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Household Income Mobility in India, 1993-2011

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Abstract

Using nationally representative longitudinal survey, we examine the income mobility among rural (urban) Indian households over 1993-2004 and 2004-2011 (2004-2011). We find mobility estimates that mirror the social hierarchy: Forward Hindu Caste (FHC) households experienced the highest (lowest) upward (downward) mobility. Considerable gaps between FHC households and households from the disadvantaged social groups remain in upward/downward mobility even after controlling for households characteristics. We find lower conditional gaps in both upward/downward mobility in rural India for the disadvantaged groups (except for Muslims) over 2004-2011 compared to 1993-2004. For Muslims, the gaps in downward mobility increased over 2004-11 compared to 1993-2004.

JEL: O15, D31, I32

Keywords: Intragenerational, Income Mobility, Social Groups, Scheduled Castes/Tribes, India

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1 Introduction

The period after the market oriented reforms in 1991 in India is associated with rapid economic growth, experiencing an annual average rate of real GDP growth of 6.6 percent between 1992 and 2011.¹ However, this period is also associated with increasing inequality.² The Gini coefficient for consumption expenditure increased from 0.325 in 1993-94 to 0.375 in 2011-12. The Gini coefficient for income is much higher and it increased from 0.536 in 2004-05 to 0.543 in 2011-12.³ Given the context of high growth and increasing inequality, it is pertinent to ask question about economic mobility as the economic mobility—the rate at which individuals/households change positions in the income distribution over time—mitigates inequality. Other things being equal, an economy with rising mobility—one in which families move increasingly frequently or traverse increasingly greater distances up and down the income ladder—will result in a more equal distribution of lifetime incomes than an economy with declining mobility (Bradbury, 2011). Paul Krugman (1992) stated: “If income mobility were very high, the degree of inequality in any given year would be unimportant, because the distribution of lifetime income would be very even An increase in income mobility tends to make the distribution of lifetime income more equal.”

The importance of economic mobility is further enhanced in the Indian context because of stratified nature of Indian society based on caste and religion. Hindus who constitute about 80% of the Indian population are stratified across caste lines which originated historically based on occupation stratification.⁴ The low castes in Hindu society were historically relegated to menial occupations and faced severe social discrimination. Recognizing the so-

¹Authors' calculation using data from: <http://povertydata.worldbank.org/poverty/country/IND>.

²A number of papers examine trade liberalization in 1991 and inequality. For example, see Topolova (2007) and Krishna and Sethupathy (2011).

³The Gini for consumption is calculated from 50th and 61st rounds consumption expenditure surveys collected by National Sample Survey Organization in 2004-05 and 2011-12, respectively. The Gini for income is calculated from India Human Development Survey 2004-05 and 2011-12.

⁴According to Hindu religious texts, the caste system divided Hindu society into Brahmins (priests), Kshatriyas (warriors), Vaisyas (traders), Sudras (menial workers), and Ati Sudras (the former untouchables who engaged in the most menial jobs) (Kijima, 2005). Traditionally some of the upper castes possessed much land and power, while the lower castes provided services to the dominant castes (Banerjee and Knight 1985).

cial discrimination faced by lower castes, Articles 341 and 342 of the Constitution provided a list of groups officially designated as Scheduled Castes (SCs) and Scheduled Tribes (STs), and extended affirmative actions for these groups since 1950.⁵ According to Census of India 2011, Scheduled Castes and Scheduled Tribes comprise about 16.6 percent and 8.6 percent Indian population, respectively. In addition to SCs/STs, the Government of India also group a number of castes who are socially and educationally backward together as Other Backward Castes (OBCs), and the OBCs are entitled to 27% reservations in public sector employment since early 1990s. The Hindu castes excluding SC, ST, and OBC are higher Hindu castes (classified in this paper as Forward Hindu Castes (FHCs)). The FHCs are socially and educationally better off historically and do not get any affirmative benefits from the government. Besides caste, religion remains another dimension of social stratification. Muslims constitute the largest religious minority group in India with a population share of 14.2% in 2011, and Government of India (2006) finds that their performance on many economic and education indicators are comparable to SCs/STs. The existence of caste-based frictions (mainly differences between SC/ST and others) in labor market allocations and poverty status have been documented by a number of studies (e.g., Banerjee and Knight, 1985; Gang et al., 2008; Kijima, 2006; and Hnatkovska et al., 2012).

In this paper, we use three waves of nationally representative longitudinal household survey data to examine the economic mobility among rural households between 1993-94 and 2004-05, and between 2004-05 and 2011-12. We also examine the economic mobility among urban households between 2004-05 and 2011-12 using two waves of longitudinal household survey. Our main measure of economic status is per capita household income, and we examine the economic mobility of a household based on the rank of the household in the national income distribution at different time periods.⁶ We address the following questions.

⁵Affirmative actions included political reservation, reservation in employment and educational institutions according to the share of these groups in population.

⁶The per capita income of the household is more relevant measure for India for two reasons. Very low female labor force participation and high prevalence of self-employment means that labor earnings are not reported for a large percentage of population. Second, income inflows are generated from various sources and shared by each household member.

How much movements are there across the household income distribution over the two time intervals considered? How these movements differ over 2004-2011 compared to 1993-2004? Does the income mobility differ across rural and urban areas? Does the income mobility differ across social groups, and how those differences, if any, changed over the two time intervals considered? To what extent are the gaps in income mobility across social groups can be explained by differences in households' characteristics and geographical locations?

The paper contributes to the existing literature (briefly discussed in Section 1.1) in the following ways. First, we estimate the intragenerational mobility in rural areas using both the transition and rank mobility measures. We also provide bootstrap confidence bound for these estimates, and compare the estimates for different social groups. As we estimate the mobility measures in rural areas over 1993-2004 and 2004-2011, we are also able to comment on changes in mobility patterns over time. Second, we also estimate the mobility for urban areas, and compare the mobility estimates across urban and rural areas. Third, we not only document the unconditional mobility gaps across social groups but control for household level characteristics to estimate the conditional gaps in mobility across social groups, and compare the conditional gaps in mobility over time.

The findings of the paper are the following. The observed mobility patterns in rural areas follow a social hierarchy. Forward Hindu Caste households experienced the highest (lowest) upward (downward) mobility in rural areas over 1993-2004 and 2004-2011. Scheduled Tribe households experienced the lowest upward mobility in both time intervals, and highest downward mobility over 1993-2004. There is considerable overlap in the confidence intervals for mobility estimates for OBC, SC, and Muslim households in rural areas. In urban areas also, the Forward Hindu Caste households experienced the highest (lowest) upward (downward) mobility over 2004-2011. Muslim households in urban areas experienced the lowest (highest) upward (downward) mobility over 2004-2011. The gaps in mobility experienced by the households belonging to the disadvantaged groups compared to Forward Hindu Caste households is not entirely explained by differences in household characteristics

and geographic locations. Controlling for district fixed effects and household characteristics reduces the mobility gaps of the households belonging to Scheduled Castes/Scheduled Tribes/Other Backward Castes/Muslim compared to the Forward Hindu Caste households in rural areas. However, considerable and statistically significant gaps remain both in upward and downward mobility in rural areas. Importantly, the conditional gaps in upward mobility in rural areas over 2004-2011 is lower than observed conditional gaps in upward mobility over 1993-2004 for all disadvantaged social groups. In contrast, the conditional downward mobility gaps for Muslims in rural areas increased over 2004-2011 compared to 1993-2004. In urban areas, Muslim households experienced the largest gap (also statistically significant) in upward and downward compared to Forward Hindu Caste households. We also find that urban households have a higher (lower) probability to improve (worsen) their ranking in national income distribution compared to rural households.

It is important to recognize that there is no consensus about optimal level of relative mobility in intragenerational mobility, as an upward movement of one household is offset by a downward movement of another household. However, if the relative mobility differ across social groups, it is a concern for policy makers who intend to provide equality of opportunities.

The remainder of the paper is organized as follows. Section 1.1 provides a brief review of the existing literature. Section 2 describes the data. Section 3 describes the empirical methodology, and Section 4 presents the results. Section 5 concludes.

1.1 Literature

There exists a large intragenerational income mobility literature for developed countries (see Jäntti and Jenkins, 2015 for a review). A number of papers focus on wage earning and examine how individuals' earnings change over time (e.g. Buchinsky and Hunt, 1999; Kopczuk et al., 2010). Another set of papers use family income, measuring the degree to which individuals' family incomes change from one point in time to another, and a subset of

that research investigates how family income mobility patterns have changed over time (e.g. Bradbury, 2011; Hungerford, 2008). Many papers compare intragenerational income mobility between West Germany and the United States (e.g. Maasoumi and Trede, 2001). Aaberge et al. (2002) compares mobility in the United States with three Scandinavian countries (Denmark, Norway, and Sweden) in the 1980s. For developing countries, the literature on intragenerational income mobility is comparatively limited. Fields (2011) focus on developing countries and examine earning mobility in six countries: Argentina, Chile, China, Mexico, South Africa, and Ethiopia.

In the context of India, the increasing concerns about equality of opportunities have generated considerable interest in the issue of mobility. A number of papers consider inter-generational educational and occupational mobility (Azam and Bhatt, 2015; Azam, 2015, Hnatkowska et al. 2014). The intergenerational literature using income as a measure is scarce.

With the increasing availability of longitudinal surveys, there is a growing literature on the intragenerational mobility. Ranganathan et al. (2016) and Gautam et al. (2012) consider intragenerational mobility using longitudinal surveys. Ranganathan et al. (2016) use rural sample of the India Human Development Surveys (IHDS) collected in 2004-05 and 2011-12, and calculate the transition matrix between 2004-05 and 2011-12 based on 19,831 rural households. They find similar probability that a household in bottom (top) quintile moves up (down). Based on average mobility statistics, $M(= \frac{5-\sum_i p_{ii}}{4})$, they conclude that average mobility is higher among backward castes.⁷ Their estimates for M are 85.5%, 88.1%, 86.9%, and 88.5% for Forward Castes, OBCs, SCs, and STs respectively. Gautam et al. (2012) use Rural Economic and Demographic (REDS) surveys collected in 1999 and 2007. Based on the 5,885 rural panel households, they calculate the transition matrix for quintiles using income, consumption and assets as measure of economic status.⁸

⁷Where p_{ii} is diagonal elements of transition matrix. They report $M = 86.75\%$ for overall population, and upward (downward) mobility of 34.8% (34.5%).

⁸They calculate upward mobility, immobility, and downward mobility based on the transition matrix, however, the summation of their reported upward, downward, and immobility is larger than 1. For example,

Shariff and Krishna (2011) use the panel rural households from Human Development Profile of India (HDPI) and IHDS 2004-05 to study the escapes and descents into poverty between 1993-94 and 2004-05. Based on their panel data for more than 13,000 rural Indian households, they find that two parallel and opposite flows (ascents and descents in poverty) regularly reconfigure the national stock of poverty. Munshi and Rosenzweig (2006) use a survey for 4900 households residing in Bombay and investigate the effect of caste-based labor market networks on occupational mobility. They find that for males there are strong effects of traditional caste networks on occupational choice. Dang and Lanjouw (2015) use cross section data collected by National Sample Survey (NSS) in 2004-04, 2009-10 and 2011-12. Using the repeated cross-section, they construct the synthetic panel data to document escapes from poverty. However, pseudo-panels usually need to impose significant structural assumptions to yield mobility measures out of repeated cross-sectional surveys (Dang et al. 2014).

2 Data

We use three large scale household surveys collected in 1993-94, 2004-05, and 2011-12 (henceforth, 1993, 2004, and 2011, respectively). The 1993 survey, known as Human Development Profile of India (HDPI), was collected by National Council of Applied Economic Research (NCAER), and the 2004 and 2011 surveys known as India Human Development Survey- 1 and 2 (IHDS-1 and IHDS-2) were collected jointly by NCAER and the University of Maryland (see Shariff, 1999; Desai et al. 2005; and Desai and Vanneman, 2015 for details).⁹ All three surveys collected information about household income from different sources (agriculture, labor, remittances, business, and other income sources), and the income definitions remained similar. All three data also report an aggregated annual household income.¹⁰

they report 0.66 upward income mobility, 0.33 income immobility, and 0.26 income downward mobility (Figure 1 of Gautan et al.). Hence it not clear whether their transition matrices are based on rank.

⁹IHDS data is publicly available from Inter-university Consortium for Political and Social Research (ICPSR). HDPI data can be accessed from NCAER on request. See <http://ihds.info/> for more details.

¹⁰The income measure is post tax and include any income from government scheme (transfers).

IHDS-1 collected information on 41,554 households (26,734 rural and 14,820 urban). The 2011 IHDS re-interview all households surveyed in 2004 as well as split households (if located within the same village or town) to trace changes in their lives. IHDS-2 were unable to reconnect with 6911 households surveyed in IHDS-1. The attrition rate was higher in urban India (4147 households lost, about 28%) compared to rural India (2764 households lost, about 10%). To establish a one-to-one matching of households between 2004 and 2011, we combine the split households in 2011 into a single household to match with the root household in 2004. In combining the split households as a single household, we compute income as the weighted average (by household size) of the income of the component households.¹¹ This gives us a balanced panel of 34,643 households (23,970 rural and 10,673 urban households) between 2004 and 2011. We also drop households who reported zero or negative income in either 2005 or 2011. Hence, our final sample is panel (over 2005 and 2011) of 23,111 rural and 10,489 urban households.

IHDS-1 rural sample also contain one-third of the households surveyed in the 1993 HDPI survey. The 1993 HDPI is a random sample of 33,230 households from rural India, located in 16 major states, 195 districts and 1,765 villages. According to Census 2011, these 16 major states accounts for 97.5% of the total rural population. 13,593 rural households surveyed in 1993 HDPI were randomly selected for re-interview in 2004 IHDS-1. Only about 82% of the households were contactable for re-interview resulting in a resurvey of 11,153 original households as well as 2,440 households which separated from these root households but were still living in the village (NCAER, 2011). We combine the split households weighted by household size (the households which formed between 1993 and 2004 by splitting the 1993 root households) into a single household in 2004 to establish one-to-one matching between 1993 and 2004.¹² This gives us a balanced panel of 10,726 households between 1993 and 2004. We further drop 191 households which reported zero or negative income.

¹¹About 13.6 percent of 2004 rural households split to form two or more households in 2011, while 8.5 percent of 2004 urban households split to form two or more households in 2011.

¹²About 8.5 percent of the 1993 root households split into two or more households between 1993 and 2004.

Using the two panels, we examine mobility patterns of rural households over two time intervals a) over 1993-2004 and b) over 2004-2011, while for urban households we examine mobility patterns over 2004-2011. The 1993-2004 rural analysis is based on the 10,518 rural households that are common between 1993 HDPI and 2004 IHDS, while the 2004-2011 rural analysis is based on the 23,111 rural households in IHDS-1 that are also surveyed in IHDS-2.¹³ To study the mobility differences across social groups, we consider four social groups: Scheduled Castes, Scheduled Tribes, Other Backward Castes, Muslims, and Forward Hindu Castes.¹⁴ Table 1 provides the sample size of each social group in our panel data.

To examine the mobility, our main measure of welfare is per capita income, and we rank households based on per capita income.¹⁵ To derive per capita income, we divide annual household income by the household size.¹⁶ We adjust for spatial price differences in each wave using state wise urban/rural poverty lines.¹⁷

3 Empirical Methodology

In broader terms, mobility is the pace and degree to which individuals' or families' incomes (or other measures of well being) change over time relative to one another or relative to the overall income distribution (Bradbury, 2011). Some researchers (e.g. Shorrocks,1978) view mobility as a re-ranking phenomenon, in which individuals switch income positions.

¹³We also constructed another panel over 2004-2011 by restricting to the only those households that were surveyed in 1993 HDPI and IHDS-1. We examine the overall mobility over 2004-2011 using this sample also, and we do not find qualitative differences using the 1993 households only vs. the larger sample common between IHDS-1 and IHDS-2, and use the larger sample in our analysis.

¹⁴The rest which include Christians, Sikhs, and Jains are not included as a separate social group because of small sample size, however, these groups are included for overall population mobility estimates.

¹⁵Measurement error in our welfare measure "per capita income" is a potential concern. Unlike the regression context, where familiar analytical formulas can be derived to demonstrate how measurement error can affect estimates, it is unclear how the rank estimates are affected (Corak, 2014). Any measurement error in the income will have no effect on the estimation result if the rank is preserved in the measurement of income utilized (Bhattacharya and Mazumder, 2011).

¹⁶Few studies in other countries adjust the household income using equivalent scale. However, no official equivalent scales are available for India. Moreover, the official poverty estimates and the majority of literature on poverty and inequality in India are based on per capita consumption expenditure.

¹⁷As we compare the ranks of the households across time, and not the income, we do not adjust for price changes over time.

In this approach, mobility is a purely relative concept. In the view of other researchers (e.g. Fields and Ok, 1996, 1999), mobility arises as soon as individuals move away from their initial income levels. In this approach, mobility is best characterized as an absolute concept. Consequently, there is less consensus on the measurement of mobility than on the measurement of inequality.¹⁸ In this paper, we focus on ranking and do not consider absolute movements. Following Bhattacharya and Mazumdar (2011), Mazumdar (2014), and Corak et al. (2014), we calculate the directional rank mobility in addition to the traditional transition probabilities.

3.1 Transition Probabilities

Let Y_1 and Y_0 are the per capita income percentile of a household in period 1 and period 0. Then the upward transition probability (hereafter UTP) is the probability that the household per capita income percentile in period 1 (Y_1) exceeds a given percentile s , in the period 1 income distribution by an amount τ , conditional on that household's income percentile in period zero (Y_0) being at or below s in the period 0 income distribution.

$$UTP_{\tau,s} = Pr(Y_1 > \tau + s | Y_0 \leq s) \tag{1}$$

For example, in a simple case where $\tau = 0$ and $s = 0.2$, the upward transition probability ($UTP_{0,20}$) would represent the probability that a household income percentile exceed the bottom quintile in period 1, conditional on that household belonged to the bottom quintile of the income distribution in period 0. We will vary s in increments of 10 percentiles throughout the bottom half of the distribution (i.e. 10, 20, ..., 50). We also estimate mobility measures for non-overlapping deciles (i.e., 1-10, 10-20, ..., 40-50).

We can alternatively define downward transition probabilities ($DTP_{\tau,s}$) by altering the

¹⁸Income mobility connotes different ideas to different researchers, and the income mobility literature is fundamentally unsettled (Fields, 2008).

inequality signs:

$$DTP_{\tau,s} = Pr(Y_1 < s - \tau | Y_0 \geq s) \quad (2)$$

In this case, we vary s from 50th percentile to 100th percentile.

3.2 Rank Mobility

Following Bhattacharya and Mazumder (2011) and Mazumdar (2014), we define upward directional rank mobility (URM) which estimates the likelihood that a household position in total income distribution in period 1 surpass the household position in total income distribution in period 0 by a given amount τ , conditional on household position in period 0 income distribution was below a given percentile s .

$$URM_{\tau,s} = Pr(Y_1 - Y_0 > \tau | Y_0 \leq s) \quad (3)$$

In the simple case where $\tau = 0$, this is the probability that the the rank of a household in period 1 income distribution exceeds the rank of that household in period 0 income distribution.

Similarly, the downward rank mobility (DRM) can be defined as:

$$DRM_{\tau,s} = Pr(Y_1 - Y_0 < \tau | Y_0 \geq s) \quad (4)$$

As discussed in Mazumdar (2014), one of the criticism of transition probabilities is that they require using arbitrarily chosen cutoffs such as the 20th percentile. In contrast, the directional rank mobility measures simply compare the rank in one period to rank of another period. When making comparisons between population subgroups, there is an unambiguous advantage to using the rank mobility. However, Bhattacharya and Mazumder (2011) show that when using the full sample (that is, pooling all subgroups), the rank mobility measures are only meaningful if there is some cutoff, s , used to condition the sample.

The directional rank mobility is able to pick up the movement across income distribution that are neglected in transition probability. For transition probability one imposes arbitrary lower and upper cutoffs say k_1 and k_2 . Thus in order to move out of this interval, a household needs to breach the bounds regardless of where they start out in the distribution. So a household in middle of the interval need to gain or lose more compared to someone who is close to the cutoffs. In the case of social group comparison, this is important. It is plausible that the more households belonging to the disadvantaged groups will be closer to lower bound k_1 , while more households belonging to Forward Hindu Caste will be closer to upper bound k_2 . The directional rank mobility only require a household to exceed or fall behind their rank in period 0 by some fixed amount τ . Bhattacharya and Mazumder (2011) develop the distribution theory for both transition probabilities and the directional rank mobility estimators and justify why the bootstrap can be used to calculate standard errors.

3.3 Conditional gaps

We also explore whether the differences in income mobility across social groups can be explained by the observed characteristics of the households. The exploration is merely descriptive in nature and not causal. The descriptive exploration analysis may yield useful clues about which factors are potentially important in mobility.¹⁹ Bhattacharya and Mazumdar (2011) develop nonparametric statistical methodology for analyzing conditional transition probabilities with continuous covariates. However, conditioning mobility measures on large number of covariates is difficult to do nonparametrically given the small sizes that arise as more and more covariates are introduced (McDonough, 2015). Therefore, we estimate linear probability model. Specifically we estimate the following equation.

$$y_i = \alpha + \sum_{j=1}^4 \beta_j socgroup_j + X_{i0}\gamma + \delta_d + \varepsilon_i \quad (5)$$

¹⁹Recent work by Chetty et al. (2014) and Mazumdar (2014) also do not attempt to estimate causal effects.

where y_i is equal to 1 if the household i is upward mobile between period 0 and 1, $socgroup_j$ are dummies for four social groups (OBC, SC, ST, and Muslim). The excluded group is FHC, hence β_j picks up the gap in mobility between group j and FHC. X_{i0} is a matrix of household covariates in period 0, while δ_d is district fixed effects. When we impose $\gamma, \delta_d = 0$, β_j 's pick up the unconditional gaps in mobility of each disadvantaged group compared to FHC. We also consider the downward mobility as outcome. For upward rank (transition) mobility, we use the probability of a household improving its rank in period 1 compared to its rank in period 0 (moving out of the bottom 50 percentile) while belonging to bottom 50th percentile in period 0.²⁰ Similarly for downward rank (transition) mobility, we use the probability of a household falling in rank in period 1 compared to period 0 (falling out of top 50 percentile) while belonging to top 50 percentile of income distribution in period 0 .

The specific covariates used are household demographic composition, education and occupation of the household head, main income source of the household, access to productive assets, and participation in government welfare scheme.

4 Results

4.1 Income mobility in rural India

For rural India, we construct the empirical distribution of per capita household income for each year using the rural sample (households from all social groups), and find ranking of each household based on their position in overall per capita income distribution. Then we use the ranking of each household in overall rural income distribution to compute the mobility estimates for each social group. We plot the mobility measures for each social group for the ease of comparison, and the actual estimates are given in online appendix. Figure 1 plots the rank mobility estimates for the entire rural population between 1993 and 2004, and 2004 and

²⁰While the choice of the 50th percentile is arbitrary, in 1993-94 (2004-05) 50.1 (41.8) percent of the rural population was classified as poor based on Tendulkar Methodology of poverty calculation (Government of India, 2014).

2011 based on the two panels. The 95% confidence bounds derived through bootstrapping with 100 replications are also plotted. Figure 1 also presents the mobility estimates over 2004-2011 based on the sample that only contains households who were surveyed in the 1993 HDPI survey. As evident from the Figure 1, the estimates of upward rank mobility over 2004-2011 is similar for the panel constructed from IHDS and the panel that contains the 1993 households only. The downward rank mobility estimates over 2004-2011 differ marginally for $\tau = 10, 20$ if we use the 1993 households only compared to the larger panel over 2004-2011 from IHDS1 and IHDS-2. However, the confidence intervals of the DRM estimates from both samples overlap. Hence we use the larger panel constructed from IHDS-1 and IHDS-2 to examine mobility over 2004 and 2011. Nonetheless, the estimates from the two time intervals can be compared as both panel give mobility estimates for the rural India.

For upward rank mobility, the estimates over 1993-2004 are similar to the estimates over 2004-2011 (Figure 1). Similarly for downward rank mobility estimates for the two time intervals are similar except for the mobility estimates for the top decile for $\tau = 10, 20$. Hence, there is little evidence that income mobility changed over time. Admittedly, the duration of time interval is not same for the two panels. While the first panel has a gap of 11 years, the second panel only has a gap of 7 years. Given the longer duration of the first time interval, one would expect a higher churning in the first time interval (1993-2004) compared to the second time interval (2004-2011), and the comparison across these two intervals does not provide conclusive evidence about changes in mobility. Nonetheless, our main focus is to examine mobility gaps across social groups within each time period. We also compare the gaps between the two time intervals, and the comparison of gaps across the two time intervals should not be problematic unless the gaps itself change based on the duration of the interval.

Figure 2 plots the upward transition probabilities experienced by each social group over the two time intervals for different values of $\tau = 0, 10, 20$. The left panel shows the UTPs over 1993-2004, while the right panel shows UTPs over 2004-2011. The x -axis varies the

sample used based on the percentile range of per capita household income in the base period data—1993 (2004) for mobility over 1993-2004 (2004-2011)—, while the y -axis shows the transition probability that per capita income of the household surpassed this range by τ in period 1. As expected if we increase the τ , the UTP decreases for all social groups and in both time intervals. Similarly, as we move to the right and gradually increase the percentile range of household per capita income, the upward transition probabilities fall. This is expected as we increase the upper bound that a household need to cross. Regarding the differences in UTPs across social groups, there exist a social hierarchy. The UTPs are highest among FHC households compared to the households belonging to other social groups in both time intervals, and the gap becomes more evident as we increase the amount of jump, τ , or increase the percentile range. The UTP estimates for OBC, SC, and Muslim households are statistically indistinguishable in both time intervals. Importantly the ST households experienced the lowest UTPs in both time intervals. Moreover, comparing the left and right panels of Figure 2 suggest that overall there are not much changes in the gaps in UTPs across social groups.

Figure 3 plots the estimates of upward rank mobility for $\tau = 0, 10, 20$. As expected, the upward mobility estimates using the URM are larger than the estimates using the UTP measure. For example, 86 percent of SC households who belonged to bottom quintile of 1993 rural income distribution surpass their 1993 income rank in 2004. In contrast, only 71 percent of the SC households from 1993 bottom quintile moved out of the bottom quintile in 2004. This implies that about 15 percent of SC households who belonged to the 1993 bottom quintile although improve their income ranking in 2004 compared to 1993, however, the magnitudes of the improvements are not enough to move them out of the bottom quintile of the 2004 income distribution. The URM estimates (for $\tau = 0$) shows no statistically distinguishable mobility over 1993-2004 across social groups except when we consider the bottom 50 percent of households. ST households experienced the lowest upward rank mobility. When we increase the τ , the advantage of FHC households in upward rank mobility is clearly ex-

hibited. More FHC households improved their ranks by 10 or 20 percentiles. Comparing across the two time intervals (left vs. right panel of Figure 3), there are not substantial changes in mobility gaps patterns across the two time intervals. Online appendix Figure A1 and Figure A2 present the UTP and URM by each decile for bottom five deciles. The overall patterns are similar to patterns observed for cumulative deciles. FHC (ST) households experienced the highest (lowest) UTP/URM (DTP/DRM) over both time intervals. SC, OBC, and Muslim households experienced similar upward and downward mobility.

Figure 4 plots the DTPs over 1993-2004 and 2004-2011. The advantage of FHC households is clear in the DTPs: they experienced considerably lower DTPs compared to other social groups in both time intervals. Over 1993-2011, the ST households experienced the highest DTPs. However, the confidence intervals of the DTP estimates for the ST households and the SC households overlap. Over 2004-2011, the confidence intervals for DTP estimates for SC, ST, OBC, and Muslim households show considerable overlap. FHC households experienced considerably lower DTPs compared to other social groups over 2004-2011. Figure 5 plots the DRM estimates, and overall they show similar patterns as DTP estimates.²¹

In summary, the social hierarchy of the Hindu castes is also reflected clearly in the income mobility over time. FHC households experienced higher upward and lower downward mobility in both time intervals. ST households experienced the lowest upward mobility (UTP/URM) in both time intervals. While the ST households experienced higher DTP/DRM compared to SC households over 1993-2004, they experienced similar DTP (lower DRM) compared to SC households over 2004-2011. There is considerable overlap of confidence intervals of mobility estimates for SC, OBC, and Muslim households, and we cannot reject the null that these groups experienced similar upward/downward mobility over both time intervals.

²¹Online appendix Figure A3 and Figure A4 plots the DTP/DRM for each decile, and overall patterns are similar.

4.2 Income mobility in urban India

For urban India, we construct the empirical distribution of per capita household income for each year using the urban sample (households from all social groups), and find ranking of each household based on their position in overall per capita income distribution. As the 1993 data does not cover urban areas, our mobility measures are based on mobility between 2004 and 2011, and hence, we cannot comment on whether the gaps have increased or decreased over time. In addition, given the small sample size of ST households in urban India, we combine ST households with SC households.

Figure 6 plots the upward rank mobility (left panel) and upward transition probabilities (right panel) for urban India over 2004-2011. The point estimates of URM/UTP suggest clear hierarchy across Hindu castes in terms of upward mobility: the FHC households experienced the highest upward mobility followed by OBC and SC/ST households. The upward mobility estimates are lowest for the Muslim households. For $\tau = 0$, although the URM suggest a higher mobility for FHC households, there is considerable overlap of 95% confidence intervals across social groups. If we consider $\tau = 10, 20$, the URM among FHC households becomes statistically different (higher) compared to SC/ST and Muslim households. In comparison to URM, the UTP clearly exhibit higher upward mobility for FHC households compared to SC/ST households for all three τ 's considered. Although the point estimates of upward mobility (both URM/UTP) for Muslim households are lower than SC/ST households, the 95% confidence intervals of these estimates overlap for these two social groups.

Figure 7 plots the estimates for DRM and DTP for urban India. The point estimates suggest highest downward mobility (DRM/DTP) for Muslim households. Importantly, since the confidence intervals of the estimates for Muslim households do not overlap with confidence intervals of the estimates for SC/ST households except at few points, one may conclude that Muslim households in urban India experienced higher downward mobility compared to SC/ST households. FHC households experienced the lowest downward mobility based on both measures. The 95% confidence intervals for FHC households and SC/ST households

exhibit considerable overlap for DRM measure but not much for DTP measure suggesting that even if FHC households experienced decline in their position in income distribution, the decline is probably not enough to move them out of the intervals considered.²²

4.3 Urban/Rural differences in mobility over 2004-2011

Although one would expect that urban households would have higher probability of improving their ranking in country's income distribution, how much advantage is there for urban households is an empirical question. To address the differences in mobility across urban and rural areas, we construct the empirical distribution of per capita household income for each year using the pooled sample (both urban and rural), and find ranking of each household based on their position in overall per capita income distribution in India.²³ Figure 8 plots the upward mobility estimates for rural and urban areas. It is evident from the Figure that a household living in urban area has a much higher probability to improve its ranking in national income distribution. For example, a urban household that belonged to the bottom 50 percent of the national income distribution in 2004 has 71 percent probability of surpassing its 2004 rank in 2011. In contrast, a rural household that belonged to the bottom 50 percent of the national income distribution in 2004 only has 65 percent probability of surpassing its 2004 rank in 2011. Similarly, a household in urban area has 42 percent probability to surpass the 50th percentile in 2011 if it belonged to bottom 50th percentile in 2004. However a household in rural area only has 31 percent probability of surpassing 50th percentile if it belonged to bottom 50 percentile of income distribution in 2004. Importantly, the households in urban areas experienced significantly (statistically) higher URM/UTP over 2004-2011.

Figure 9 plots the estimates for downward mobility for urban and rural areas. As expected,

²²Online appendix Figure A5 (Figure A6) plots the upward (downward) mobility estimates for bottom (top) five deciles. Point estimates present similar patterns, however, the confidence intervals exhibit more overlap across social groups given the wider intervals because of comparatively smaller sample sizes when we restrict sample to only a decile.

²³To adjust for spatial and urban/rural prices differences, we adjust the per capita income distribution in each year using the state-specific urban/rural poverty line (with urban poverty line in the state of Uttar Pradesh as base).

the rural households experienced much higher downward mobility (both DRM and DTP) over 2004-2011 compared to urban households.

4.4 Conditional mobility gaps in rural India

The mobility estimates presented earlier do not control for households or geographic differences. In this section, we explore whether the differences in household or geographic characteristics explain the gaps observed in income mobility across social groups. Table 2a presents the gaps in mobility (over 1993-2004) for each social group with respect to FHC households for households who belonged to bottom 50 percent (for upward mobility) or top 50 percent (for downward mobility) of the 1993 rural income distribution. Column 1, 2, 3 of Table provide unconditional mobility gaps for $\tau=0, 10, \text{ and } 20$. Column 4, 5, 6 provide those gaps when the influence of districts are controlled for by district fixed effects. Column 7, 8, 9 provide those gaps when households characteristics in addition to district fixed effects are controlled for.

Panel 1 and Panel 2 of Table 2a provide gaps in upward rank mobility and upward transition probabilities. The unconditional gaps in UTP with respect to FHC households are larger than the unconditional gaps in URM for all four social groups. Thus even if we consider only those households which improve their income ranking in 2004 compared to 1993 income ranking, the FHC households are much more likely to surpass the 50th percentile compared to other social groups. This is probably because of combination of two factors. First FHC households may have experienced larger gains compared to other social groups. Second, more FHC households are closer to the upper bound of the interval compared to other groups. Controlling for district fixed effects lead to a noticeable reduction in gaps in both measures of upward mobility. Largest decline of the gap is observed in case of STs, which is because of relative isolation of STs to more geographically isolated areas. For $\tau = 0$, after controlling for district fixed effects, the gap in URM is statistically significant for only ST households. However, for $\tau = 20$, the URM gaps with comparison to FHC households are

statistically significant for all the four social groups. In contrast, the gaps in UTPs remain statistically significant for all four social groups for all three τ 's. Controlling household characteristics in addition to district fixed effects lead to further reduction in the gaps in upward mobility. Nevertheless, there remains considerable gaps in transition probabilities even after conditioning on household characteristics and districts. For example, the SC and ST households that belonged to bottom 50 percent of the 1993 income distribution are about 11 percentage points less likely to improve their rank by 20 or more percentiles ($\tau = 20$) compared to FHC households that also belonged to bottom 50 percent of the 1993 income distribution. The gaps for SC/ST households are marginally wider when we consider UTP as a measure of upward mobility (about 14 percentage points).

Panel 3 and 4 of Table 2a provide the gaps for downward mobility. The unconditional gaps suggest that OBC, SC, ST, and Muslim households are more likely to have experienced decline in their rank in rural income distribution compared to FHC households over 1993-2004. Controlling for district fixed effects reduces the gaps for all four social groups, however the gaps remain statistically significant for both measures of downward mobility. Controlling for household characteristics further reduces the gaps. Importantly, the DTP gaps for OBC households are no more statistically significant. Similarly, the gaps in DRM are no more statistically significant for OBC and Muslim households for $\tau=10,20$. Nevertheless, considerable and statistically significant gaps remain for the SC and ST households for both measures. The SC (ST) households belonging to top 50 percent of the rural income distribution in 1993 are about 7 (15) percentage points more likely to fall below 40th percentile ($\tau = 20$) in 2004 rural income distribution when compared to FHC households who also belonged to top 50 percent of the rural 1993 income distribution.

Table 2b presents the mobility gaps over 2004-2011. Comparing Table 2a and Table 2b, the unconditional gaps are lower over 2004-2011 when compared to the unconditional gaps over 1993-2004 for each of the social disadvantaged groups.²⁴ Moreover controlling for

²⁴The gap is larger over 2004-2011 for ST households in URM measure for $\tau = 0$.

district fixed effects and household characteristics lead to substantial reduction in the upward mobility gaps. The URM gaps become statistically insignificant for all social groups except for the STs for $\tau = 0$. For $\tau = 10$, the gaps are statistically significant only for SC and ST households. Importantly, the gaps in conditional UTP with respect to FHC households are statistically significant for all four social groups, and gaps in UTP are larger than gaps in URM for $\tau = 0, 10$. Moreover, the conditional gaps in upward mobility over 2004-2011 is lower than observed conditional gaps in upward mobility over 1993-2004 for all social groups including STs.

Panel 3 and Panel 4 of Table 2b present the gaps in downward mobility. Controlling for household characteristics and district fixed effects reduce the downward mobility gaps considerably. However, most of the gaps in DRM/DTP are statistically significant. For ST households although the gaps in DRM is not statistically significant for $\tau = 0, 10$, the gaps in DTP are statistically significant and larger in magnitude compared to the gaps for other disadvantaged groups. Hence the ST households are much more likely to fall below the 50th percentile compared to FHC households. The conditional downward mobility gaps (both DRM/DTP) over 2004-2011 are larger compared to conditional downward mobility gaps over 1993-2004 for Muslim households. The conditional gaps in DTPs are larger for OBC households over 2004-2011, however, the conditional gaps in DRM for OBC households are lower over 2004-2011 compared to 1993-2004. For the SC and ST households, the conditional downward mobility gaps compared to FHC households are lower over 2004-2011 compared to 1993-2004.

Table 3 presents the correlates of URM/UTP (DRM/DTP) for households belonging to bottom 50 percent (top 50 percent) of the rural income distribution. The dependent variable is a binary indicator that captures URM/UTP (or DRM/DTP) for $\tau = 20$. Age of the household head is positively (negatively) associated with upward (downward) mobility. Education of the household head positively (negatively) associated with upward (downward) mobility. Importantly, only education levels above middle school has positive association

with upward mobility during 2004-2011. If a household main source of income is salary, they are more likely to have experienced upward mobility. Similarly, having access to productive asset such as tractor improves probability of upward mobility. The household which split between period 0 and period 1, are more (less) likely to have experienced downward (upward) transition mobility compared to the households who remain intact. However, there are no differences in the mobility between split and intact households in term of rank mobility.

4.5 Conditional mobility gaps in urban India

Table 4 presents the gaps in mobility (over 2004-2011) for each of the four social group with respect to FHC households for households who belonged to bottom 50 percent (for upward mobility) or top 50 percent (for downward mobility) of the 2004 urban income distribution. Controlling for household characteristics and district fixed effects reduces the gaps in upward mobility considerably. Importantly, the gaps in URM are no more statistically significant for OBC and SC/ST households. However, the gaps in UTP remain significant for all three social groups. In addition, the gaps in UTPs are larger than gaps in URMs. The highest gaps in UTPs are experienced by Muslim households, and these gaps are much larger in magnitude than the gaps experienced by the SC/ST households.

Panel 3 and Panel 4 of Table 4 presents the gaps in downward mobility estimates. The SC/ST, OBC, and Muslim households that belonged to top 50 percent of 2004 urban income distribution are more likely to have experienced downward mobility over 2004-2011 compared to FHC households. Importantly, when we control for household characteristics and district fixed effects, the gaps in DRM/DTP decline, and those gaps are no more statistically significant for the SC/ST and OBC households (except the gap in DTP for OBC at $\tau = 10$). For Muslims, considerable and statistically significant gaps in both DRM/DTP remain. Moreover, the gaps observed by Muslim households are much larger in magnitude than the gaps experienced by the OBC, SC/ST households over 2004-2011. In the absence of mobility estimates for 1993-2004, we cannot comment whether those gaps increased com-

pared to 1993-2004.

5 Conclusion

We document income mobility among rural (urban) Indian households over 1993-2004 and 2004-2011 (2004-2011). We use both rank and transition mobility measures to document how mobility patterns differ across social groups and across urban/rural areas. We also examine whether the mobility gaps of the disadvantaged social groups compared to higher Hindu castes could be explained by differences in household and geographic characteristics.

We find a hierarchy in terms of income mobility across social groups that mirrors the social hierarchy in the Indian society. The households belonging to the disadvantaged Hindu Castes (Scheduled Castes (SCs), Scheduled Tribes (STs), and Other Backward Castes (OBCs)) experienced lower (higher) upward (downward) income mobility in rural areas in both time intervals compared to the households belonging to the Higher/Forward Hindu Castes (FHCs). FHC households also experienced highest (lowest) upward (downward) mobility over 2004-2011 in urban areas. Muslim households also experienced lower (higher) upward (downward) mobility compared to FHC households, and their mobility estimates are similar to the OBC or SC households in rural areas in both time intervals. However, in urban areas Muslim households experienced higher downward mobility compared to the OBC, SC/St households.

The gaps in mobility between households belonging to the disadvantaged social groups and FHC households reduce considerably when we control for the household characteristics and district fixed effects, however, large gaps remain. Conditional gap in mobility (both upward and downward) is largest for the ST households in rural areas over 1993-2004, however, over 2004-2011, the conditional gap is largest for ST households only for upward mobility, but for downward mobility the gaps for Muslim households is larger than gaps for ST households. Importantly, the conditional gaps in mobility in rural areas declined for all disadvantaged groups over 2004-2011 compared to 1993-2004 except for Muslim households. The condi-

tional upward mobility gaps for Muslim households compared to FHC households in rural areas are smaller over 2004-2011 compared to the conditional upward gaps over 1993-2004, however, the conditional downward mobility gaps are larger for Muslim households in rural areas over 2004-2011 compared to the downward mobility gaps over 1993-2004. Similarly, the conditional mobility gaps for Muslim households in urban areas compared to FHC households are large than the conditional mobility gaps for the SC/ST households compared to FHC households over 2004-2011.

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Table 1: Panel structure of data (number of households)

	Panel 1993-2004	Panel 2004-2011
Panel A: Rural		
Total	10,518	23,111
Forward Castes (FC)	2,261	4,419
Other Backward Castes (OBC)	3,514	8,083
Scheduled Castes (SC)	2,616	5,278
Scheduled Tribes (ST)	1,035	2,594
Muslim	791	2,118
Others	301	619
Panel B: Urban		
Total	NA	10489
Forward Castes (FC)		3,036
Other Backward Castes (OBC)		3,254
Scheduled Castes (SC)		1,836
Scheduled Tribes (ST)		343
Muslim		1,600
Others		420

Table 2a: Mobility Gaps (between 1993 and 2004) for each social group with respect to FHC, Rural

		No controls			Control district fixed effects			Add households characteristics		
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		$\tau = 0$	$\tau = 10$	$\tau = 20$	$\tau = 0$	$\tau = 10$	$\tau = 20$	$\tau = 0$	$\tau = 10$	$\tau = 20$
Panel 1: Upward Rank Mobility for households below 50th percentile										
OBC	URM	-0.076*** (0.019)	-0.111*** (0.020)	-0.144*** (0.022)	-0.021 (0.020)	-0.034 (0.022)	-0.063*** (0.024)	-0.031 (0.020)	-0.037 (0.025)	-0.059*** (0.021)
SC	URM	-0.051** (0.022)	-0.095*** (0.023)	-0.131*** (0.023)	-0.026 (0.022)	-0.064*** (0.020)	-0.105*** (0.020)	-0.044** (0.019)	-0.078*** (0.025)	-0.108*** (0.024)
ST	URM	-0.124*** (0.022)	-0.211*** (0.026)	-0.221*** (0.024)	-0.062** (0.027)	-0.120*** (0.030)	-0.119*** (0.028)	-0.068*** (0.025)	-0.119*** (0.030)	-0.107*** (0.029)
Muslim	URM	-0.049* (0.025)	-0.087*** (0.028)	-0.148*** (0.029)	-0.018 (0.030)	-0.060** (0.029)	-0.126*** (0.034)	-0.053* (0.030)	-0.085** (0.034)	-0.135*** (0.035)
Panel 2: Upward Transition Probabilities for households below 50th percentile										
OBC	UTP	-0.167*** (0.024)	-0.184*** (0.021)	-0.177*** (0.020)	-0.074*** (0.022)	-0.099*** (0.023)	-0.113*** (0.020)	-0.060** (0.025)	-0.084*** (0.020)	-0.097*** (0.020)
SC	UTP	-0.146*** (0.022)	-0.184*** (0.021)	-0.180*** (0.021)	-0.114*** (0.021)	-0.157*** (0.021)	-0.160*** (0.018)	-0.098*** (0.024)	-0.135*** (0.019)	-0.137*** (0.022)
ST	UTP	-0.261*** (0.027)	-0.274*** (0.022)	-0.242*** (0.023)	-0.163*** (0.024)	-0.181*** (0.027)	-0.172*** (0.023)	-0.131*** (0.030)	-0.148*** (0.023)	-0.143*** (0.025)
Muslim	UTP	-0.131*** (0.030)	-0.182*** (0.028)	-0.189*** (0.022)	-0.110*** (0.032)	-0.146*** (0.029)	-0.157*** (0.029)	-0.091*** (0.033)	-0.125*** (0.029)	-0.135*** (0.031)
Panel 3: Downward Rank Mobility for households above 50th percentile										
OBC	DRM	0.119*** (0.016)	0.128*** (0.020)	0.109*** (0.018)	0.052*** (0.017)	0.056** (0.022)	0.032* (0.018)	0.042** (0.019)	0.035* (0.018)	0.018 (0.018)
SC	DRM	0.104*** (0.019)	0.136*** (0.021)	0.114*** (0.019)	0.095*** (0.020)	0.131*** (0.023)	0.110*** (0.018)	0.097*** (0.020)	0.109*** (0.021)	0.101*** (0.018)
ST	DRM	0.178*** (0.027)	0.222*** (0.033)	0.205*** (0.028)	0.131*** (0.028)	0.179*** (0.029)	0.180*** (0.031)	0.113*** (0.028)	0.135*** (0.032)	0.151*** (0.030)
Muslim	DRM	0.111*** (0.029)	0.126*** (0.029)	0.099*** (0.028)	0.097*** (0.032)	0.095*** (0.032)	0.082** (0.035)	0.071** (0.030)	0.043 (0.035)	0.043 (0.029)
Panel 4: Downward Transition Mobility for households above 50th percentile										
OBC	DTP	0.130*** (0.016)	0.112*** (0.015)	0.084*** (0.015)	0.052*** (0.017)	0.044*** (0.015)	0.025 (0.016)	0.014 (0.020)	0.017 (0.019)	0.004 (0.017)
SC	DTP	0.172*** (0.020)	0.149*** (0.016)	0.090*** (0.015)	0.167*** (0.020)	0.149*** (0.019)	0.089*** (0.018)	0.109*** (0.021)	0.112*** (0.017)	0.066*** (0.019)
ST	DTP	0.302*** (0.031)	0.272*** (0.027)	0.192*** (0.030)	0.256*** (0.031)	0.251*** (0.031)	0.185*** (0.032)	0.187*** (0.029)	0.203*** (0.033)	0.150*** (0.030)
Muslim	DTP	0.183*** (0.026)	0.140*** (0.025)	0.058** (0.024)	0.158*** (0.032)	0.130*** (0.030)	0.054** (0.027)	0.077** (0.032)	0.073** (0.034)	0.015 (0.029)

Note: Standard errors derived through bootstrapping with 100 replications are in parenthesis. *** p<0.01, ** p<0.05, * p<0.1. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Table 2b: Mobility Gaps (between 2004 and 2011) for each social group with respect to FHC, Rural

		No controls			Control district fixed effects			Add households characteristics		
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		$\tau = 0$	$\tau = 10$	$\tau = 20$	$\tau = 0$	$\tau = 10$	$\tau = 20$	$\tau = 0$	$\tau = 10$	$\tau = 20$
Panel 1: Upward Rank Mobility for households below 50th percentile										
OBC	URM	-0.040*** (0.013)	-0.077*** (0.014)	-0.096*** (0.015)	-0.004 (0.015)	-0.037** (0.016)	-0.054*** (0.016)	0.010 (0.015)	-0.017 (0.015)	-0.028* (0.017)
SC	URM	-0.035** (0.014)	-0.073*** (0.013)	-0.118*** (0.015)	-0.031** (0.013)	-0.065*** (0.013)	-0.110*** (0.016)	-0.013 (0.015)	-0.034** (0.017)	-0.067*** (0.017)
ST	URM	-0.159*** (0.016)	-0.201*** (0.018)	-0.210*** (0.016)	-0.067*** (0.021)	-0.109*** (0.020)	-0.121*** (0.021)	-0.047** (0.021)	-0.075*** (0.022)	-0.078*** (0.022)
Muslim	URM	-0.045** (0.018)	-0.075*** (0.020)	-0.104*** (0.016)	-0.033* (0.019)	-0.072*** (0.022)	-0.104*** (0.024)	-0.020 (0.020)	-0.044* (0.023)	-0.062** (0.024)
Panel 2: Upward Transition Probabilities for households below 50th percentile										
OBC	UTP	-0.113*** (0.013)	-0.112*** (0.015)	-0.096*** (0.012)	-0.062*** (0.014)	-0.064*** (0.014)	-0.058*** (0.013)	-0.032** (0.016)	-0.033** (0.016)	-0.027* (0.015)
SC	UTP	-0.118*** (0.014)	-0.126*** (0.016)	-0.112*** (0.014)	-0.109*** (0.017)	-0.111*** (0.013)	-0.098*** (0.014)	-0.067*** (0.018)	-0.064*** (0.016)	-0.051*** (0.015)
ST	UTP	-0.228*** (0.016)	-0.209*** (0.015)	-0.177*** (0.014)	-0.140*** (0.018)	-0.138*** (0.019)	-0.130*** (0.015)	-0.093*** (0.018)	-0.087*** (0.019)	-0.081*** (0.017)
Muslim	UTP	-0.120*** (0.018)	-0.128*** (0.019)	-0.102*** (0.017)	-0.101*** (0.024)	-0.120*** (0.018)	-0.113*** (0.018)	-0.051** (0.022)	-0.064*** (0.023)	-0.059*** (0.018)
Panel 3: Downward Rank Mobility for households above 50th percentile										
OBC	DRM	0.066*** (0.010)	0.103*** (0.013)	0.094*** (0.011)	0.037*** (0.012)	0.061*** (0.014)	0.056*** (0.012)	0.029** (0.012)	0.041*** (0.014)	0.038*** (0.014)
SC	DRM	0.062*** (0.013)	0.105*** (0.014)	0.088*** (0.014)	0.059*** (0.014)	0.094*** (0.015)	0.083*** (0.015)	0.036** (0.014)	0.057*** (0.015)	0.054*** (0.015)
ST	DRM	0.088*** (0.015)	0.137*** (0.017)	0.143*** (0.017)	0.036* (0.019)	0.065*** (0.020)	0.082*** (0.021)	0.014 (0.022)	0.027 (0.026)	0.048** (0.022)
Muslim	DRM	0.107*** (0.016)	0.157*** (0.018)	0.145*** (0.017)	0.107*** (0.019)	0.149*** (0.021)	0.131*** (0.020)	0.098*** (0.019)	0.122*** (0.019)	0.112*** (0.022)
Panel 4: Downward Transition Mobility for households above 50th percentile										
OBC	DTP	0.127*** (0.013)	0.107*** (0.012)	0.081*** (0.009)	0.092*** (0.011)	0.080*** (0.011)	0.056*** (0.011)	0.058*** (0.012)	0.053*** (0.011)	0.042*** (0.010)
SC	DTP	0.137*** (0.014)	0.110*** (0.011)	0.070*** (0.010)	0.127*** (0.013)	0.102*** (0.012)	0.066*** (0.012)	0.067*** (0.015)	0.062*** (0.013)	0.048*** (0.011)
ST	DTP	0.193*** (0.019)	0.170*** (0.016)	0.124*** (0.012)	0.151*** (0.020)	0.126*** (0.018)	0.084*** (0.017)	0.090*** (0.020)	0.080*** (0.018)	0.055*** (0.018)
Muslim	DTP	0.165*** (0.018)	0.131*** (0.017)	0.111*** (0.015)	0.201*** (0.020)	0.151*** (0.021)	0.119*** (0.021)	0.149*** (0.022)	0.117*** (0.022)	0.102*** (0.017)

Note: Standard errors derived through bootstrapping with 100 replications are in parenthesis. *** p<0.01, ** p<0.05, * p<0.1. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Table 3: Correlates for upward mobility (for bottom 50% of the households) and downward mobility (for top 50% of the households) for $\tau=20$, Rural India

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Between 1993 and 2004				Between 2004 and 2011			
	URM-20	UTP-20	DRM-20	DTP-20	URM-20	UTP-20	DRM-20	DTP-20
OBC	-0.059*** (0.021)	-0.097*** (0.020)	0.018 (0.018)	0.004 (0.017)	-0.028* (0.017)	-0.027* (0.015)	0.038*** (0.014)	0.042*** (0.010)
SC	-0.108*** (0.024)	-0.137*** (0.022)	0.101*** (0.018)	0.066*** (0.019)	-0.067*** (0.017)	-0.051*** (0.015)	0.054*** (0.015)	0.048*** (0.011)
ST	-0.107*** (0.029)	-0.143*** (0.025)	0.151*** (0.030)	0.150*** (0.030)	-0.078*** (0.022)	-0.081*** (0.017)	0.048** (0.022)	0.055*** (0.018)
Muslim	-0.135*** (0.035)	-0.135*** (0.031)	0.043 (0.029)	0.015 (0.029)	-0.062** (0.024)	-0.059*** (0.018)	0.112*** (0.022)	0.102*** (0.017)
Female head	0.046 (0.040)	0.014 (0.031)	-0.004 (0.036)	-0.025 (0.027)	0.029* (0.017)	0.021 (0.014)	-0.040** (0.017)	-0.036*** (0.013)
Head's age	0.009*** (0.003)	0.004* (0.003)	-0.007*** (0.003)	-0.007** (0.003)	0.015*** (0.002)	0.011*** (0.002)	-0.011*** (0.002)	-0.005*** (0.002)
Head's age square	-0.000*** (0.000)	-0.000 (0.000)	0.000** (0.000)	0.000** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	0.000*** (0.000)	0.000** (0.000)
Head's education: Primary	0.017 (0.022)	0.040** (0.018)	-0.064*** (0.021)	-0.041** (0.016)	0.013 (0.013)	0.028** (0.011)	-0.014 (0.013)	-0.031*** (0.010)
Middle	0.046** (0.023)	0.062*** (0.020)	-0.056*** (0.021)	-0.052*** (0.015)	0.008 (0.016)	0.039*** (0.014)	-0.028** (0.014)	-0.027** (0.012)
Secondary	0.053* (0.031)	0.078** (0.031)	-0.071*** (0.024)	-0.059*** (0.019)	0.084*** (0.019)	0.097*** (0.018)	-0.045*** (0.016)	-0.048*** (0.012)
Senior Secondary	0.139** (0.070)	0.184*** (0.061)	-0.159*** (0.037)	-0.076*** (0.029)	0.109*** (0.034)	0.107*** (0.030)	-0.097*** (0.021)	-0.084*** (0.018)
Tertiary	0.067 (0.093)	0.279*** (0.084)	-0.078** (0.033)	-0.097*** (0.024)	0.068 (0.042)	0.123*** (0.037)	-0.116*** (0.023)	-0.094*** (0.015)
Head's occupation: Farmer	-0.019 (0.021)	-0.013 (0.016)	0.006 (0.019)	-0.001 (0.016)	-0.024 (0.015)	-0.026** (0.011)	0.027* (0.015)	0.019** (0.009)
Salaried	-0.003 (0.044)	0.001 (0.041)	-0.056* (0.030)	-0.029 (0.020)	-0.034* (0.020)	0.002 (0.019)	0.006 (0.016)	-0.002 (0.013)
Non-agriculture labor	-0.017 (0.030)	-0.026 (0.019)	0.004 (0.038)	0.020 (0.032)	-0.023 (0.017)	0.021 (0.014)	0.024 (0.018)	0.011 (0.015)
Cultivate land (1/0)	-0.070*** (0.020)	-0.017 (0.015)	0.042* (0.022)	0.009 (0.017)	0.026* (0.014)	0.019 (0.012)	-0.013 (0.014)	0.015 (0.012)
Amount of land cultivated	-0.002 (0.002)	0.000 (0.001)	0.001 (0.001)	-0.001*** (0.000)	0.007 (0.012)	0.031** (0.016)	-0.021*** (0.007)	-0.012*** (0.005)
Dependency ratio	0.043** (0.021)	0.006 (0.015)	-0.043** (0.021)	-0.001 (0.015)	0.011 (0.012)	-0.015* (0.008)	0.002 (0.016)	0.029** (0.013)
Household Size	-0.008 (0.008)	-0.014*** (0.005)	0.001 (0.007)	-0.001 (0.006)	-0.014*** (0.005)	-0.015*** (0.003)	-0.006 (0.005)	-0.002 (0.004)
Number of adult males	0.030** (0.015)	0.026** (0.011)	-0.015 (0.012)	0.000 (0.010)	0.028*** (0.009)	0.023*** (0.007)	-0.008 (0.009)	-0.006 (0.007)
Number of adult females	0.009 (0.017)	0.008 (0.012)	-0.025* (0.015)	0.004 (0.012)	0.028*** (0.010)	0.013* (0.008)	-0.003 (0.009)	0.010 (0.009)
Main source income: Cultivation	0.042** (0.020)	0.029* (0.017)	0.015 (0.023)	0.020 (0.018)	0.027** (0.012)	-0.005 (0.010)	0.031** (0.015)	0.017 (0.012)
Non-agriculture labor wage	-0.009 (0.025)	-0.010 (0.017)	-0.026 (0.037)	-0.032 (0.032)	0.006 (0.013)	-0.004 (0.012)	-0.012 (0.018)	0.003 (0.013)
Salary	0.136*** (0.046)	0.129*** (0.035)	-0.076*** (0.029)	-0.066*** (0.022)	0.095*** (0.026)	0.123*** (0.021)	-0.048*** (0.017)	-0.042*** (0.014)
Own tractor	0.117* (0.067)	0.172*** (0.053)	-0.079*** (0.026)	-0.084*** (0.019)	0.169*** (0.053)	0.137*** (0.052)	-0.083*** (0.022)	-0.065*** (0.017)
Own tube well	0.012	0.050*	-0.012	-0.032**	0.047**	0.048***	-0.031*	-0.019

	(0.034)	(0.029)	(0.019)	(0.015)	(0.021)	(0.018)	(0.016)	(0.013)
Own animal	-0.019	0.011	0.020	0.022	-0.028***	0.006	0.023**	0.012
	(0.016)	(0.012)	(0.017)	(0.016)	(0.011)	(0.008)	(0.009)	(0.009)
Participated in government scheme	0.021	0.009	-0.029*	-0.017				
	(0.020)	(0.015)	(0.016)	(0.014)				
Split between period 0 and 1	0.006	-0.031**	0.011	-0.025	-0.004	-0.049***	0.017	-0.045***
	(0.020)	(0.013)	(0.019)	(0.016)	(0.016)	(0.010)	(0.015)	(0.011)
Participated in NREGA					-0.045***	-0.043***	0.037**	0.047***
					(0.011)	(0.009)	(0.015)	(0.012)
Constant	0.287***	0.180***	0.661***	0.400***	0.091	-0.008	0.700***	0.282***
	(0.073)	(0.061)	(0.075)	(0.066)	(0.057)	(0.040)	(0.061)	(0.045)
Observations	5,226	5,226	5,184	5,184	11,315	11,315	11,289	11,288
R-squared	0.161	0.198	0.199	0.195	0.146	0.177	0.149	0.145

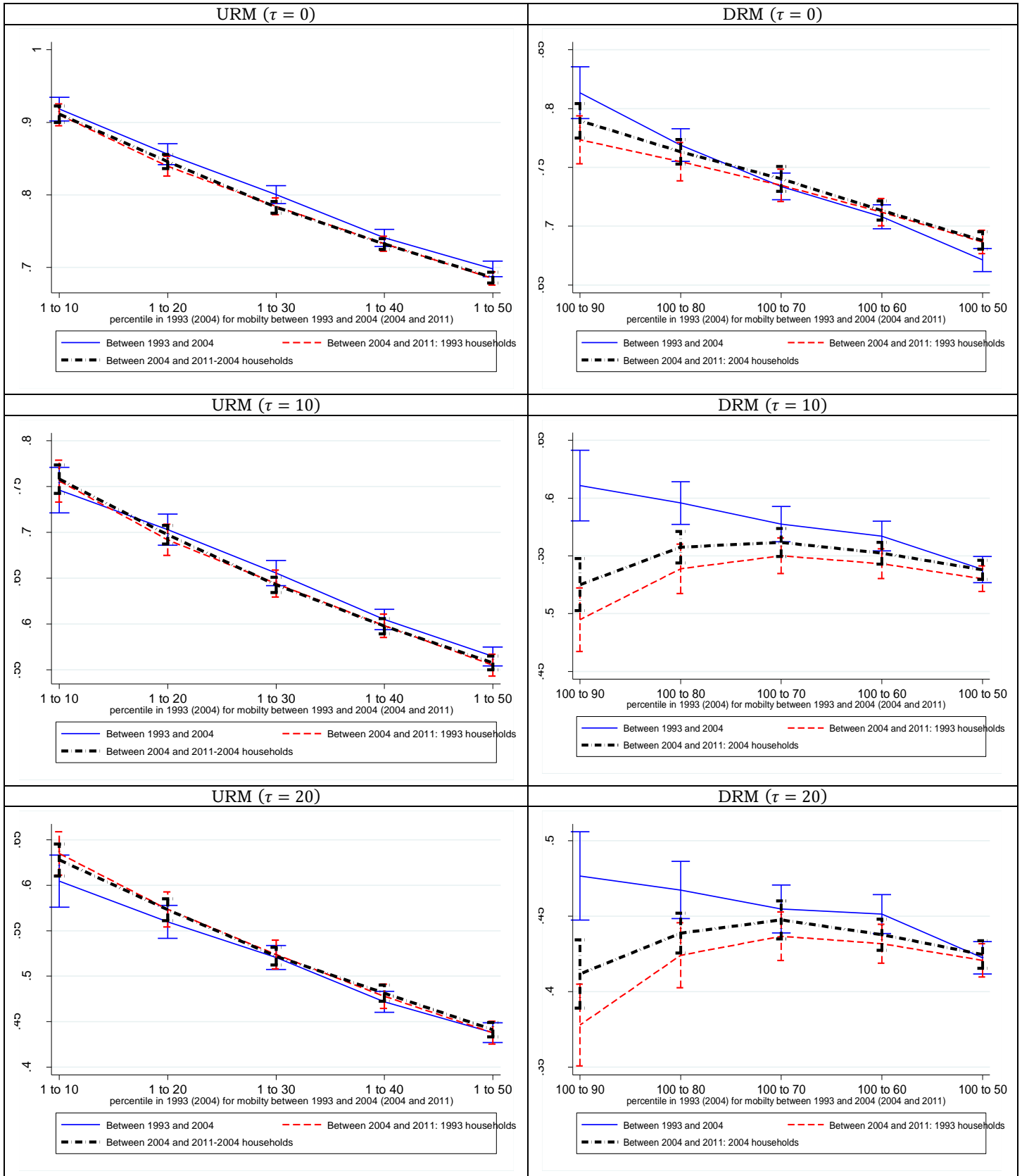
Note: All the models control for district fixed effects. Bootstrapped standard errors with 100 replications. *** p<0.01, ** p<0.05, * p<0.1. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Table 4: Mobility Gaps (between 2004 and 2011) for each social group with respect to FHC, Urban

		No controls			Control district fixed effects			Add households characteristics		
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		$\tau = 0$	$\tau = 10$	$\tau = 20$	$\tau = 0$	$\tau = 10$	$\tau = 20$	$\tau = 0$	$\tau = 10$	$\tau = 20$
Panel 1: Upward Rank Mobility for households below 50th percentile										
OBC	URM	-0.019 (0.018)	-0.020 (0.023)	-0.034* (0.020)	-0.011 (0.021)	-0.005 (0.023)	-0.026 (0.022)	-0.003 (0.022)	0.013 (0.023)	-0.010 (0.019)
SC/ST	URM	-0.040* (0.021)	-0.064*** (0.023)	-0.067*** (0.019)	-0.044** (0.020)	-0.069*** (0.021)	-0.073*** (0.021)	-0.031 (0.022)	-0.034 (0.024)	-0.036* (0.020)
Muslim	URM	-0.071*** (0.020)	-0.109*** (0.023)	-0.111*** (0.021)	-0.045** (0.021)	-0.083*** (0.024)	-0.082*** (0.022)	-0.039 (0.024)	-0.051** (0.025)	-0.049** (0.023)
Panel 2: Upward Transition Probabilities for households below 50th percentile										
OBC	UTP	-0.087*** (0.019)	-0.078*** (0.018)	-0.064*** (0.015)	-0.074*** (0.024)	-0.070*** (0.019)	-0.060*** (0.014)	-0.042** (0.020)	-0.046** (0.019)	-0.041** (0.016)
SC/ST	UTP	-0.133*** (0.020)	-0.116*** (0.017)	-0.106*** (0.015)	-0.124*** (0.021)	-0.102*** (0.021)	-0.096*** (0.015)	-0.066*** (0.022)	-0.063*** (0.020)	-0.063*** (0.015)
Muslim	UTP	-0.209*** (0.021)	-0.170*** (0.017)	-0.131*** (0.013)	-0.183*** (0.024)	-0.154*** (0.020)	-0.120*** (0.015)	-0.121*** (0.021)	-0.113*** (0.019)	-0.084*** (0.016)
Panel 3: Downward Rank Mobility for households above 50th percentile										
OBC	DRM	0.043** (0.017)	0.071*** (0.016)	0.078*** (0.015)	0.045*** (0.017)	0.061*** (0.022)	0.064*** (0.019)	0.026 (0.019)	0.029 (0.020)	0.033* (0.019)
SC/ST	DRM	-0.003 (0.021)	0.031* (0.017)	0.046** (0.019)	0.018 (0.021)	0.042* (0.023)	0.055*** (0.020)	0.009 (0.021)	0.014 (0.022)	0.032 (0.021)
Muslim	DRM	0.139*** (0.023)	0.195*** (0.022)	0.204*** (0.024)	0.129*** (0.024)	0.187*** (0.031)	0.189*** (0.030)	0.093*** (0.026)	0.124*** (0.030)	0.130*** (0.030)
Panel 4: Downward Transition Mobility for households above 50th percentile										
OBC	DTP	0.105*** (0.014)	0.089*** (0.013)	0.068*** (0.012)	0.082*** (0.016)	0.071*** (0.016)	0.049*** (0.016)	0.031 (0.020)	0.032** (0.016)	0.025* (0.015)
SC/ST	DTP	0.082*** (0.018)	0.066*** (0.014)	0.049*** (0.014)	0.087*** (0.018)	0.072*** (0.018)	0.055*** (0.015)	0.029 (0.020)	0.028* (0.016)	0.027* (0.015)
Muslim	DTP	0.283*** (0.026)	0.233*** (0.022)	0.181*** (0.024)	0.274*** (0.030)	0.215*** (0.028)	0.164*** (0.025)	0.168*** (0.030)	0.135*** (0.026)	0.108*** (0.026)

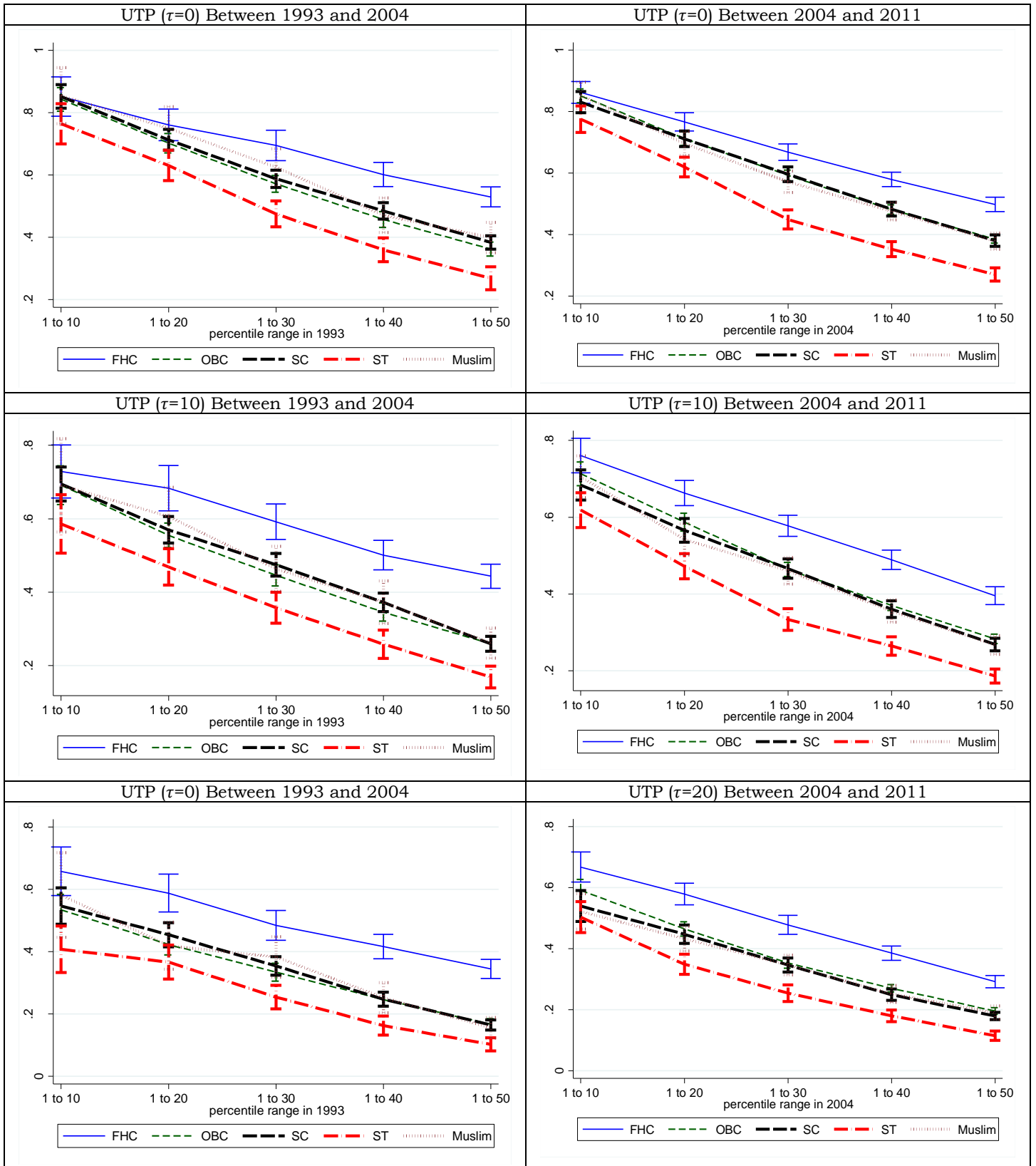
Note: Standard errors derived through bootstrapping with 100 replications are in parenthesis. *** p<0.01, ** p<0.05, * p<0.1. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Figure 1: Mobility between 1993 and 2004 (2004 and 2011), Rural India



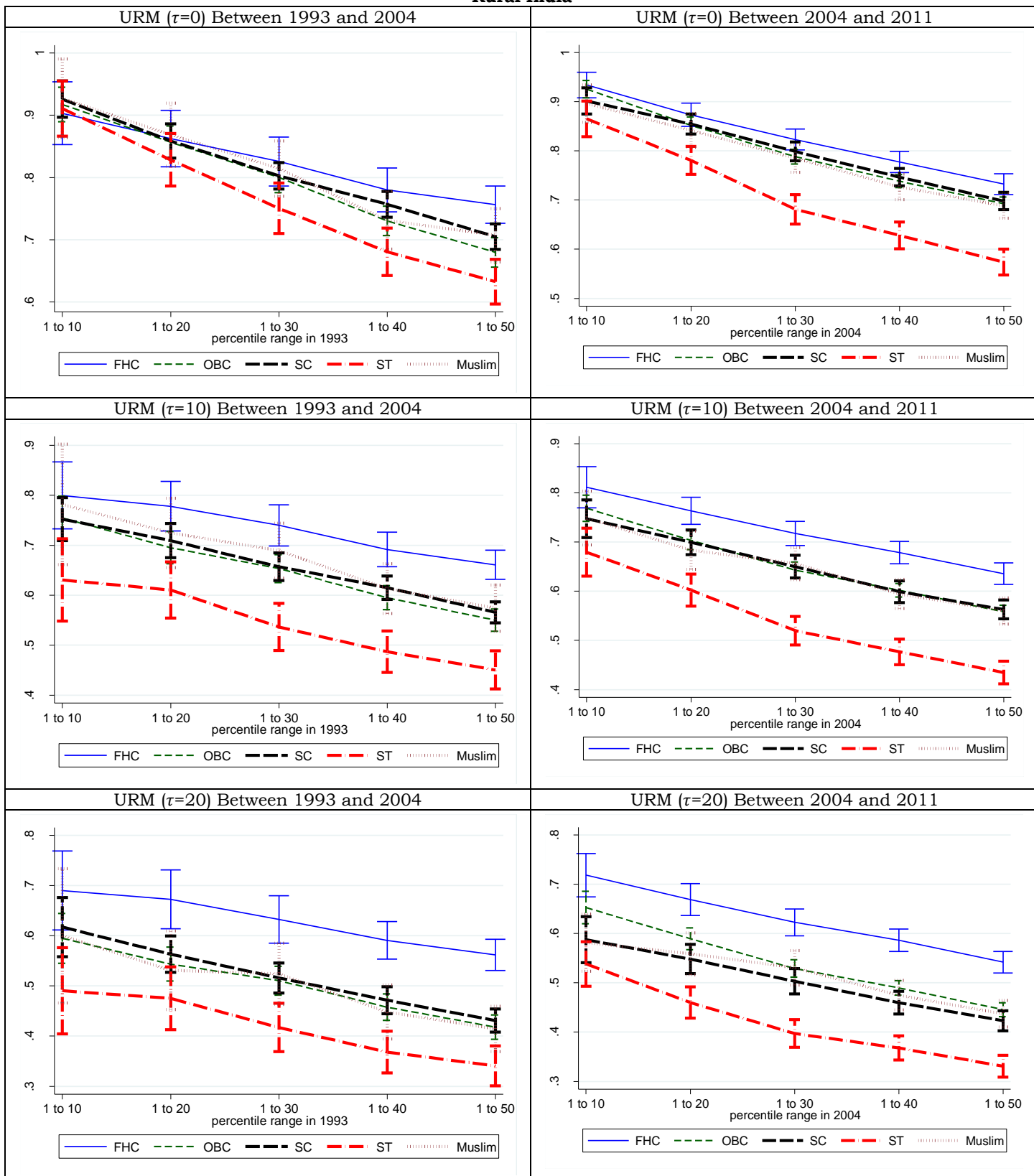
Note: The bounds represent 95% confidence interval derived through bootstrapping with 100 replications.

Figure 2: UTP between 1993 and 2004 (left panel) and between 2004 and 2011 (right panel) by cumulative decile, Rural India



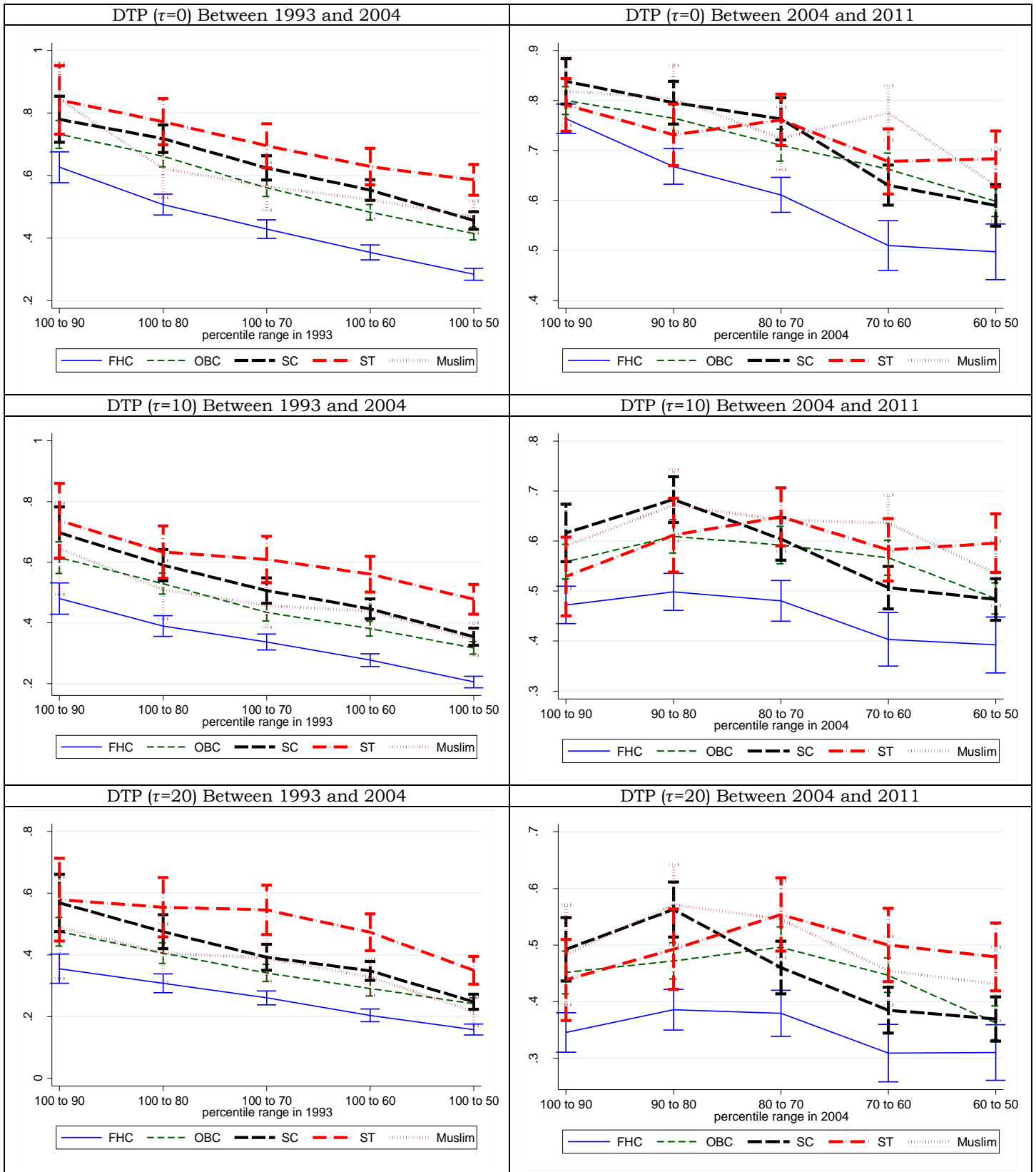
Note: The bounds represent 95% confidence interval derived through bootstrapping with 100 replications. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Figure 3: URM between 1993 and 2004 (left panel) and between 2004 and 2011 (right panel) by cumulative decile, Rural India



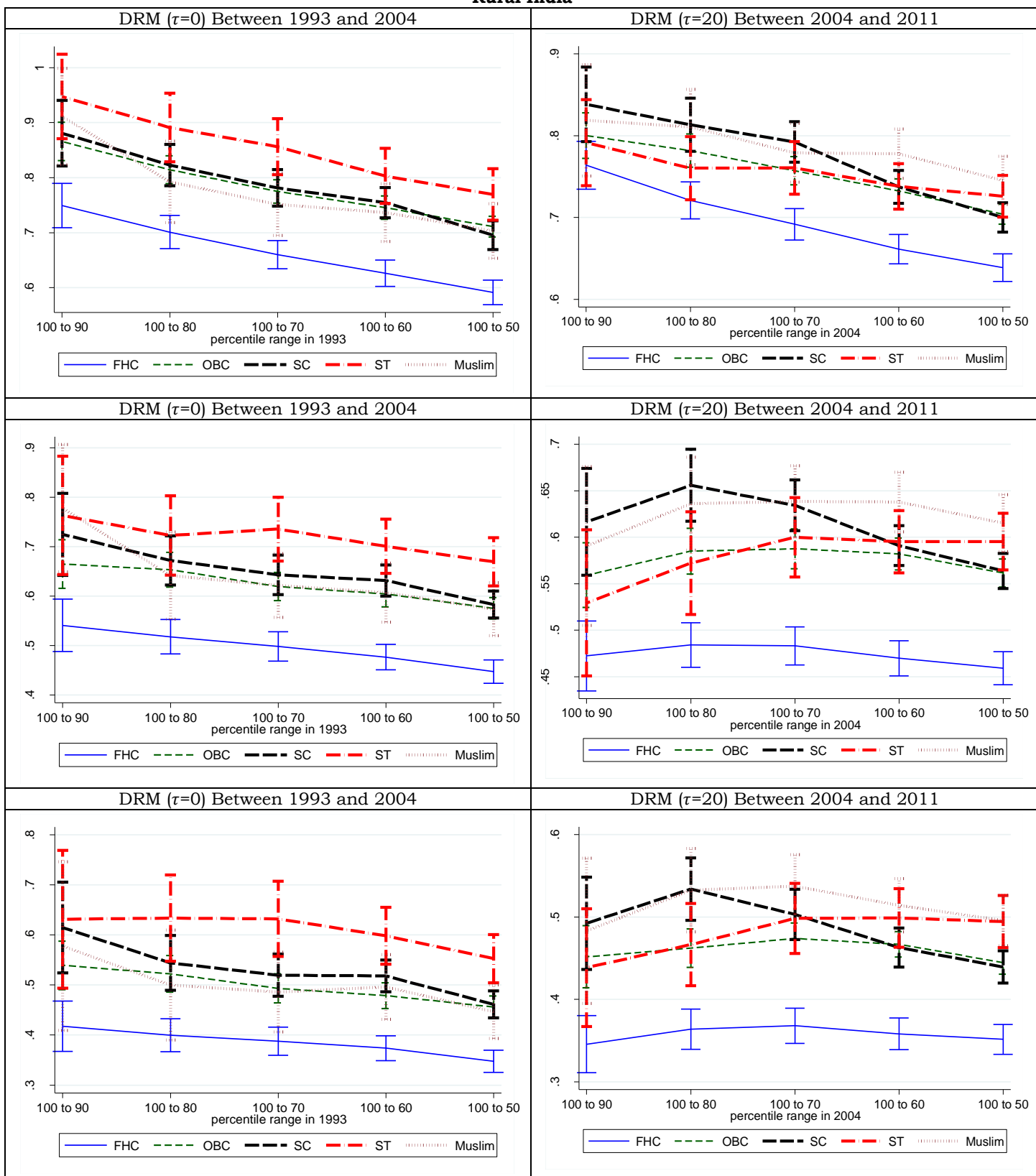
Note: The bounds represent 95% confidence interval derived through bootstrapping with 100 replications. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Figure 4: DTP between 1993 and 2004 (left panel) and between 2004 and 2011 (right panel) by cumulative decile, Rural India



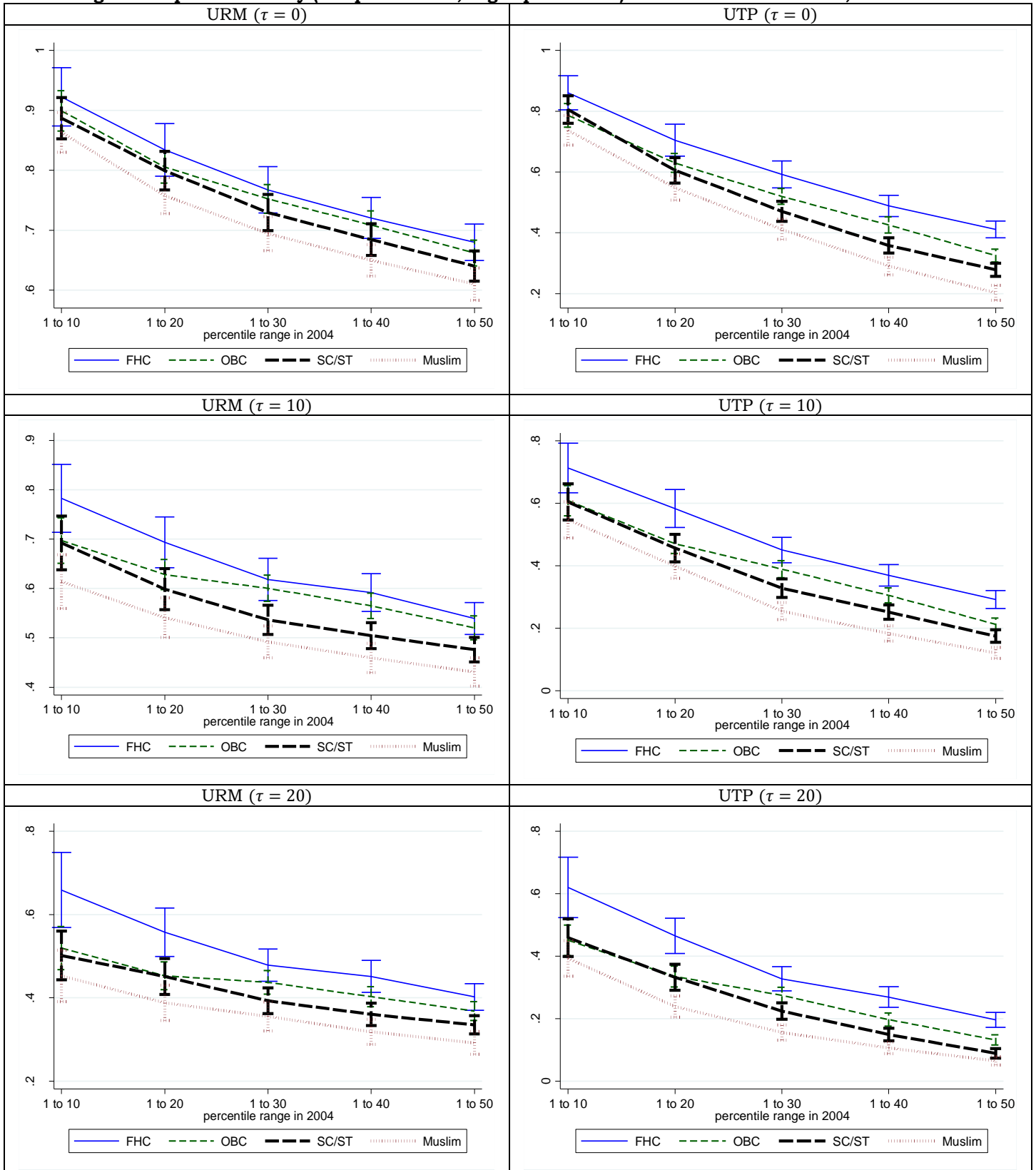
Note: The bounds represent 95% confidence interval derived through bootstrapping with 100 replications. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Figure 5: DRM between 1993 and 2004 (left panel) and between 2004 and 2011 (right panel) by cumulative decile, Rural India



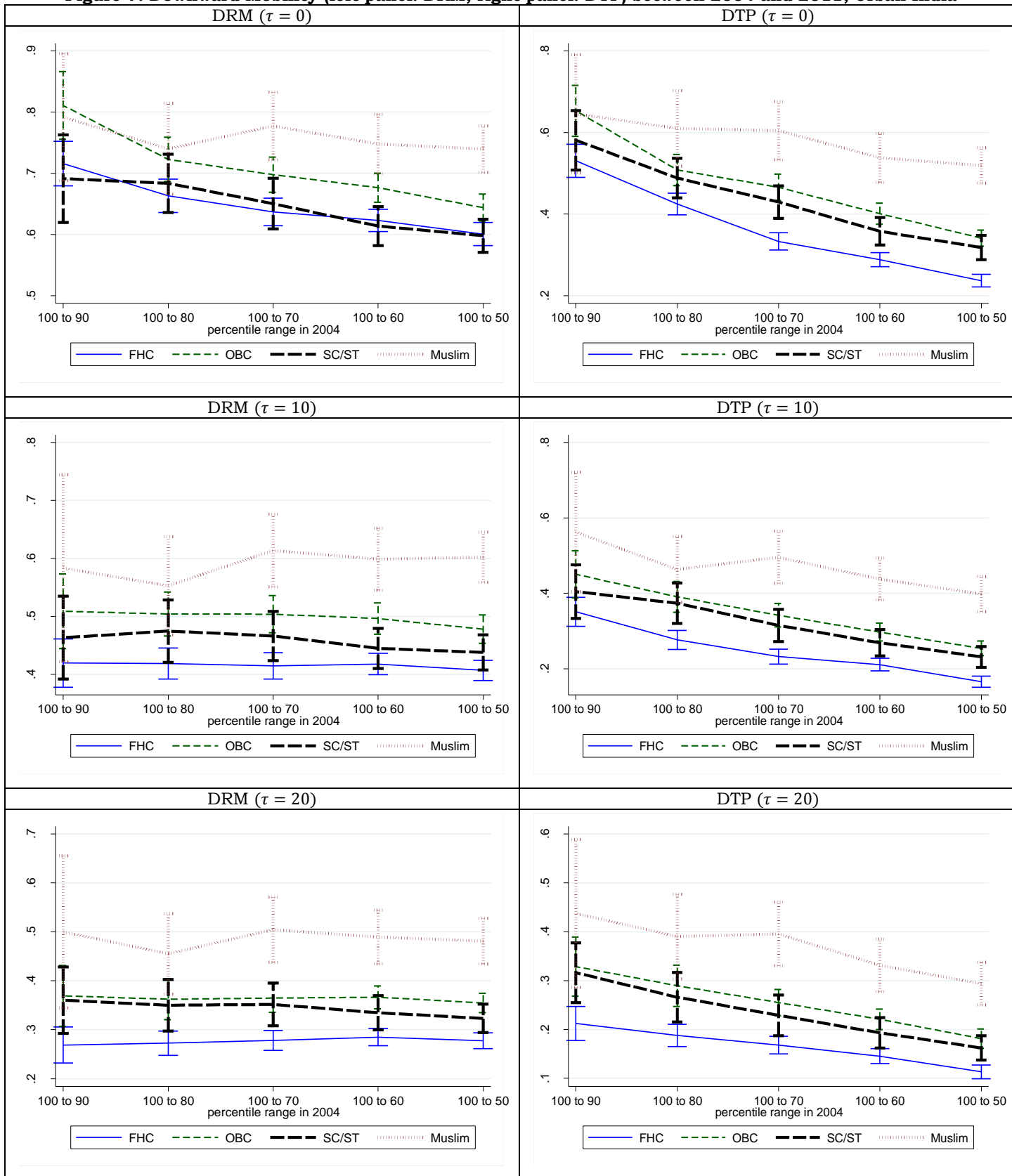
Note: The bounds represent 95% confidence interval derived through bootstrapping with 100 replications. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Figure 6: Upward Mobility (left panel: URM; Right panel: UTP) between 2004 and 2011, Urban India



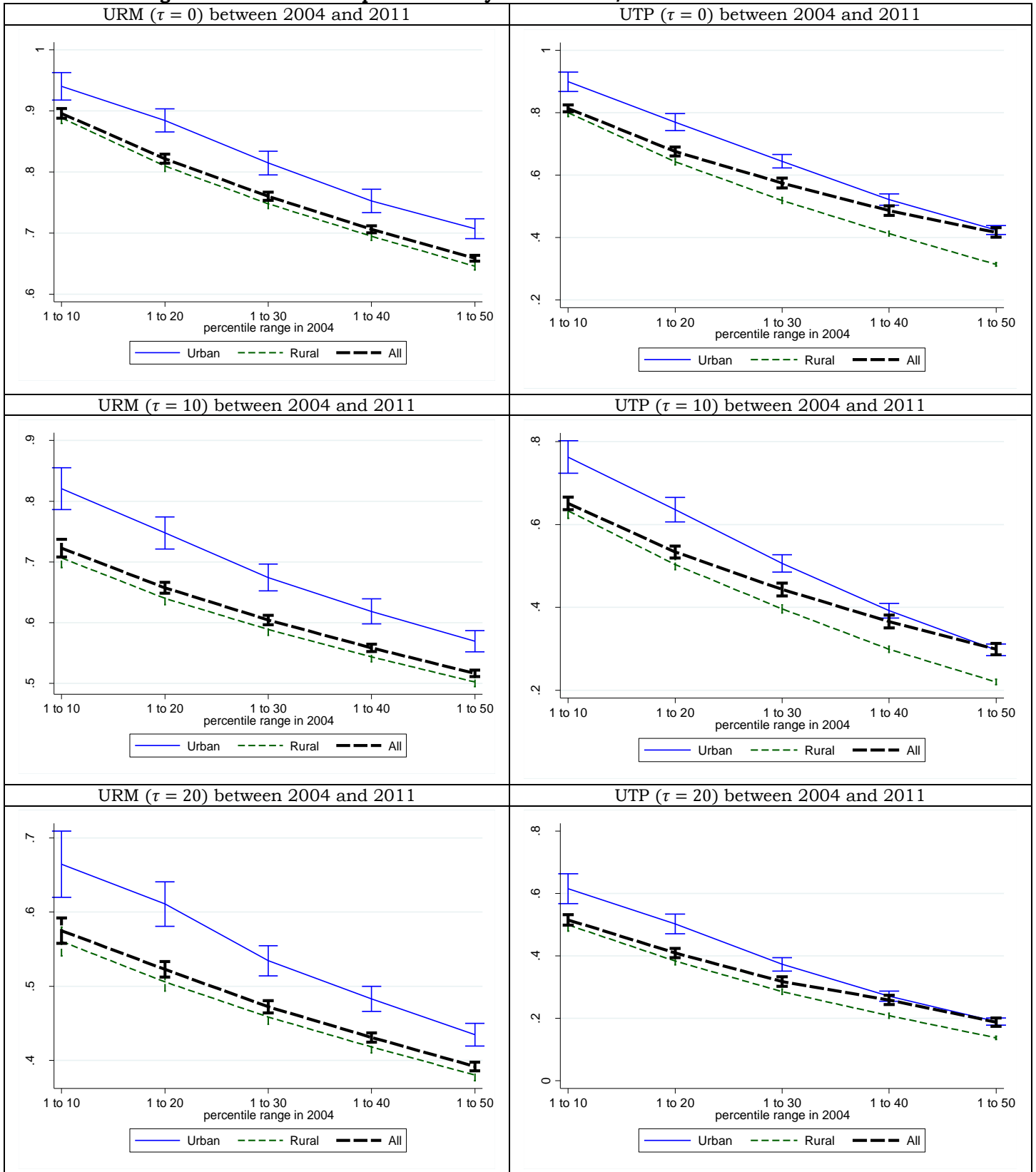
Note: The bounds represent 95% confidence interval derived through bootstrapping with 100 replications. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Figure 7: Downward Mobility (left panel: DRM; right panel: DTP) between 2004 and 2011, Urban India



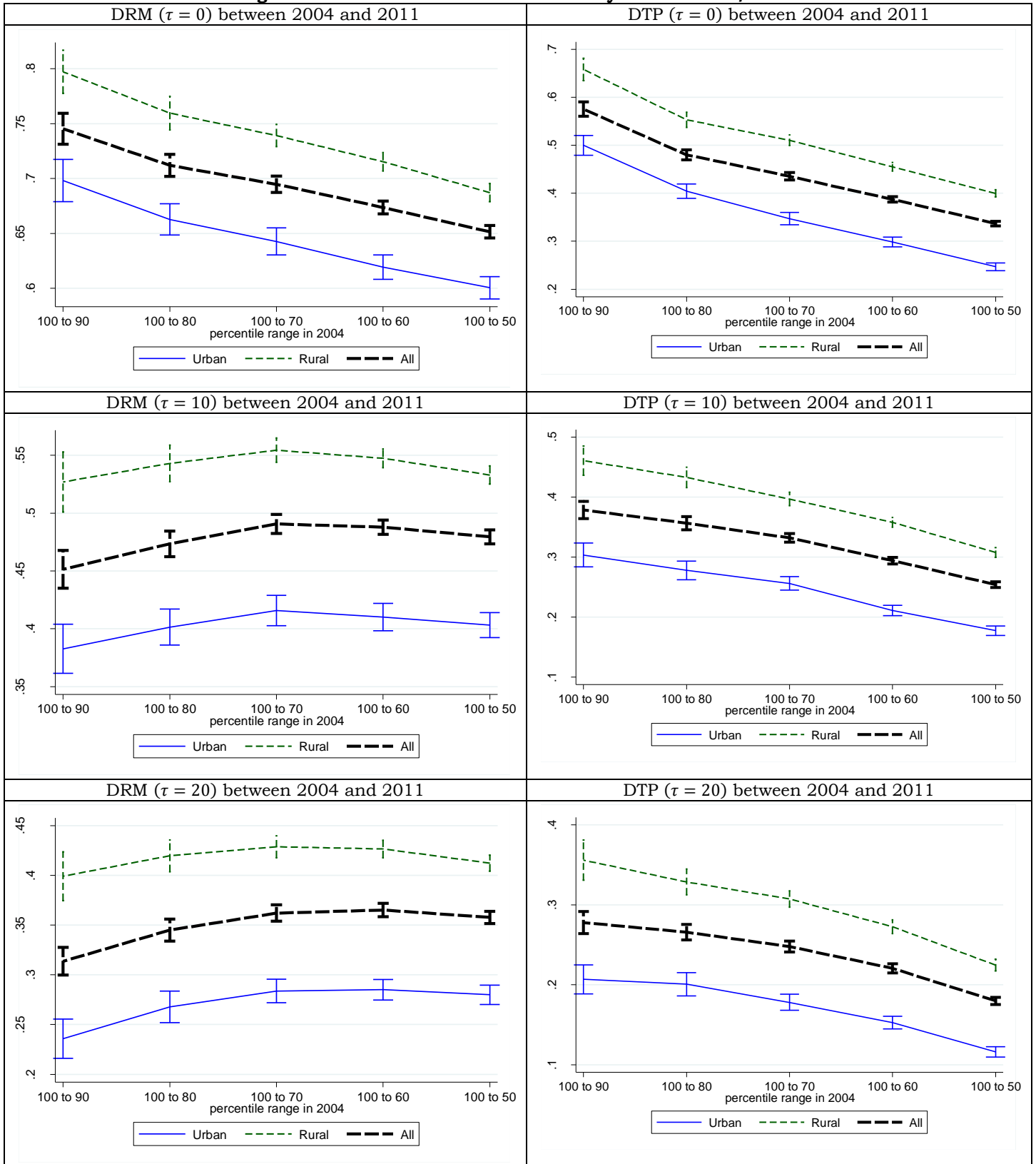
Note: The bounds represent 95% confidence interval derived through bootstrapping with 100 replications. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Figure 8: Difference in Upward Mobility across Urban/Rural between 2004 and 2011



Note: The bounds represent 95% confidence interval derived through bootstrapping with 100 replications.

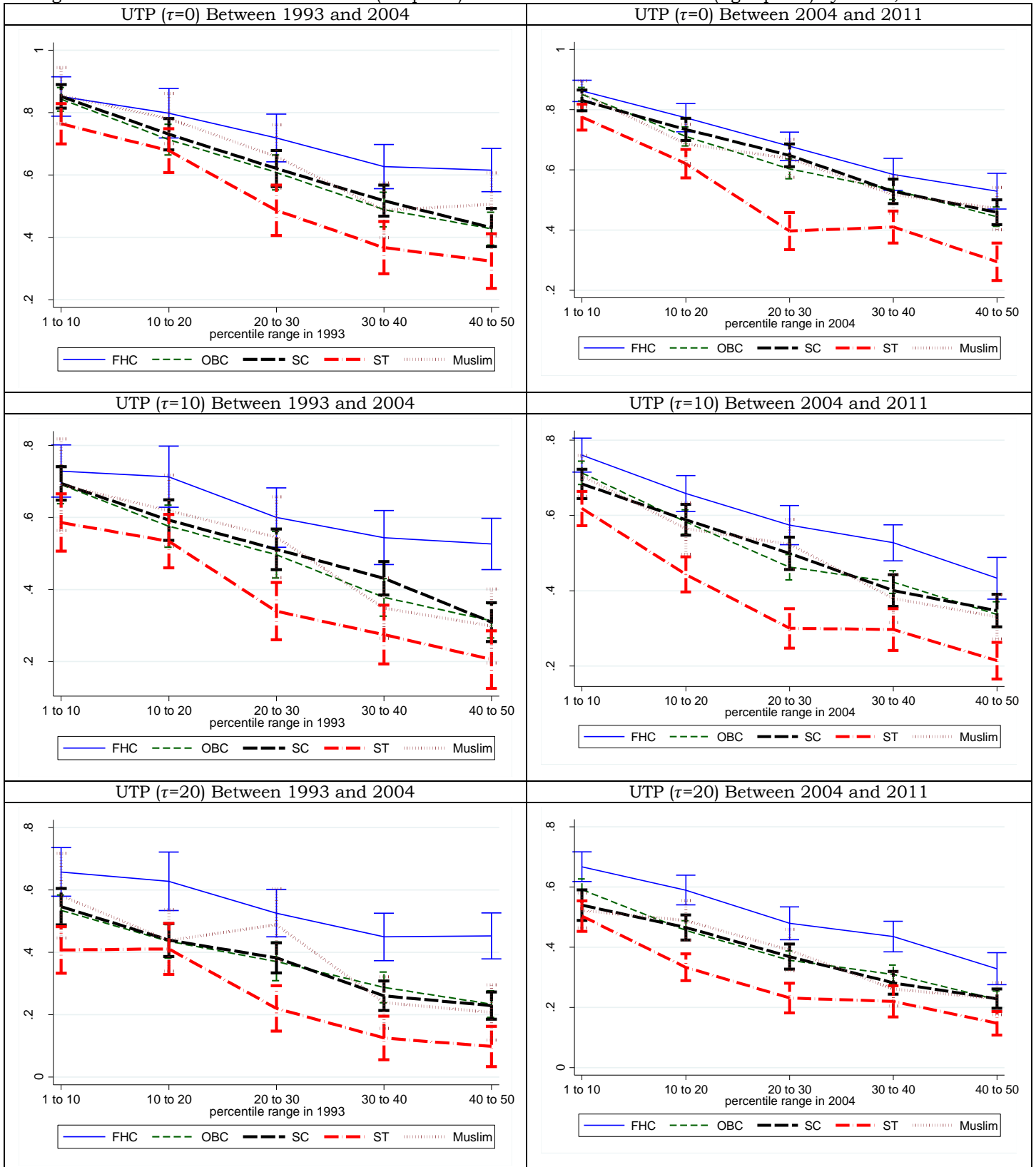
Figure 9: Difference in Downward Mobility across Urban/Rural



Note: The bounds represent 95% confidence interval derived through bootstrapping with 100 replications.

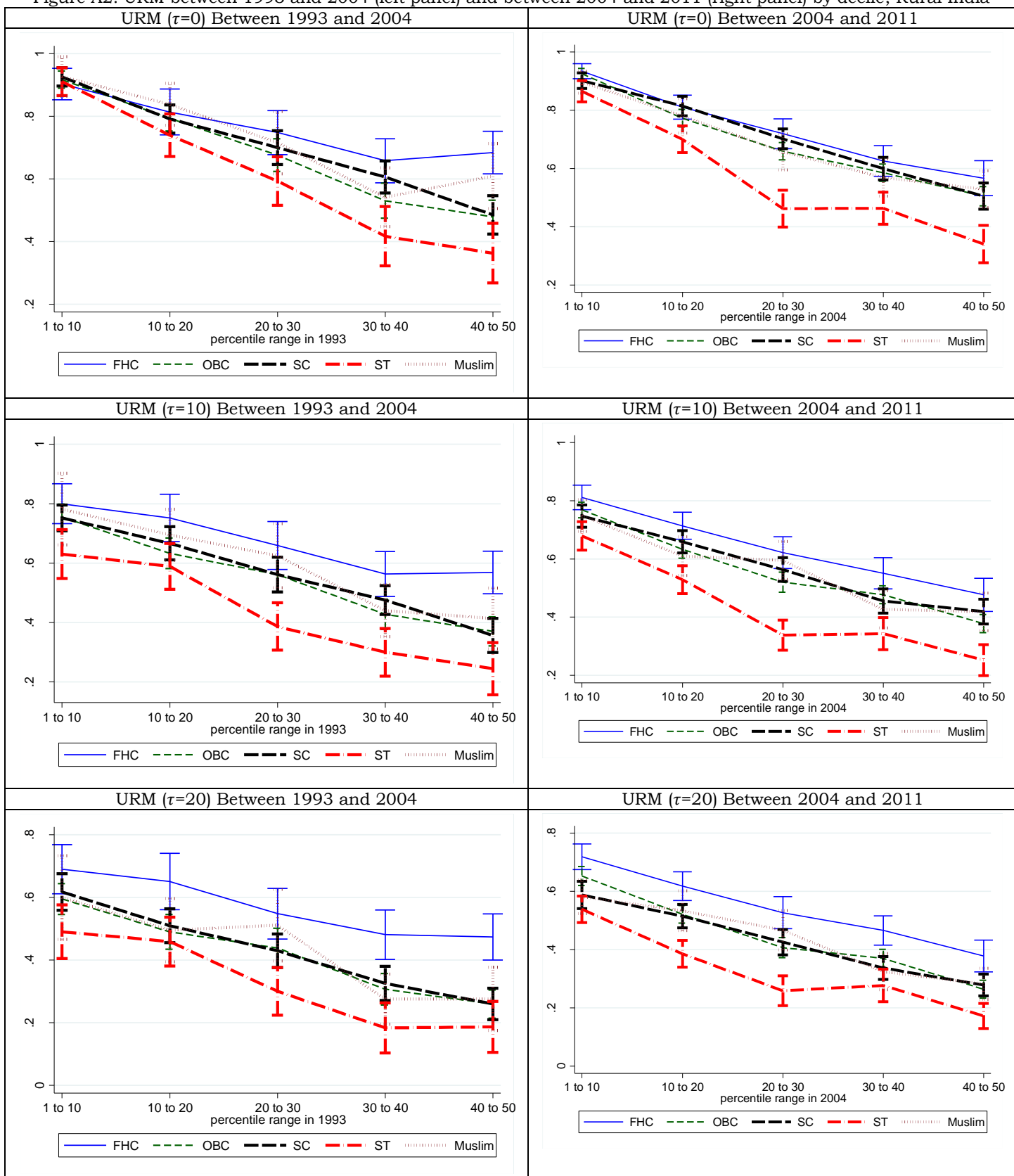
Online Appendix

Figure A1: UTP between 1993 and 2004 (left panel) and between 2004 and 2011 (right panel) by decile, Rural India



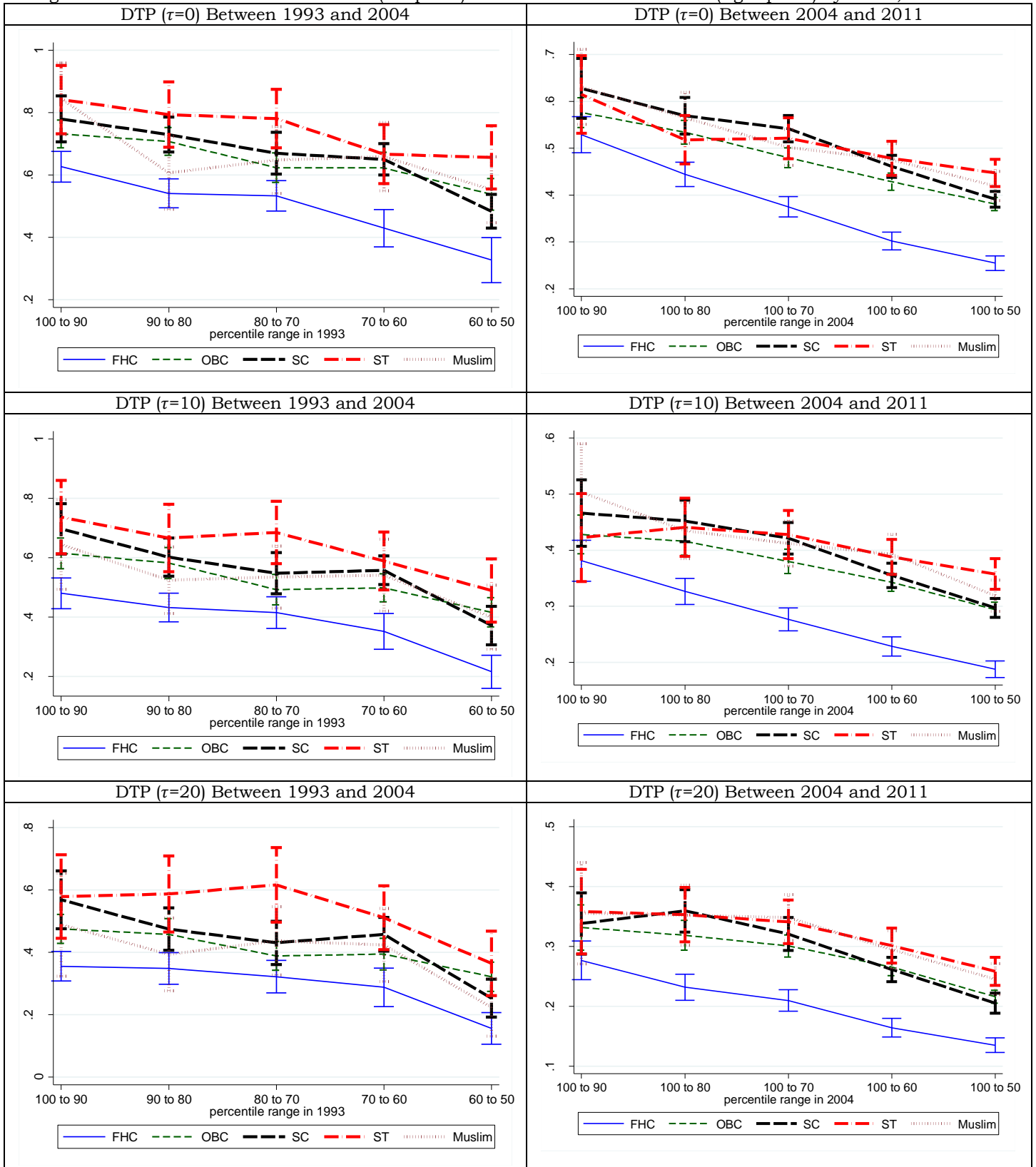
Note: The bounds represent 95% confidence interval derived through bootstrapping with 100 replications. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Figure A2: URM between 1993 and 2004 (left panel) and between 2004 and 2011 (right panel) by decile, Rural India



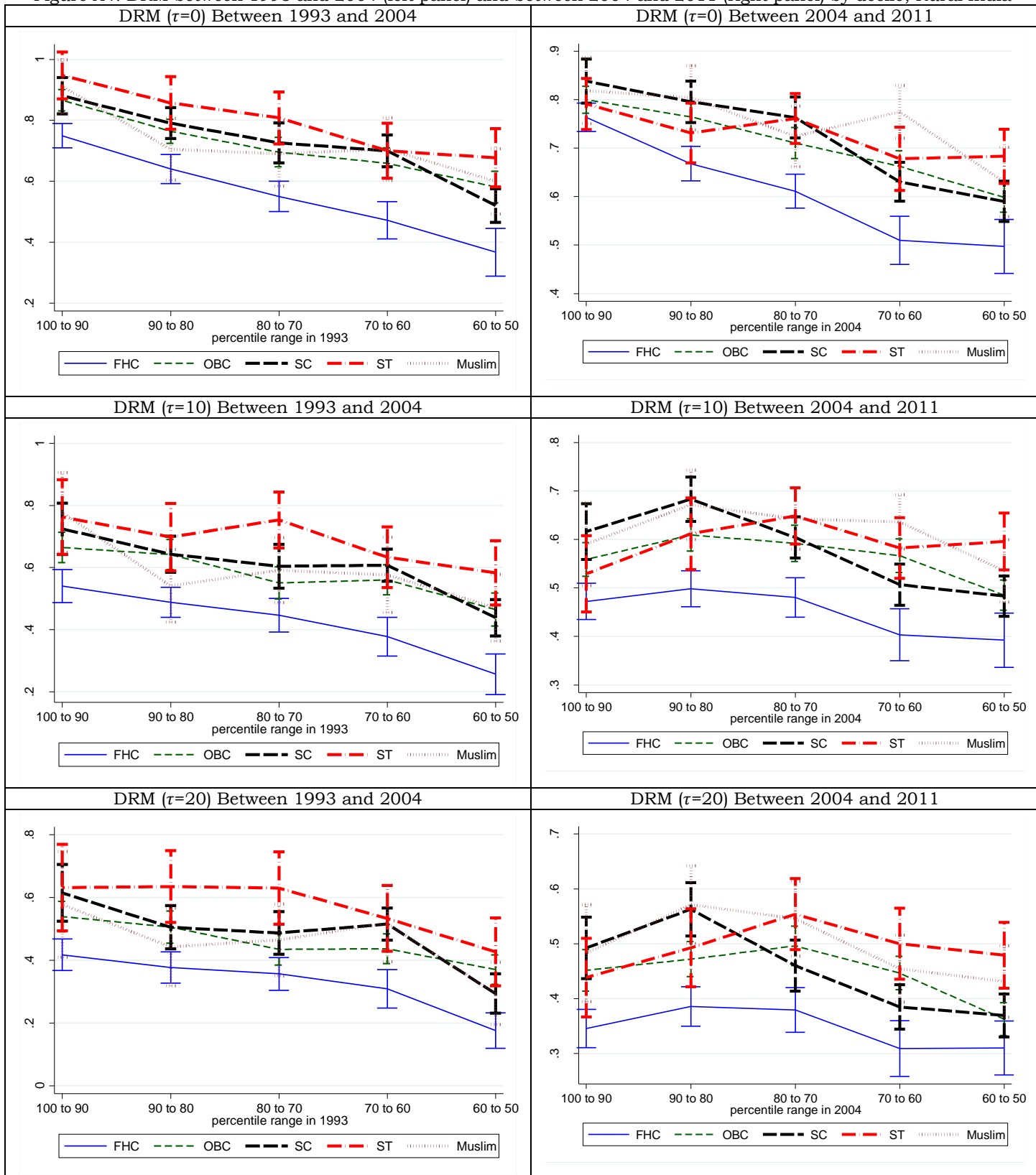
Note: The bounds represent 95% confidence interval derived through bootstrapping with 100 replications. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Figure A3: DTM between 1993 and 2004 (left panel) and between 2004 and 2011 (right panel) by decile, Rural India



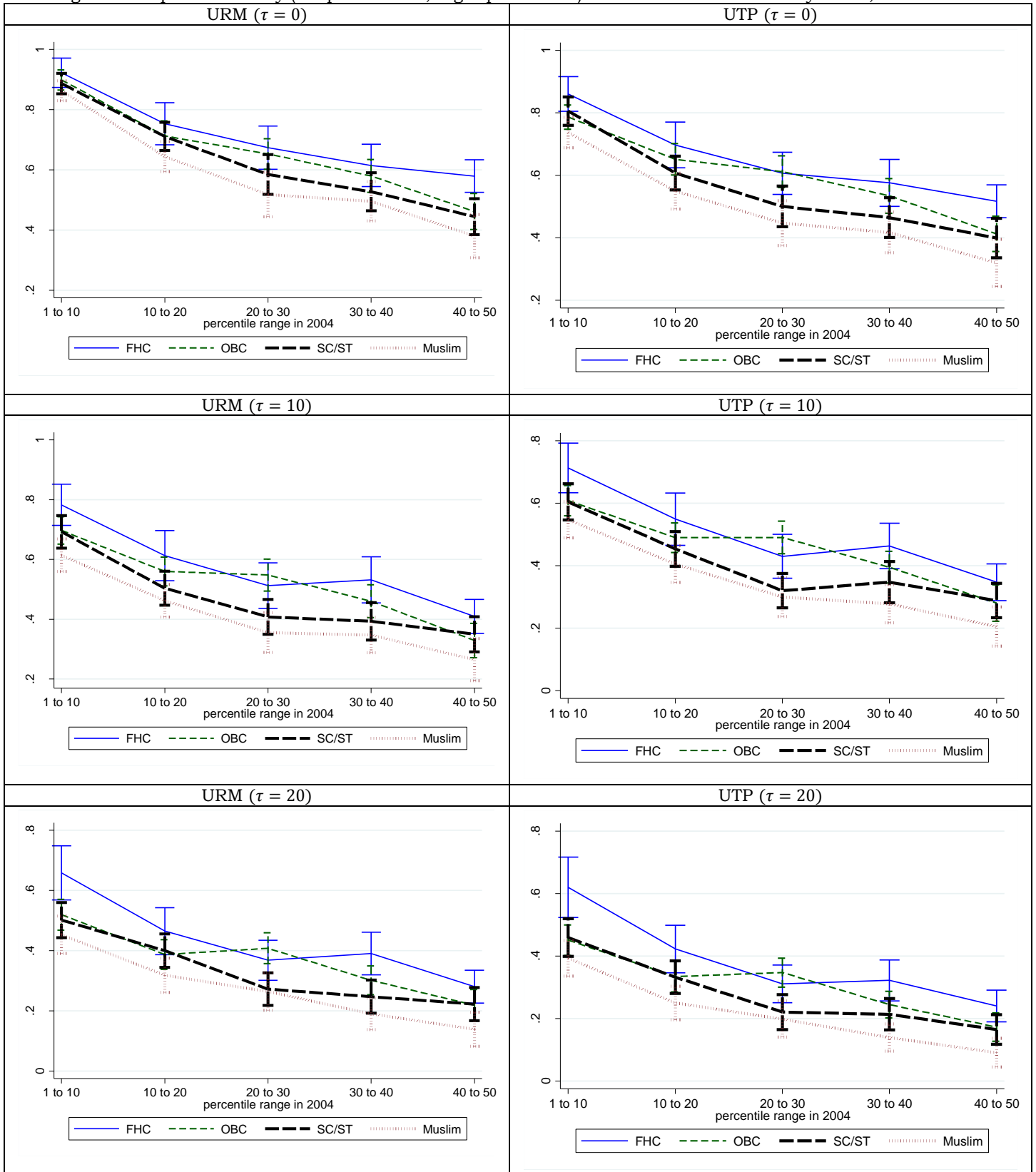
Note: The bounds represent 95% confidence interval derived through bootstrapping with 100 replications. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Figure A4: DRM between 1993 and 2004 (left panel) and between 2004 and 2011 (right panel) by decile, Rural India



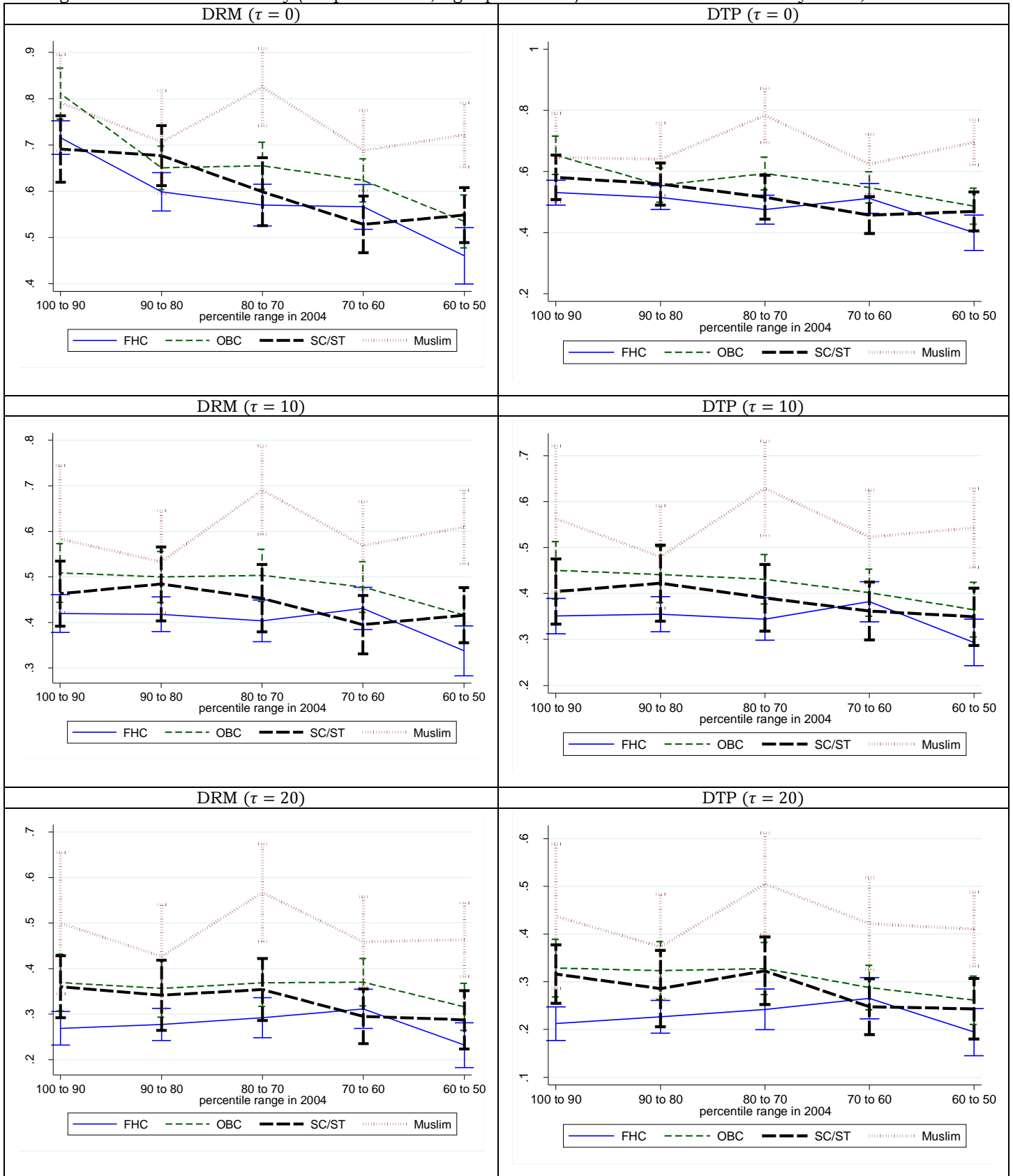
Note: The bounds represent 95% confidence interval derived through bootstrapping with 100 replications. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Figure A5: Upward Mobility (left panel: URM; Right panel: UTP) between 2004 and 2011 by decile, Urban India



Note: The bounds represent 95% confidence interval derived through bootstrapping with 100 replications. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Figure A6: Downward Mobility (left panel: DRM; right panel: DTP) between 2004 and 2011 by decile, Urban India



Note: The bounds represent 95% confidence interval derived through bootstrapping with 100 replications. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC/ST=Scheduled Caste/Tribe.

Table-1: Upward Transition Probabilities (UTP) by cumulative decile, Rural India

UTP between 1993 and 2004

Cumulative Percentile	All		FHC		OBC		SC		ST		Muslim	
	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$
1 to 10	0.837 (0.011)	0.545 (0.015)	0.852 (0.032)	0.658 (0.040)	0.843 (0.019)	0.534 (0.025)	0.852 (0.019)	0.547 (0.030)	0.764 (0.033)	0.408 (0.038)	0.855 (0.046)	0.582 (0.069)
1 to 20	0.732 (0.012)	0.461 (0.016)	0.761 (0.026)	0.588 (0.031)	0.702 (0.016)	0.423 (0.017)	0.713 (0.017)	0.454 (0.020)	0.630 (0.025)	0.366 (0.028)	0.750 (0.035)	0.419 (0.039)
1 to 30	0.619 (0.015)	0.388 (0.015)	0.695 (0.025)	0.484 (0.024)	0.571 (0.014)	0.334 (0.014)	0.588 (0.014)	0.354 (0.015)	0.475 (0.021)	0.254 (0.019)	0.625 (0.030)	0.383 (0.033)
1 to 40	0.507 (0.014)	0.284 (0.012)	0.601 (0.020)	0.416 (0.020)	0.457 (0.013)	0.246 (0.012)	0.484 (0.013)	0.247 (0.011)	0.360 (0.020)	0.162 (0.016)	0.471 (0.028)	0.252 (0.025)
1 to 50	0.469 (0.016)	0.265 (0.015)	0.529 (0.016)	0.344 (0.016)	0.362 (0.012)	0.167 (0.009)	0.383 (0.011)	0.164 (0.008)	0.268 (0.019)	0.102 (0.011)	0.399 (0.025)	0.155 (0.017)

UTP between 2004 and 2011

Cumulative Percentile	All		FHC		OBC		SC		ST		Muslim	
	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$
1 to 10	0.840 (0.007)	0.576 (0.010)	0.862 (0.018)	0.668 (0.025)	0.851 (0.011)	0.591 (0.018)	0.830 (0.018)	0.539 (0.026)	0.776 (0.022)	0.503 (0.026)	0.853 (0.022)	0.522 (0.030)
1 to 20	0.712 (0.009)	0.467 (0.009)	0.767 (0.015)	0.579 (0.018)	0.712 (0.011)	0.465 (0.012)	0.711 (0.013)	0.447 (0.015)	0.620 (0.016)	0.349 (0.017)	0.696 (0.020)	0.432 (0.021)
1 to 30	0.606 (0.011)	0.369 (0.009)	0.668 (0.014)	0.478 (0.016)	0.592 (0.009)	0.353 (0.009)	0.596 (0.012)	0.346 (0.012)	0.449 (0.016)	0.254 (0.014)	0.572 (0.018)	0.346 (0.017)
1 to 40	0.525 (0.010)	0.305 (0.009)	0.579 (0.012)	0.385 (0.012)	0.481 (0.008)	0.270 (0.006)	0.483 (0.011)	0.249 (0.010)	0.352 (0.012)	0.180 (0.010)	0.476 (0.014)	0.252 (0.014)
1 to 50	0.450 (0.010)	0.238 (0.009)	0.498 (0.012)	0.292 (0.010)	0.385 (0.007)	0.195 (0.006)	0.380 (0.010)	0.179 (0.006)	0.270 (0.011)	0.114 (0.008)	0.378 (0.013)	0.190 (0.011)

Note: Standard errors derived through bootstrapping with 100 replications are in parenthesis. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Table-2: Upward Transition Probabilities(UTP) by decile, Rural India

UTP between 1993 and 2004

Decile	All		FHC		OBC		SC		ST		Muslim	
	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$
1 to 10	0.837 (0.011)	0.545 (0.015)	0.852 (0.032)	0.658 (0.040)	0.843 (0.019)	0.534 (0.025)	0.852 (0.019)	0.547 (0.030)	0.764 (0.033)	0.408 (0.038)	0.855 (0.046)	0.582 (0.069)
10 to 20	0.732 (0.012)	0.461 (0.016)	0.798 (0.041)	0.628 (0.048)	0.713 (0.025)	0.436 (0.027)	0.731 (0.025)	0.439 (0.027)	0.678 (0.036)	0.411 (0.042)	0.781 (0.041)	0.438 (0.050)
20 to 30	0.619 (0.015)	0.388 (0.015)	0.719 (0.039)	0.526 (0.039)	0.608 (0.029)	0.370 (0.031)	0.621 (0.030)	0.382 (0.025)	0.487 (0.041)	0.220 (0.037)	0.659 (0.052)	0.489 (0.059)
30 to 40	0.507 (0.014)	0.284 (0.012)	0.627 (0.036)	0.449 (0.039)	0.489 (0.028)	0.287 (0.025)	0.517 (0.025)	0.260 (0.024)	0.367 (0.043)	0.125 (0.036)	0.486 (0.045)	0.239 (0.042)
40 to 50	0.469 (0.016)	0.265 (0.015)	0.616 (0.036)	0.453 (0.038)	0.427 (0.027)	0.234 (0.022)	0.431 (0.031)	0.229 (0.022)	0.324 (0.045)	0.098 (0.033)	0.506 (0.051)	0.207 (0.045)

UTP between 2004 and 2011

Decile	All		FHC		OBC		SC		ST		Muslim	
	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$
1 to 10	0.840 (0.007)	0.576 (0.010)	0.862 (0.018)	0.668 (0.025)	0.851 (0.011)	0.591 (0.018)	0.830 (0.018)	0.539 (0.026)	0.776 (0.022)	0.503 (0.026)	0.853 (0.022)	0.522 (0.030)
10 to 20	0.712 (0.009)	0.467 (0.009)	0.773 (0.024)	0.590 (0.025)	0.711 (0.016)	0.456 (0.016)	0.734 (0.019)	0.466 (0.021)	0.621 (0.024)	0.333 (0.023)	0.686 (0.033)	0.489 (0.034)
20 to 30	0.606 (0.011)	0.369 (0.009)	0.678 (0.024)	0.479 (0.028)	0.603 (0.017)	0.357 (0.016)	0.648 (0.019)	0.369 (0.021)	0.397 (0.031)	0.231 (0.025)	0.638 (0.032)	0.390 (0.035)
30 to 40	0.525 (0.010)	0.305 (0.009)	0.585 (0.027)	0.435 (0.026)	0.534 (0.016)	0.309 (0.016)	0.528 (0.021)	0.282 (0.019)	0.410 (0.027)	0.220 (0.026)	0.518 (0.032)	0.261 (0.029)
40 to 50	0.450 (0.010)	0.238 (0.009)	0.529 (0.030)	0.328 (0.027)	0.444 (0.016)	0.227 (0.014)	0.459 (0.021)	0.229 (0.016)	0.295 (0.032)	0.147 (0.020)	0.471 (0.036)	0.229 (0.027)

Note: Standard errors derived through bootstrapping with 100 replications are in parenthesis. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Table-3: Upward Rank Mobility (URM) by cumulative decile, Rural India

URM between 1993 and 2004

Cumulative Percentile	All		FHC		OBC		SC		ST		Muslim	
	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$
1 to 10	0.918 (0.008)	0.605 (0.015)	0.903 (0.026)	0.690 (0.040)	0.917 (0.014)	0.595 (0.025)	0.926 (0.015)	0.617 (0.030)	0.911 (0.023)	0.490 (0.044)	0.927 (0.032)	0.600 (0.068)
1 to 20	0.856 (0.007)	0.560 (0.009)	0.863 (0.023)	0.673 (0.030)	0.857 (0.013)	0.544 (0.017)	0.859 (0.014)	0.563 (0.018)	0.828 (0.022)	0.475 (0.032)	0.869 (0.026)	0.531 (0.040)
1 to 30	0.800 (0.006)	0.521 (0.007)	0.826 (0.020)	0.632 (0.024)	0.800 (0.012)	0.511 (0.015)	0.803 (0.011)	0.516 (0.015)	0.751 (0.021)	0.417 (0.025)	0.815 (0.023)	0.524 (0.031)
1 to 40	0.741 (0.006)	0.472 (0.006)	0.780 (0.018)	0.591 (0.019)	0.730 (0.012)	0.458 (0.013)	0.757 (0.011)	0.472 (0.014)	0.681 (0.019)	0.368 (0.021)	0.731 (0.024)	0.448 (0.027)
1 to 50	0.698 (0.005)	0.438 (0.006)	0.756 (0.015)	0.562 (0.016)	0.680 (0.012)	0.418 (0.012)	0.705 (0.010)	0.431 (0.012)	0.633 (0.018)	0.341 (0.020)	0.707 (0.022)	0.414 (0.023)

URM between 2004 and 2011

Cumulative Percentile	All		FHC		OBC		SC		ST		Muslim	
	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$
1 to 10	0.911 (0.006)	0.628 (0.009)	0.934 (0.013)	0.719 (0.023)	0.926 (0.009)	0.653 (0.017)	0.902 (0.014)	0.588 (0.024)	0.865 (0.018)	0.538 (0.023)	0.896 (0.019)	0.582 (0.030)
1 to 20	0.846 (0.005)	0.573 (0.006)	0.873 (0.012)	0.669 (0.016)	0.852 (0.009)	0.590 (0.011)	0.855 (0.011)	0.548 (0.015)	0.781 (0.015)	0.460 (0.016)	0.842 (0.017)	0.559 (0.022)
1 to 30	0.783 (0.004)	0.522 (0.005)	0.823 (0.011)	0.623 (0.014)	0.788 (0.008)	0.529 (0.009)	0.799 (0.010)	0.503 (0.013)	0.681 (0.015)	0.397 (0.014)	0.785 (0.015)	0.531 (0.018)
1 to 40	0.732 (0.004)	0.481 (0.004)	0.777 (0.011)	0.586 (0.012)	0.738 (0.007)	0.490 (0.007)	0.747 (0.009)	0.460 (0.012)	0.628 (0.014)	0.368 (0.013)	0.727 (0.013)	0.475 (0.015)
1 to 50	0.686 (0.004)	0.441 (0.004)	0.732 (0.011)	0.542 (0.011)	0.693 (0.007)	0.446 (0.007)	0.698 (0.009)	0.423 (0.010)	0.574 (0.013)	0.331 (0.011)	0.688 (0.013)	0.437 (0.014)

Note: Standard errors derived through bootstrapping with 100 replications are in parenthesis. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Table-4: Upward Rank Mobility (URM) by decile, Rural India

URM between 1993 and 2004

Percentile	All		FHC		OBC		SC		ST		Muslim	
	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$
1 to 10	0.918 (0.008)	0.605 (0.015)	0.903 (0.026)	0.690 (0.040)	0.917 (0.014)	0.595 (0.025)	0.926 (0.015)	0.617 (0.030)	0.911 (0.023)	0.490 (0.044)	0.927 (0.032)	0.600 (0.068)
10 to 20	0.794 (0.011)	0.515 (0.015)	0.814 (0.037)	0.651 (0.046)	0.794 (0.021)	0.490 (0.028)	0.792 (0.023)	0.510 (0.027)	0.740 (0.035)	0.459 (0.040)	0.838 (0.034)	0.495 (0.052)
20 to 30	0.689 (0.014)	0.442 (0.015)	0.748 (0.036)	0.548 (0.041)	0.676 (0.027)	0.438 (0.032)	0.700 (0.028)	0.429 (0.027)	0.593 (0.040)	0.300 (0.039)	0.716 (0.051)	0.511 (0.058)
30 to 40	0.562 (0.014)	0.325 (0.014)	0.658 (0.036)	0.481 (0.040)	0.530 (0.029)	0.307 (0.026)	0.606 (0.026)	0.325 (0.028)	0.417 (0.048)	0.183 (0.041)	0.541 (0.048)	0.275 (0.041)
40 to 50	0.527 (0.016)	0.301 (0.015)	0.684 (0.034)	0.474 (0.037)	0.479 (0.027)	0.259 (0.023)	0.485 (0.031)	0.259 (0.026)	0.363 (0.049)	0.186 (0.042)	0.609 (0.053)	0.276 (0.052)

URM between 2004 and 2011

Percentile	All		FHC		OBC		SC		ST		Muslim	
	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$
1 to 10	0.911 (0.006)	0.628 (0.009)	0.934 (0.013)	0.719 (0.023)	0.926 (0.009)	0.653 (0.017)	0.902 (0.014)	0.588 (0.024)	0.865 (0.018)	0.538 (0.023)	0.896 (0.019)	0.582 (0.030)
10 to 20	0.781 (0.008)	0.518 (0.009)	0.811 (0.021)	0.618 (0.025)	0.773 (0.016)	0.521 (0.016)	0.815 (0.017)	0.515 (0.021)	0.700 (0.024)	0.385 (0.023)	0.780 (0.030)	0.534 (0.035)
20 to 30	0.657 (0.010)	0.420 (0.011)	0.719 (0.026)	0.527 (0.028)	0.659 (0.015)	0.407 (0.017)	0.702 (0.017)	0.425 (0.022)	0.462 (0.032)	0.259 (0.026)	0.657 (0.032)	0.467 (0.034)
30 to 40	0.580 (0.009)	0.359 (0.009)	0.626 (0.027)	0.466 (0.026)	0.586 (0.015)	0.370 (0.016)	0.600 (0.020)	0.337 (0.020)	0.463 (0.028)	0.277 (0.029)	0.569 (0.032)	0.324 (0.032)
40 to 50	0.501 (0.011)	0.280 (0.009)	0.567 (0.031)	0.378 (0.028)	0.504 (0.017)	0.264 (0.016)	0.505 (0.023)	0.278 (0.019)	0.340 (0.033)	0.172 (0.022)	0.529 (0.032)	0.282 (0.027)

Note: Standard errors derived through bootstrapping with 100 replications are in parenthesis. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Table-5: Downward Transition Probability (DTP) by cumulative decile, Rural India

DTP between 1993 and 2004

Cumulative Decile	All		FHC		OBC		SC		ST		Muslim	
	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$
100 to 90	0.687 (0.014)	0.417 (0.015)	0.626 (0.025)	0.355 (0.024)	0.732 (0.023)	0.475 (0.024)	0.780 (0.038)	0.569 (0.047)	0.842 (0.056)	0.579 (0.068)	0.844 (0.059)	0.489 (0.084)
100 to 80	0.600 (0.008)	0.371 (0.009)	0.507 (0.017)	0.308 (0.016)	0.662 (0.017)	0.406 (0.017)	0.718 (0.022)	0.475 (0.028)	0.772 (0.038)	0.554 (0.049)	0.623 (0.048)	0.406 (0.049)
100 to 70	0.521 (0.007)	0.325 (0.007)	0.428 (0.015)	0.261 (0.011)	0.561 (0.014)	0.341 (0.014)	0.624 (0.020)	0.393 (0.021)	0.695 (0.036)	0.546 (0.041)	0.565 (0.039)	0.390 (0.038)
100 to 60	0.455 (0.006)	0.281 (0.006)	0.354 (0.012)	0.204 (0.011)	0.482 (0.013)	0.291 (0.013)	0.553 (0.017)	0.348 (0.016)	0.629 (0.030)	0.473 (0.030)	0.523 (0.031)	0.328 (0.030)
100 to 50	0.390 (0.005)	0.218 (0.004)	0.284 (0.010)	0.158 (0.009)	0.414 (0.010)	0.242 (0.010)	0.456 (0.014)	0.248 (0.012)	0.586 (0.025)	0.350 (0.023)	0.467 (0.027)	0.216 (0.024)

DTP between 2004 and 2011

Cumulative Decile	All		FHC		OBC		SC		ST		Muslim	
	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$
100 to 90	0.563 (0.010)	0.311 (0.010)	0.529 (0.020)	0.277 (0.017)	0.576 (0.016)	0.332 (0.019)	0.628 (0.033)	0.338 (0.026)	0.615 (0.042)	0.358 (0.036)	0.631 (0.041)	0.356 (0.043)
100 to 80	0.502 (0.007)	0.297 (0.007)	0.444 (0.013)	0.232 (0.011)	0.534 (0.013)	0.319 (0.013)	0.569 (0.020)	0.360 (0.018)	0.518 (0.026)	0.353 (0.023)	0.565 (0.028)	0.352 (0.026)
100 to 70	0.454 (0.006)	0.278 (0.005)	0.375 (0.011)	0.210 (0.009)	0.480 (0.011)	0.301 (0.009)	0.542 (0.014)	0.321 (0.014)	0.521 (0.022)	0.341 (0.019)	0.502 (0.020)	0.348 (0.020)
100 to 60	0.401 (0.005)	0.238 (0.004)	0.302 (0.010)	0.164 (0.008)	0.429 (0.009)	0.266 (0.007)	0.461 (0.012)	0.261 (0.010)	0.479 (0.019)	0.301 (0.015)	0.475 (0.018)	0.295 (0.016)
100 to 50	0.354 (0.004)	0.195 (0.003)	0.255 (0.008)	0.135 (0.006)	0.381 (0.007)	0.216 (0.005)	0.391 (0.009)	0.205 (0.009)	0.447 (0.015)	0.258 (0.012)	0.419 (0.016)	0.245 (0.013)

Note: Standard errors derived through bootstrapping with 100 replications are in parenthesis. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Table-6: Downward Transition Probability (DTP) by decile, Rural India

DTP between 1993 and 2004

Decile	All		FHC		OBC		SC		ST		Muslim	
	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$
100 to 90	0.687 (0.014)	0.417 (0.015)	0.626 (0.025)	0.355 (0.024)	0.732 (0.023)	0.475 (0.024)	0.780 (0.038)	0.569 (0.047)	0.842 (0.056)	0.579 (0.068)	0.844 (0.059)	0.489 (0.084)
90 to 80	0.648 (0.014)	0.419 (0.015)	0.541 (0.024)	0.348 (0.026)	0.707 (0.023)	0.457 (0.026)	0.730 (0.029)	0.474 (0.035)	0.794 (0.054)	0.587 (0.062)	0.607 (0.060)	0.393 (0.060)
80 to 70	0.616 (0.012)	0.388 (0.014)	0.533 (0.025)	0.322 (0.027)	0.623 (0.024)	0.388 (0.024)	0.670 (0.034)	0.430 (0.035)	0.781 (0.048)	0.616 (0.061)	0.648 (0.055)	0.437 (0.056)
70 to 60	0.589 (0.015)	0.395 (0.015)	0.429 (0.031)	0.288 (0.031)	0.623 (0.026)	0.394 (0.026)	0.650 (0.026)	0.458 (0.028)	0.667 (0.048)	0.511 (0.052)	0.659 (0.056)	0.424 (0.060)
60 to 50	0.486 (0.015)	0.263 (0.013)	0.327 (0.037)	0.156 (0.026)	0.538 (0.026)	0.322 (0.024)	0.483 (0.028)	0.253 (0.031)	0.656 (0.052)	0.365 (0.053)	0.553 (0.054)	0.224 (0.047)

DTP between 2004 and 2011

Decile	All		FHC		OBC		SC		ST		Muslim	
	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$
100 to 90	0.562 (0.010)	0.310 (0.010)	0.529 (0.020)	0.277 (0.017)	0.576 (0.016)	0.331 (0.019)	0.628 (0.033)	0.338 (0.026)	0.615 (0.042)	0.358 (0.036)	0.631 (0.041)	0.356 (0.043)
90 to 80	0.591 (0.009)	0.360 (0.010)	0.521 (0.018)	0.288 (0.016)	0.634 (0.018)	0.378 (0.018)	0.641 (0.025)	0.424 (0.026)	0.607 (0.038)	0.433 (0.036)	0.614 (0.041)	0.402 (0.034)
80 to 70	0.588 (0.010)	0.381 (0.012)	0.508 (0.021)	0.325 (0.021)	0.601 (0.019)	0.406 (0.018)	0.667 (0.022)	0.394 (0.025)	0.662 (0.032)	0.437 (0.034)	0.617 (0.031)	0.429 (0.033)
70 to 60	0.538 (0.011)	0.327 (0.008)	0.428 (0.026)	0.215 (0.021)	0.566 (0.018)	0.368 (0.014)	0.538 (0.022)	0.317 (0.020)	0.613 (0.033)	0.409 (0.031)	0.636 (0.032)	0.354 (0.031)
60 to 50	0.505 (0.010)	0.293 (0.009)	0.418 (0.030)	0.238 (0.023)	0.522 (0.016)	0.298 (0.015)	0.497 (0.022)	0.270 (0.019)	0.654 (0.027)	0.421 (0.025)	0.512 (0.034)	0.327 (0.031)

Note: Standard errors derived through bootstrapping with 100 replications are in parenthesis. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Table-7: Downward Rank Mobility (DRM) by cumulative decile, Rural India

DRM between 1993 and 2004

Cumulative Decile	All		FHC		OBC		SC		ST		Muslim	
	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$
100 to 90	0.814 (0.011)	0.477 (0.015)	0.749 (0.020)	0.418 (0.026)	0.866 (0.018)	0.539 (0.025)	0.881 (0.030)	0.615 (0.046)	0.947 (0.039)	0.632 (0.070)	0.911 (0.045)	0.578 (0.086)
100 to 80	0.769 (0.007)	0.467 (0.010)	0.701 (0.016)	0.400 (0.017)	0.814 (0.013)	0.522 (0.019)	0.823 (0.019)	0.544 (0.028)	0.891 (0.032)	0.634 (0.044)	0.792 (0.038)	0.500 (0.056)
100 to 70	0.734 (0.006)	0.455 (0.008)	0.660 (0.013)	0.388 (0.014)	0.775 (0.011)	0.493 (0.015)	0.781 (0.017)	0.520 (0.021)	0.856 (0.026)	0.632 (0.038)	0.751 (0.029)	0.486 (0.041)
100 to 60	0.708 (0.005)	0.451 (0.007)	0.626 (0.012)	0.374 (0.013)	0.746 (0.011)	0.479 (0.013)	0.755 (0.014)	0.518 (0.016)	0.803 (0.026)	0.598 (0.029)	0.737 (0.027)	0.496 (0.033)
100 to 50	0.671 (0.005)	0.422 (0.005)	0.592 (0.011)	0.347 (0.011)	0.711 (0.010)	0.456 (0.011)	0.695 (0.013)	0.461 (0.014)	0.769 (0.024)	0.553 (0.025)	0.703 (0.025)	0.447 (0.027)

DRM between 2004 and 2011

Cumulative Decile	All		FHC		OBC		SC		ST		Muslim	
	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$
100 to 90	0.790 (0.008)	0.412 (0.012)	0.764 (0.015)	0.346 (0.018)	0.800 (0.014)	0.452 (0.019)	0.838 (0.023)	0.492 (0.029)	0.791 (0.027)	0.439 (0.037)	0.819 (0.035)	0.483 (0.045)
100 to 80	0.763 (0.005)	0.439 (0.007)	0.721 (0.012)	0.364 (0.012)	0.782 (0.010)	0.462 (0.012)	0.813 (0.017)	0.534 (0.019)	0.760 (0.020)	0.466 (0.025)	0.811 (0.023)	0.533 (0.026)
100 to 70	0.740 (0.005)	0.448 (0.006)	0.692 (0.010)	0.368 (0.011)	0.757 (0.009)	0.474 (0.010)	0.792 (0.013)	0.503 (0.016)	0.761 (0.016)	0.498 (0.022)	0.779 (0.018)	0.537 (0.020)
100 to 60	0.713 (0.004)	0.438 (0.005)	0.661 (0.009)	0.358 (0.010)	0.732 (0.007)	0.467 (0.008)	0.737 (0.010)	0.463 (0.012)	0.738 (0.014)	0.499 (0.018)	0.778 (0.015)	0.514 (0.017)
100 to 50	0.688 (0.004)	0.425 (0.005)	0.639 (0.009)	0.351 (0.009)	0.704 (0.006)	0.445 (0.007)	0.700 (0.009)	0.439 (0.010)	0.726 (0.013)	0.494 (0.016)	0.745 (0.015)	0.496 (0.016)

Note: Standard errors derived through bootstrapping with 100 replications are in parenthesis. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Table-8: Downward Rank Mobility (DRM) by decile, Rural India

DRM between 1993 and 2004

Decile	All		FHC		OBC		SC		ST		Muslim	
	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$
100 to 90	0.814 (0.011)	0.477 (0.015)	0.749 (0.020)	0.418 (0.026)	0.866 (0.018)	0.539 (0.025)	0.881 (0.030)	0.615 (0.046)	0.947 (0.039)	0.632 (0.070)	0.911 (0.045)	0.578 (0.086)
90 to 80	0.724 (0.012)	0.458 (0.015)	0.640 (0.024)	0.377 (0.025)	0.764 (0.020)	0.506 (0.026)	0.791 (0.026)	0.505 (0.035)	0.857 (0.044)	0.635 (0.059)	0.705 (0.052)	0.443 (0.063)
80 to 70	0.663 (0.013)	0.430 (0.014)	0.550 (0.026)	0.356 (0.026)	0.696 (0.025)	0.435 (0.025)	0.726 (0.034)	0.487 (0.035)	0.808 (0.043)	0.630 (0.059)	0.690 (0.054)	0.465 (0.058)
70 to 60	0.630 (0.015)	0.441 (0.014)	0.472 (0.031)	0.309 (0.031)	0.659 (0.026)	0.437 (0.024)	0.700 (0.027)	0.515 (0.026)	0.700 (0.046)	0.533 (0.054)	0.706 (0.053)	0.518 (0.062)
60 to 50	0.524 (0.016)	0.306 (0.013)	0.367 (0.040)	0.176 (0.029)	0.581 (0.026)	0.370 (0.024)	0.520 (0.028)	0.294 (0.032)	0.677 (0.049)	0.427 (0.055)	0.600 (0.055)	0.294 (0.051)

DRM between 2004 and 2011

Decile	All		FHC		OBC		SC		ST		Muslim	
	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$
100 to 90	0.790 (0.008)	0.412 (0.012)	0.764 (0.015)	0.346 (0.018)	0.800 (0.014)	0.452 (0.019)	0.838 (0.023)	0.492 (0.029)	0.791 (0.027)	0.439 (0.037)	0.819 (0.035)	0.483 (0.045)
90 to 80	0.737 (0.009)	0.466 (0.010)	0.668 (0.018)	0.386 (0.018)	0.765 (0.016)	0.472 (0.016)	0.796 (0.022)	0.563 (0.025)	0.731 (0.031)	0.493 (0.036)	0.804 (0.034)	0.571 (0.036)
80 to 70	0.694 (0.010)	0.465 (0.012)	0.611 (0.018)	0.379 (0.021)	0.711 (0.016)	0.496 (0.018)	0.763 (0.022)	0.460 (0.024)	0.761 (0.026)	0.554 (0.033)	0.724 (0.032)	0.546 (0.035)
70 to 60	0.633 (0.009)	0.408 (0.009)	0.510 (0.025)	0.309 (0.026)	0.663 (0.016)	0.447 (0.016)	0.631 (0.020)	0.385 (0.021)	0.678 (0.033)	0.500 (0.033)	0.775 (0.028)	0.455 (0.031)
60 to 50	0.585 (0.010)	0.372 (0.010)	0.497 (0.028)	0.310 (0.025)	0.598 (0.015)	0.363 (0.015)	0.590 (0.021)	0.370 (0.020)	0.683 (0.029)	0.479 (0.031)	0.630 (0.036)	0.431 (0.033)

Note: Standard errors derived through bootstrapping with 100 replications are in parenthesis. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Table-9: Upward Transition Probability (UTP) 2004-2011, Urban India

By Cumulative Decile

Cumulative Percentile	All		FHC		OBC		SC/ST		Muslim	
	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$
1 to 10	0.787 (0.011)	0.460 (0.015)	0.860 (0.029)	0.620 (0.049)	0.786 (0.020)	0.451 (0.025)	0.806 (0.023)	0.459 (0.031)	0.737 (0.025)	0.393 (0.029)
1 to 20	0.622 (0.012)	0.324 (0.014)	0.705 (0.027)	0.465 (0.029)	0.630 (0.016)	0.335 (0.017)	0.606 (0.021)	0.332 (0.021)	0.548 (0.021)	0.239 (0.017)
1 to 30	0.556 (0.016)	0.286 (0.014)	0.593 (0.023)	0.328 (0.020)	0.520 (0.013)	0.275 (0.013)	0.471 (0.017)	0.224 (0.013)	0.412 (0.017)	0.155 (0.012)
1 to 40	0.504 (0.013)	0.236 (0.012)	0.489 (0.018)	0.269 (0.017)	0.426 (0.013)	0.197 (0.011)	0.358 (0.013)	0.149 (0.010)	0.291 (0.015)	0.106 (0.010)
1 to 50	0.430 (0.013)	0.181 (0.012)	0.412 (0.014)	0.196 (0.012)	0.325 (0.011)	0.132 (0.008)	0.279 (0.011)	0.089 (0.008)	0.203 (0.012)	0.065 (0.007)

By Decile

Decile	All		FHC		OBC		SC/ST		Muslim	
	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$	UTP $\tau = 0$	UTP $\tau = 20$
1 to 10	0.787 (0.011)	0.460 (0.015)	0.860 (0.029)	0.620 (0.049)	0.786 (0.020)	0.451 (0.025)	0.806 (0.023)	0.459 (0.031)	0.737 (0.025)	0.393 (0.029)
10 to 20	0.622 (0.012)	0.324 (0.014)	0.697 (0.038)	0.423 (0.039)	0.651 (0.026)	0.334 (0.025)	0.607 (0.028)	0.332 (0.027)	0.549 (0.029)	0.250 (0.027)
20 to 30	0.556 (0.016)	0.286 (0.014)	0.606 (0.035)	0.311 (0.031)	0.612 (0.026)	0.347 (0.024)	0.500 (0.033)	0.221 (0.029)	0.447 (0.037)	0.198 (0.030)
30 to 40	0.504 (0.013)	0.236 (0.012)	0.576 (0.038)	0.322 (0.034)	0.534 (0.028)	0.244 (0.022)	0.464 (0.032)	0.213 (0.026)	0.417 (0.033)	0.139 (0.022)
40 to 50	0.430 (0.013)	0.181 (0.012)	0.517 (0.027)	0.240 (0.026)	0.412 (0.029)	0.172 (0.023)	0.399 (0.032)	0.165 (0.024)	0.319 (0.038)	0.090 (0.023)

Note: Standard errors derived through bootstrapping with 100 replications are in parenthesis. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Table-10: Upward Rank Mobility 2004-2011, Urban India

By Cumulative Decile

Cumulative Percentile	All		FHC		OBC		SC/ST		Muslim	
	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$
1 to 10	0.887 (0.009)	0.515 (0.016)	0.922 (0.025)	0.659 (0.046)	0.899 (0.017)	0.519 (0.026)	0.887 (0.018)	0.502 (0.030)	0.863 (0.017)	0.453 (0.032)
1 to 20	0.795 (0.007)	0.450 (0.012)	0.834 (0.022)	0.557 (0.030)	0.805 (0.014)	0.453 (0.017)	0.799 (0.016)	0.451 (0.022)	0.758 (0.015)	0.388 (0.022)
1 to 30	0.736 (0.006)	0.415 (0.009)	0.767 (0.020)	0.478 (0.020)	0.752 (0.012)	0.437 (0.014)	0.729 (0.015)	0.393 (0.016)	0.694 (0.014)	0.355 (0.018)
1 to 40	0.692 (0.006)	0.383 (0.008)	0.720 (0.017)	0.451 (0.020)	0.709 (0.012)	0.403 (0.012)	0.684 (0.013)	0.360 (0.014)	0.650 (0.013)	0.318 (0.015)
1 to 50	0.650 (0.005)	0.353 (0.006)	0.680 (0.016)	0.402 (0.016)	0.662 (0.011)	0.368 (0.012)	0.640 (0.013)	0.335 (0.011)	0.610 (0.014)	0.292 (0.014)

By Decile

Decile	All		FHC		OBC		SC/ST		Muslim	
	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$	URM $\tau = 0$	URM $\tau = 20$
1 to 10	0.887 (0.009)	0.515 (0.016)	0.922 (0.025)	0.659 (0.046)	0.899 (0.017)	0.519 (0.026)	0.887 (0.018)	0.502 (0.030)	0.863 (0.017)	0.453 (0.032)
10 to 20	0.702 (0.013)	0.385 (0.014)	0.754 (0.036)	0.465 (0.040)	0.713 (0.026)	0.387 (0.025)	0.711 (0.024)	0.400 (0.028)	0.644 (0.025)	0.318 (0.029)
20 to 30	0.619 (0.015)	0.344 (0.015)	0.674 (0.037)	0.368 (0.034)	0.653 (0.026)	0.408 (0.026)	0.585 (0.034)	0.272 (0.027)	0.518 (0.038)	0.264 (0.032)
30 to 40	0.559 (0.013)	0.289 (0.014)	0.615 (0.036)	0.390 (0.036)	0.580 (0.028)	0.301 (0.024)	0.527 (0.032)	0.247 (0.028)	0.495 (0.033)	0.190 (0.027)
40 to 50	0.485 (0.014)	0.232 (0.013)	0.579 (0.028)	0.280 (0.028)	0.462 (0.031)	0.218 (0.026)	0.444 (0.031)	0.222 (0.028)	0.380 (0.037)	0.139 (0.029)

Note: Standard errors derived through bootstrapping with 100 replications are in parenthesis. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Table-11: Downward Transition Probability (DTP) 2004-2011, Urban India

By Cumulative Decile

Cumulative Percentile	All		FHC		OBC		SC/ST		Muslim	
	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$
100 to 90	0.577 (0.014)	0.265 (0.013)	0.531 (0.021)	0.212 (0.018)	0.653 (0.032)	0.329 (0.031)	0.581 (0.037)	0.316 (0.031)	0.646 (0.074)	0.438 (0.077)
100 to 80	0.468 (0.008)	0.236 (0.009)	0.425 (0.014)	0.188 (0.012)	0.508 (0.019)	0.289 (0.022)	0.488 (0.025)	0.266 (0.026)	0.610 (0.047)	0.390 (0.044)
100 to 70	0.401 (0.007)	0.218 (0.007)	0.333 (0.011)	0.168 (0.009)	0.466 (0.016)	0.255 (0.014)	0.429 (0.020)	0.229 (0.021)	0.605 (0.036)	0.395 (0.033)
100 to 60	0.348 (0.005)	0.188 (0.005)	0.288 (0.009)	0.145 (0.008)	0.401 (0.013)	0.221 (0.011)	0.358 (0.017)	0.193 (0.016)	0.538 (0.031)	0.331 (0.027)
100 to 50	0.306 (0.005)	0.158 (0.005)	0.237 (0.008)	0.113 (0.007)	0.341 (0.010)	0.181 (0.010)	0.318 (0.015)	0.162 (0.013)	0.519 (0.022)	0.294 (0.022)

By Decile

Decile	All		FHC		OBC		SC/ST		Muslim	
	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$	DTP $\tau = 0$	DTP $\tau = 20$
100 to 90	0.577 (0.014)	0.265 (0.013)	0.531 (0.021)	0.212 (0.018)	0.653 (0.032)	0.329 (0.031)	0.581 (0.037)	0.316 (0.031)	0.646 (0.074)	0.438 (0.077)
90 to 80	0.543 (0.014)	0.269 (0.015)	0.515 (0.020)	0.227 (0.017)	0.555 (0.029)	0.324 (0.031)	0.559 (0.035)	0.286 (0.041)	0.640 (0.060)	0.373 (0.056)
80 to 70	0.542 (0.014)	0.306 (0.014)	0.475 (0.024)	0.242 (0.022)	0.593 (0.027)	0.328 (0.028)	0.516 (0.037)	0.323 (0.036)	0.784 (0.045)	0.505 (0.055)
70 to 60	0.519 (0.013)	0.281 (0.013)	0.512 (0.025)	0.266 (0.022)	0.547 (0.026)	0.288 (0.024)	0.457 (0.031)	0.248 (0.030)	0.624 (0.050)	0.422 (0.049)
60 to 50	0.485 (0.014)	0.257 (0.014)	0.399 (0.029)	0.195 (0.025)	0.486 (0.030)	0.261 (0.026)	0.469 (0.032)	0.243 (0.032)	0.695 (0.037)	0.411 (0.040)

Note: Standard errors derived through bootstrapping with 100 replications are in parenthesis. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.

Table-12: Downward Rank Mobility (DRM) 2004-2011, Urban India

By Cumulative Decile

Cumulative Percentile	All		FHC		OBC		SC/ST		Muslim	
	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$
100 to 90	0.740 (0.013)	0.317 (0.014)	0.716 (0.018)	0.269 (0.019)	0.811 (0.028)	0.369 (0.032)	0.691 (0.037)	0.360 (0.035)	0.792 (0.053)	0.500 (0.079)
100 to 80	0.688 (0.009)	0.317 (0.009)	0.663 (0.014)	0.273 (0.013)	0.723 (0.018)	0.362 (0.021)	0.684 (0.024)	0.350 (0.027)	0.740 (0.038)	0.455 (0.042)
100 to 70	0.666 (0.007)	0.328 (0.007)	0.637 (0.012)	0.278 (0.010)	0.698 (0.015)	0.365 (0.015)	0.650 (0.021)	0.352 (0.022)	0.777 (0.028)	0.505 (0.034)
100 to 60	0.645 (0.006)	0.330 (0.006)	0.623 (0.009)	0.285 (0.009)	0.676 (0.012)	0.366 (0.012)	0.614 (0.016)	0.335 (0.018)	0.748 (0.025)	0.489 (0.028)
100 to 50	0.624 (0.005)	0.325 (0.005)	0.601 (0.010)	0.278 (0.008)	0.644 (0.011)	0.355 (0.010)	0.598 (0.014)	0.323 (0.015)	0.740 (0.019)	0.481 (0.024)

By Decile

Decile	All		FHC		OBC		SC/ST		Muslim	
	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$	DRM $\tau = 0$	DRM $\tau = 20$
100 to 90	0.740 (0.013)	0.317 (0.014)	0.716 (0.018)	0.269 (0.019)	0.811 (0.028)	0.369 (0.032)	0.691 (0.037)	0.360 (0.035)	0.792 (0.053)	0.500 (0.079)
90 to 80	0.636 (0.014)	0.318 (0.015)	0.599 (0.021)	0.277 (0.018)	0.651 (0.024)	0.357 (0.032)	0.677 (0.033)	0.342 (0.039)	0.707 (0.057)	0.427 (0.058)
80 to 70	0.621 (0.014)	0.349 (0.014)	0.570 (0.023)	0.292 (0.022)	0.655 (0.026)	0.369 (0.026)	0.599 (0.037)	0.354 (0.035)	0.825 (0.043)	0.567 (0.055)
70 to 60	0.583 (0.014)	0.336 (0.014)	0.566 (0.025)	0.312 (0.022)	0.623 (0.024)	0.370 (0.026)	0.529 (0.031)	0.295 (0.031)	0.688 (0.044)	0.459 (0.051)
60 to 50	0.539 (0.014)	0.303 (0.015)	0.461 (0.031)	0.232 (0.025)	0.535 (0.029)	0.316 (0.026)	0.549 (0.030)	0.288 (0.033)	0.722 (0.035)	0.464 (0.041)

Note: Standard errors derived through bootstrapping with 100 replications are in parenthesis. FHC=Forward Hindu Caste; OBC=Other Backward Caste; SC=Scheduled Caste; ST=Scheduled Tribe.