(245.94)	(231.24)
Primary education	436.27		449.57	446.52	439.70	508.64
	(262.91)		(282.82)	(278.42)	(265.54)	(323.05)
Middle education	493.15		538.55	530.33	529.77	589.32
	(275.13)		(339.03)	(328.80)	(304.94)	(348.23)
Secondary education	671.61		810.68	798.60	740.05	802.59
	(382.86)		(575.10)	(562.36)	(400.21)	(409.31)
General tertiary	1006.90		1130.61	1124.42	987.68	1137.25
	(498.51)		(690.95)	(683.10)	(520.75)	(859.28)
Professional education	1244.63		1713.32	1702.92	1504.09	1625.36
	(597.03)		(812.47)	(810.84)	(685.10)	(968.68)
1999						
	Caste			**Religion**		
	SC/ST	**OBC**	**Other**	**Hindu**	**Muslim**	**Other**
Illiterate	484.46	412.27	508.15	466.04	454.29	526.26
	(344.62)	(301.95)	(347.29)	(334.10)	(287.39)	(451.26)
Primary education	608.60	549.09	642.47	596.99	557.73	646.97
	(391.44)	(393.96)	(441.18)	(411.20)	(429.22)	(403.36)
Middle education	707.28	648.00	739.54	700.21	649.84	807.64
	(487.69)	(507.23)	(544.17)	(521.14)	(476.80)	(470.16)
Secondary education	998.03	880.67	1089.13	1012.34	892.28	1152.69
	(757.58)	(589.73)	(706.06)	(686.13)	(570.31)	(763.64)
General tertiary	1443.38	1279.46	1605.10	1520.28	1350.15	1588.35
	(878.82)	(831.49)	(1008.62)	(971.56)	(929.27)	(947.92)
Professional education	2260.39	2352.23	2696.54	2615.09	2610.15	2747.68
	(857.46)	(190.20)	(1265.94)	(1245.83)	(1130.69)	(1003.67)

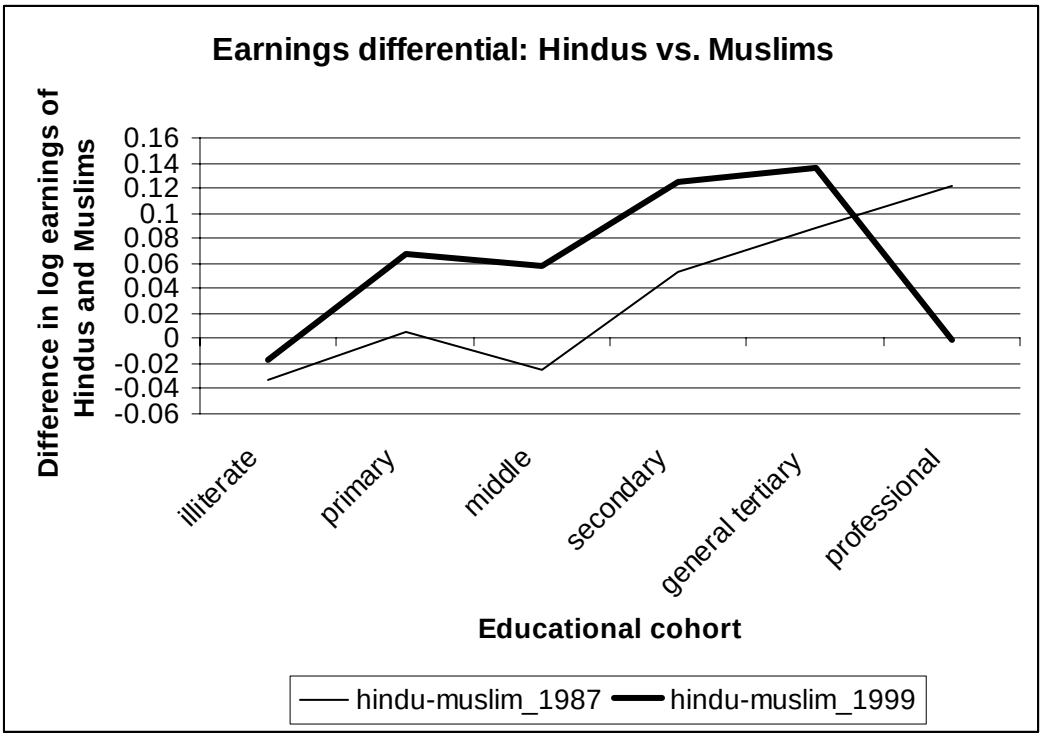
Note: The values within parentheses are standard deviations.
In 1987, the "other" castes included the OBC.

Figure 4
Earnings differential across castes and religions by educational cohort

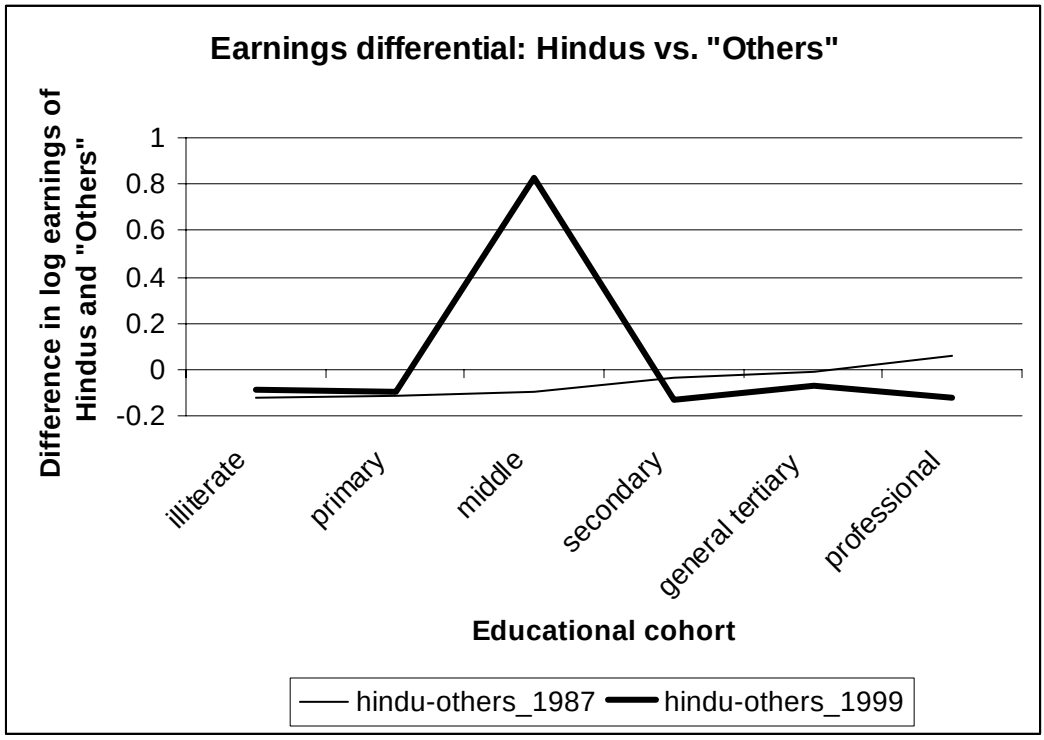
(a)



(b)



(c)


Earnings differential: Hindus vs. "Others"
Difference in log earnings of Hindus and "Others"
1
0.8
0.6
0.4
0.2
0
-0.2
illiterate
primary
middle
secondary
general tertiary
professional
Educational cohort
hindu-others_1987
hindu-others_1999

(d)

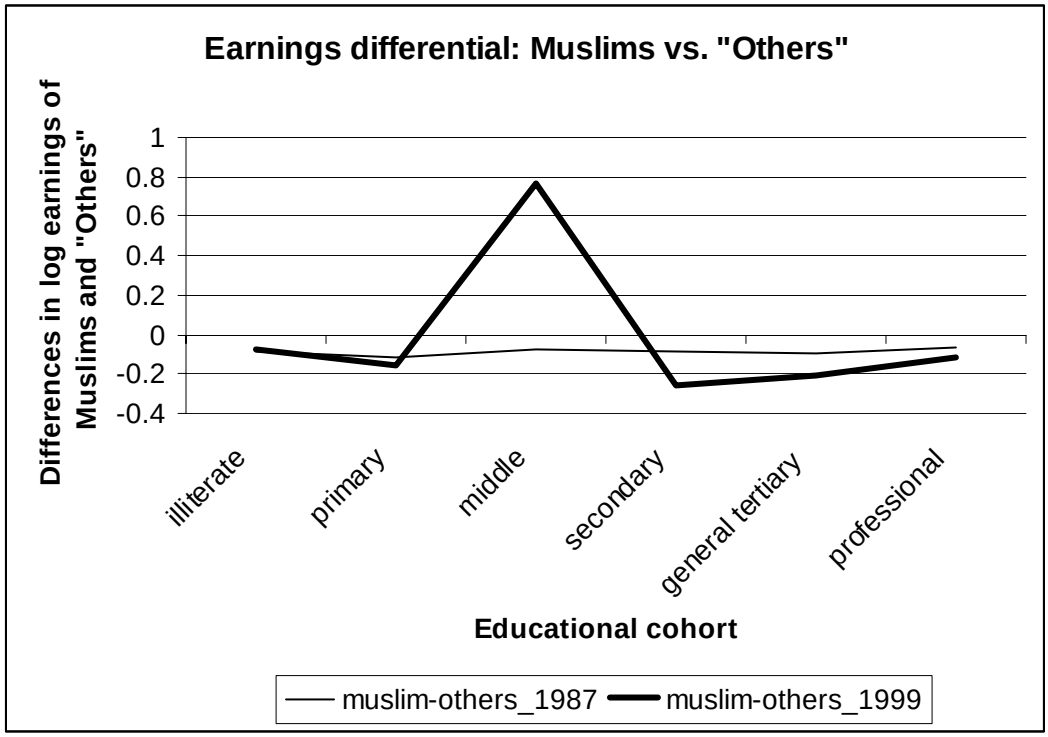

Earnings differential: Muslims vs. "Others"
Differences in log earnings of Muslims and "Others"
1
0.8
0.6
0.4
0.2
0
-0.2
-0.4
illiterate
primary
middle
secondary
general tertiary
professional
Educational cohort
muslim-others_1987
muslim-others_1999

Table 3
Determinants of weekly earnings

	1987					1999					
	Caste		Religion			Caste			Religion		
	SC/ST	Other	Hindu	Muslim	Other	SC/ST	OBC	Other	Hindu	Muslim	Other
Constant	3.60 *** (0.12)	3.41 *** (0.07)	3.45 *** (0.06)	3.74 *** (0.17)	3.71 *** (0.19)	4.85 *** (0.13)	4.65 *** (0.12)	4.78 *** (0.09)	4.76 *** (0.06)	5.41 *** (0.16)	4.79 *** (0.18)
Age	0.06 *** (0.01)	0.06 *** (0.00)	0.06 *** (0.003)	0.05 *** (0.008)	0.04 *** (0.01)	0.05 *** (0.01)	0.07 *** (0.01)	0.06 *** (0.005)	0.06 *** (0.003)	0.04 *** (0.01)	0.07 *** (0.01)
Age (sq)	- 0.001 *** (0.00)	- 0.001 *** (0.00)	- 0.001 *** (0.00)	- 0.0004 *** (0.0001)	- 0.0004 *** (0.0001)	- 0.0004 *** (0.0001)	- 0.001 *** (0.0001)	- 0.0004 *** (0.00)	- 0.001 *** (0.00004)	- 0.0002 ** (0.0001)	- 0.001 *** (0.0001)
Female	- 0.35 *** (0.02)	- 0.35 *** (0.01)	- 0.35 *** (0.01)	- 0.47 *** (0.03)	- 0.22 *** (0.03)	- 0.18 *** (0.02)	- 0.28 *** (0.02)	- 0.15 *** (0.02)	- 0.19 *** (0.01)	- 0.32 *** (0.04)	- 0.18 *** (0.02)
Married	0.07 *** (0.02)	0.10 *** (0.01)	0.10 *** (0.01)	0.08 *** (0.03)	0.10 *** (0.03)	0.09 *** (0.02)	0.11 *** (0.12)	0.16 *** (0.02)	0.13 *** (0.01)	0.04 (0.03)	0.08 *** (0.03)
Primary	0.25 *** (0.02)	0.29 *** (0.02)	0.28 *** (0.01)	0.27 *** (0.02)	0.31 *** (0.05)	0.20 *** (0.02)	0.25 *** (0.02)	0.21 *** (0.03)	0.23 *** (0.01)	0.14 *** (0.03)	0.21 *** (0.05)
Middle	0.40 *** (0.03)	0.47 *** (0.02)	0.46 *** (0.01)	0.47 *** (0.03)	0.46 *** (0.05)	0.34 *** (0.03)	0.41 *** (0.03)	0.38 *** (0.03)	0.40 *** (0.02)	0.32 *** (0.03)	0.41 *** (0.05)
Secondary	0.67 *** (0.03)	0.84 *** (0.02)	0.82 *** (0.01)	0.82 *** (0.03)	0.80 *** (0.04)	0.57 *** (0.03)	0.61 *** (0.03)	0.67 *** (0.03)	0.65 *** (0.02)	0.51 *** (0.03)	0.68 *** (0.05)
General Tertiary	1.04 *** (0.04)	1.18 *** (0.02)	1.17 *** (0.01)	1.16 *** (0.04)	1.10 *** (0.05)	0.92 *** (0.03)	0.91 *** (0.03)	1.01 *** (0.03)	0.99 *** (0.01)	0.84 *** (0.04)	0.99 *** (0.05)
Professional	1.40 *** (0.12)	1.64 *** (0.02)	1.63 *** (0.03)	1.43 *** (0.08)	1.51 *** (0.07)	1.40 *** (0.10)	1.53 *** (0.07)	1.58 *** (0.03)	1.59 *** (0.03)	1.52 *** (0.09)	1.64 *** (0.07)
State	Yes ***	Yes ***	Yes ***	Yes ***	Yes ***	Yes ***	Yes ***	Yes ***	Yes ***	Yes ***	Yes ***
Industry	Yes ***	Yes ***	Yes ***	Yes ***	Yes ***	Yes ***	Yes ***	Yes ***	Yes ***	Yes ***	Yes ***
F-stats Prob > F	106.64 (0.00)	598.63 (0.00)	758.55 (0.00)	75.22 (0.00)	58.56 (0.00)	115.16 (0.00)	174.34 (0.00)	306.08 (0.00)	692.50 (0.00)	84.14 (0.00)	91.70 (0.00)
R-square	0.42	0.52	0.53	0.46	0.46	0.48	0.48	0.48	0.52	0.47	0.50
Nobs	4596	19933	24529	3548	2641	4563	6610	11600	22773	3273	3259

Note: The values within parentheses are robust standard errors.
***, ** and * indicate significance at 1%, 5% and 10% levels
In 1987, the "other" castes included the OBC.

Table 4
Decomposition of earnings differentials across castes

	1987	1999			
	SC/ST-Other	**SC/ST-Other (Incl. OBC)**	**SC/ST-OBC**	**SC/ST-Other (Excl. OBC)**	**OBC-Other**
(Log) Earnings:					
High	Other	Other	OBC	Other	Other
Low	SC/ST	SC/ST	SC/ST	SC-ST	OBC
Difference	0.43	0.32	0.03	0.48	0.45
Endowments:	0.31	0.29	0.08	0.42	0.33
Of which					
Age	0.01	0.02	- 0.002	0.02	0.03
Female	0.01	0.002	0.003	0.001	- 0.002
Primary education	0.02	0.04	0.01	0.05	0.04
Secondary education	0.01	0.002	- 0.01	0.01	0.01
General tertiary	0.07	0.08	0.03	0.11	0.07
Professional	0.02	0.02	0.01	0.03	0.02
Region	- 0.02	- 0.01	- 0.04	0.02	0.07
Coefficients (without constant):	0.01	0.11	0.22	0.07	- 0.11
Of which					
Age	0.10	0.14	0.21	0.11	- 0.09
Female	- 0.0002	- 0.0003	- 0.01	0.003	0.01
Primary education	- 0.02	- 0.01	0.002	- 0.01	- 0.01
Secondary education	0..002	0.0003	0.003	- 0.001	- 0.003
General tertiary	0.002	0.002	- 0.01	0.003	0.02
Professional	0.0003	0.001	0.0004	0.001	0.004
Region	- 0.01	- 0.01	- 0.01	- 0.01	0.02
Constant	0.04	- 0.11	- 0.26	- 0.03	0.22
Interaction	0.07	0.02	- 0.02	0.03	0.002

Note: In the first and second columns, the “other” castes include the OBC.

Table 5
Decomposition of earnings differentials across religion

	1987			1999		
	Hindu-Muslim	**Hindu-Other**	**Muslim-Other**	**Hindu-Muslim**	**Hindu-Other**	**Muslim-Other**
(Log) Earnings:						
High	Hindu	Other	Other	Hindu	Other	Other
Low	Muslim	Hindu	Muslim	Muslim	Hindu	Muslim
Difference	0.21	0.16	0.36	0.26	0.17	0.43
Endowments:	0.13	0.08	0.23	0.21	0.10	0.30
Of which						
Age	0.01	- 0.01	0.01	0.03	0.01	0.04
Female	- 0.01	- 0.02	- 0.03	- 0.01	- 0.01	- 0.03
Primary education	0.04	0.01	0.05	0.04	0.01	0.05
Secondary education	0.01	0.01	0.02	0.001	- 0.001	- 0.002
General tertiary	0.05	0.003	0.05	0.04	0.02	0.05
Professional	0.01	0.002	0.01	0.01	- 0.004	0.01
Region	- 0.03	0.04	0.04	0.01	0.04	0.07
Coefficients (without constant):	0.23	- 0.35	- 0.11	0.45	0.19	0.62
Of which						
Age	0.35	- 0.35	- 0.01	0.47	0.18	0.64
Female	0.01	0.01	0.01	0.01	0.001	0.01
Primary education	- 0.01	0.01	0.01	0.003	- 0.01	- 0.01
Secondary education	- 0.01	0.01	- 0.01	0.01	0.004	0.01
General tertiary	0.002	- 0.01	- 0.01	0.01	- 0.01	0.01
Professional	0.002	- 0.002	0.001	- 0.0002	0.001	0.003
Region	- 0.03	0.01	- 0.03	0.02	0.01	0.01
Constant	- 0.20	0.42	0.22	- 0.45	- 0.16	- 0.61
Interaction	0.04	0.01	0.02	0.05	0.04	0.13