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Top Indian Incomes, 1922-2000

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Abstract : This paper presents data on the evolution of top incomes and wages from 1922 to 2000 in India using individual tax returns data. Our data shows that the shares of the top 0.01%, the top 0.1% and the top 1% in total income, shrank very substantially from the 1950s until the early to mid 1980s but then went back up again, so that today these shares are only slightly below what they were in the interwar. We argue that this U-shaped pattern is broadly consistent with the evolution of economic policy in India: The period from the 1950s to the early to mid 1980s was also the period of “socialist” policies in India, while the subsequent period, starting with the rise of Rajiv Gandhi, saw a gradual shift towards more pro-business policies. Although the initial share of this group was small, the fact that the rich were getting richer had a non-trivial impact on the overall income distribution. In particular, its impact is not large enough to fully explain the gap observed during the 1990s between average consumption growth in survey-based NSS data and the National accounts based NAS data, but is sufficiently large to explain a non-negligible part of it (between 20% and 40%).

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1. Introduction

This paper presents series on top incomes and top wages in India between the years of 1922 and 2000 based individual tax returns data. We use tabulations of tax returns published each year by the Indian tax administration to compute the share of the top percentile of the distribution of total income, the top 0,5%, the top 0,1% and the top 0,01%. We do the same for the wage distribution. We do not go below the top percentile because incomes below this level are largely exempt from taxation in India.

Our series begin in 1922, when the income tax was created in India, and allow us to look at the impact of the Great Depression and World War 2 on inequality. We are particularly interested in the period starting in the 1950s, right at the beginning of India's experiment with socialism. This experiment was officially suspended in 1991 with the beginning of the liberalization process, which continued through the 1990s. One explicit goal of the socialist program was to limit the economic power of the elite, in the context of a mixed economy. Our data offers us the opportunity to say something about the extent to which this program, with all its well-known deficiencies, succeeded in its distributional objectives. This is important first, because it is an important part of our assessment of this period. And second, because it offers a window into the broader question of the role of policy in affecting the distribution of income and wealth in a developing country: Given that much of the economic activity in these countries is outside the formal sector, it is not at all obvious that there is a lot that policy can affect.

Our results are consistent with an important role for policy in shaping the distribution of income. In particular, we do find evidence of a substantial decline in the share of the elite during the years of socialist planning and a comparable recovery in the post-liberalization era. However the rebound seems to start significantly before the official move towards liberalization.

Given that these results are likely to be controversial, it is worth emphasizing that there are a number of obvious problems with using tax data, not the least because of tax evasion. We discuss these at some length in section 4. While we conclude that our results are probably robust, we do not intend them to be definitive. Our view is rather that they provide a point of departure on an important question about which very little is

known, primarily because of data limitations: There are good reasons to suspect that the usual sources of information on income distribution in India---such as consumer expenditure surveys---are not particularly effective at picking up the very rich. This is in part because the rich are rare, and in part because they are much more likely to refuse to cooperate with the time-consuming and irksome process of being subjected to a consumer expenditure survey.¹

While there is no hard evidence that the rich are indeed being undercounted in India, (the Indian consumer expenditure surveys do not, for example, report refusal rates by potential income category), one reason to suspect that this the case comes from what has been called the *Indian growth paradox of the 1990s*. According to the standard household expenditure survey conducted by the National Sample Survey (NSS), real per capita growth in India during the 1990s was fairly limited. Such a conclusion stands in sharp contrast with the substantial growth measured by national accounts statistics (NAS) over this same period. This puzzle has attracted quite a lot of attention during the recent years² and it has been widely suggested that it might simply be that a very large part of the growth went to very rich. However there has been no attempt to directly quantify this possibility.³ Our data allows us to take a useful step in this direction. We are able to put bounds on the extent to which the growth gap can be explained simply in terms of undercounting the very rich. We conclude that it can explain between 20% and 40% of the puzzle. Although this is not negligible, this leaves the bulk of the puzzle unaccounted for, largely because the share of the rich in total income is still relatively small. This

¹ See, e.g., Szekely and Hilgert (1999), who look at a large number of Latin American household surveys and find that the 10 largest incomes reported in surveys are often not very much larger than the salary of an average manager in the given country at the time of survey. For a systematic comparison of survey and national accounts aggregates in developing countries, see Ravallion (2001).

² See, e.g., Datt (1999), Ravallion (2000), The World Bank (2000), Sundaram and Tendulkar (2001). Recently released data from the 1999-2000 NSS round has revealed that NSS growth was larger than expected during the 1990s and that poverty rates did decline over this period, contrarily to what most observers believed on the basis of pre-1999-2000 NSS rounds (see Deaton and Dreze (2002) and Deaton (2003a, 2003b)). However the overall NSS-NAS growth gap still appears to be substantial, even after this correction (see Table 2 below), and this substantial gap remains to be explained.

³ Sundaram and Tendulkar (2001) find that the NSS-NAS gap is particularly important for commodities that are more heavily consumed by higher income groups, thereby providing indirect evidence for the explanation based on rising inequality.

suggests that there probably is some deeper problem with the way either the NSS or the NSO (which generates the NAS) collects its data.⁴

The rest of this paper is organized as follows. Section 2 briefly outlines our data and methodology. Section 3 presents our long run results. Section 4 discusses potential problems with this evidence. Section 5 uses this evidence to shed some light on the Indian growth paradox of the 1990s. Section 6 concludes.

2. Data and methodology

The tabulations of tax returns published each year by the Indian tax administration in the “All-India Income-Tax Statistics” (AIITS) series constitute the primary data source used in this paper. The first year for which we have income data is 1922-1923 while the last is 1999-2000.⁵

Due to the relatively high exemption levels, the number of taxpayers in India has always been rather small. The proportion of taxable tax units was around 0,5%-1% from the 1920s to the 1980s, and it rose sharply during the 1990s up to 3,5%-4% at the end of the decade, following the large increase in top nominal incomes (see figure 1).⁶ Therefore our long run series cannot go below the top percentile.

⁴ See Bhalla (2002) for a negative view of the NSS approach. For more balanced discussions of the relative merits of survey and national accounts aggregates in developing countries, see Ravallion (2001) and Deaton (2003c).

⁵ Financial years run from April 1st to March 31st in India (1922-3 refers to the period running from April 1st 1922 to March 31st 1923, etc., and 1999-2000 to the period running from April 1st 1999 to March 31st 2000). Note also that AIITS publications always refer to assessment years (AY), i.e. years during which incomes are assessed, while we always refer to income years (IY) (IY=AY-1). For instance, AIITS 1923-4 contains the data on IY 1922-3, etc., and AIITS 1999-00 contains the data on IY 1998-9. AIITS 2000-01 (IY 1999-00) was not yet available when we revised this paper, and our IY 1999-0 figures for top incomes were obtained by inflating the 1998-9 figures by the nominal 1999-00/1998-9 per tax unit national income growth rate. This approximation probably leads us to under-estimate top income growth. We did this because there was no large NSS round for 1998-9 so it was easier to make comparison with 1999-00 as the end point.

⁶ Throughout the paper, “tax units” should be thought of as individuals (all of our estimates have been obtained by summing up tax returns filed by individuals and those filed by “Hindu undivided families” (HUF); the latter make less than 5% of the total in the 1990s, down from about 20% in the interwar). The total, theoretical number of tax units was set to be equal to 40% of the total population of India throughout the period (see table A0, col. (2)). This represents a rough estimate of the potential “positive-income population” of India: this is lower than India’s adult population (the 15-year-and-over population makes about 60-65% of

Insert Figure 1: The proportion of taxable tax units in India, 1922-2000

The tabulations published in AIITS report the number of taxpayers and the total income reported by these taxpayers for a large number of income brackets. By using standard Pareto extrapolation techniques we computed for each year the average incomes of the top percentile (P99-100), the top 0,5% (P99,5-100), the top 0,1% (P99,9-100) and the top 0,01% (P99,99-100) of the tax unit distribution of total income, as well as the income thresholds P99, P99,5, P99,9 and P99,99 and the average incomes of the intermediate fractiles P99-99,5, P99,5-99,9 and P99,9-99,99.⁷

To get a sense of the orders of magnitude, we report in table 1 the results obtained for 1999-00. There were almost 400 millions tax units in India in 1999-00 (396.4 millions). Based on the national accounts statistics, the average income of those 400 millions tax units was around Rs. 25,000 per year (\$3,000 in PPP terms).⁸ To belong to the top percentile (P99), which includes about 4 million tax units, one needed to make more than Rs.88,000 (around \$10,000 at PPP). The average income of the bottom half of the top percentile (fractile P99-99,5, about 2 million tax units) was about Rs. 99,000 (less than \$12,000 at PPP). To belong to the top 0.01% (about 40,000 tax units), one needs to make more than Rs.1.4 million (\$160,000 at PPP), and the average income above that threshold was more than Rs. 4 million (\$470,000 at PPP).

Insert Table 1: Top Indian Incomes in 1999-2000

total population since the 1950s), but is very close to India's labor force (the labor force consists of about 40-45% of total population since the 1950s).

⁷ For a recent use of Pareto extrapolation techniques with similar tax return data, see Piketty (2003) and Piketty and Saez (2003). See also Atkinson (2003).

⁸ Our average income series (table A0, col.(7)) was set to be equal to 70% of national income per tax unit (the 30% deduction is assumed to represent the fraction of national income that goes to undistributed profits, non-taxable income, etc.; the national income series was taken from Sivasubramonian (2000), to whom we also borrowed our population series). We also report on table A0 other income aggregates based on GDP and NAS household consumption (both taken from the World Bank's WDI data base, from which we also extracted our CPI series) and on NSS household consumption (computed from Datt (1997, 1999) for the 1956-1998 series and Deaton and Dreze (2002, note 24) for the corrected 1999-00/1993-4 growth rate).

As in other countries, the top of India's income distribution appears to be very precisely approximated by the Pareto structural form.⁹ On the other hand the estimates for the recent period are subject to sampling error: the AIITS tabulations were based on the entire population until the early 1990s (as in most OECD countries),¹⁰ but they now seem to be based upon uniform samples of all tax returns. However the sampling rate is sufficiently large to guarantee that the estimated trends for top income shares are statistically significant.¹¹

AIITS publications also includes tabulations reporting the amounts of the various income categories (wages, business income, dividends, interest, etc.) for each income bracket. In particular, AIITS offers separate tables for wage earners who are by far the largest subgroup. This allowed us to separate estimates for top wage fractiles, which we can compare to our top fractiles estimates for total income (see below).¹²

3. The long run dynamics of top income shares, 1922-2000

Figure 2 illustrates the basic pattern of our findings: Our results show that income inequality (as measured by the share of top incomes) has followed a U-shaped pattern over the 1922-2000 period. The top 0.01% income share was fluctuating around 2-2.5% of total income from the 1920s to the 1950s. It then gradually fell from about 1.5-2% of total income in the 1950s to less than 0.5% in the early 1980s, and finally rose during the 1980s-1990s, back to 1.5-2% during the late 1990s. What this means is that the average

⁹ In the same way as for other countries (see above for references), we checked that our extrapolation results are virtually unaffected by the choice of extrapolation thresholds. Pareto coefficients are locally very stable in India, just like in other countries.

¹⁰ Or on stratified samples with sampling rates close to 100% for top incomes.

¹¹ According to the tax administration statistics division, the sampling rate is about 1% and approximately uniform (no precise information about sampling design and rate is included in AIITS publications). Given India's large population, this implies that our estimate for the top 1% income share (8,95% of total income in 1999-00, see Table A3) has a standard error of about 0,04%, and that our estimate for the top 0,01% income share (1,57% of total income in 1999-00, see Table A3) has a standard error of about 0,08%. There is some evidence however that the sampling design is changing and that published tabulations are becoming more volatile by the end of the period. In particular, the tabulations for IY 1997-8 (AIITS 1998-9) contain far too many individual taxpayers above 1 million Rs, thereby suggesting that something went wrong in the sampling design during that year. The 1997-8 estimates were corrected downwards on the basis of 1996-7 and 1998-9 tabulations.

¹² Published wage tabulations for IY 1996-7 and 1997-8 appear to suffer from sampling design failures (top wages are clearly truncated in 1996-7, and they are too numerous in 1997-8), and our estimates for those two years were corrected on the basis of 1995-6 and 1998-9 data.

top 0.01% income was about 150-200 times larger than the average income of the entire population during the 1950s. It went down to less than 50 times as large in the early 1980s, but went back to being 150-200 times larger during the late 1990s.

The exact turning point is also of some interest. We see that the decline in the share of the top 0.01% is relatively rapid till 1974-75. Then it slows considerably but there is still a clear downward trend till 1980-81. Then it reverses: The trend is upwards throughout the 1980s, reaching a peak in 1988-89. Over the 1980s, the share of the top 0.01% more than doubles---from less than 0.4% to more than 0.8%. But it then reverses once again, and by 1991-92 it is back below 0.6%. Then it takes off and after 1995-96 remains in the 1.5-2% range.

One also observes a similar (though less pronounced) U-shaped pattern for the top 1% income share, which went from about 12-13% during the 1950s to 4-5% in the early 1980s to 9-10% in the late 1990s (see figure 4). Once again the turning point seems to be around 1980-81, and over the 1980s, the share of the top 1% also doubles. Then, as with the share of the top 0.01%, there is a period of retrenchment that lasts till 1991-92, followed by a renewed upward movement.

The comparison of these figures 2 and 3 reveals another intriguing fact: While in the 1980s the share of the top 1% increases almost as quickly as the share of the top 0.01%, in the 1990s there is a clear divergence between what is happening to the top 0.01% and the rest of the top percentile. To confirm that this is the case, we break up the top percentile into four groups: Those between the 99th percentile and the 99.5th percentile, those between the 99.5th percentile and the 99.9th percentile, those between the 99.9th percentile and the 99.99th percentile and those in the top 0.01 percentile. Tables 2 reports what happened to each of these groups in the 1987-2000 period. We see that only those in the top 0.1 percent enjoyed income growth rates faster than the growth rate of GDP per capita. This contrasts with what we see when we look at the period that includes the 1980s (see table 3): For this period we see evidence of above average growth for the entire top percentile.

Insert Figure 2: The top 0,01% income share in India, 1922-2000

Insert Figure 3: The top 0,1% income share in India, 1922-2000

Insert Figure 4: The top 1% income share in India, 1922-2000

While 1980-81 was clearly the year when the data series turn around, it is not possible to date the "true" turn-around with quite so much precision, because the share of the rich is also affected by short run, cyclical factors. It is possible that our data puts the turning point in 1980-81 only because we have not made any allowances for the deep recession of 1979-80 and 1980-81, which hurt the rich. As a result, we see a sharp upward trend starting in 1981, even though perhaps what is really happening in 1981-82 and 1982-83 is just a reversion to the pre-existing trend. Therefore rather than naming a single year, we date the turn-around to the early to mid 1980s.

The fact that the turning point is so early makes it hard to attribute it to the formal process of liberalization. Indeed given the nature of our data, we cannot entirely rule out the possibility that the driving factor was either, a shift in the global economic environment, or even that it was a part of the natural evolution of a mixed economy. However, the timing of the turn-around is also consistent with the view that there was a structural shift in the Indian economy in the early to mid 1980s. DeLong (2002), based on macro time series data, dates the acceleration in the growth rate of the Indian economy to the early to mid 1980s, rather than the early 1990s. He and others have suggested that this may have to do with a shift of power within the ruling Congress Party towards a more technocratic/pro-business group associated with Rajiv Gandhi, who enters politics in 1981 following his brother's death, and become Prime Minister in 1984.

Also while the turn-around was earlier, the data suggests a definite acceleration in the growth of the share of the top 0.01% after 1991. Moreover this contrasts with what we see in the case of the top 1%, suggesting that what happened after 1991 was qualitatively different from what happened before, and even more biased in favor of the ultra-rich.

Finally, a tentative piece of evidence suggesting that what happened in India over this entire period was not simply a reflection of forces that were affecting countries all over the world. Figures 5, 6 and 7 compares what happened in India to the patterns obtained using similar data from France and the United States. During the 1950s-1960s, India was less egalitarian than either of these countries (they were actually quite similar at that time), in the sense that the top 0.01% earned a substantially higher share of total income in India.

Subsequently however, top income shares declined continuously in India during 1960s-1970s and fell below the Western levels during the early 1980s. The fact that the fall of top income shares occurred mostly during the 1950s-1970s in India (rather than during the interwar and World War 2) seems consistent with the interpretation posited by Piketty (2003) and Piketty and Saez (2003) to explain the French and U.S. trajectories. The shocks induced by the Great Depression of the 1930s and World War 2 were less severe in India, while tax progressivity was extremely high in India during the 1950s-1970s, which might have induced a very large impact on capital concentration and pre-tax income inequality (even larger than in France or the U.S.).¹³ Preliminary computations do indeed seem to indicate that the fall in top shares observed during this period was primarily due to the fall of top capital incomes.

Top income shares then went back up in India, following a pattern similar to the United States but not France, where the top shares remained fairly flat during the 1980s-1990s (the pattern in most other European countries is quite similar). The share of the very rich in Indian incomes is currently much higher than in Europe. As we show below, the rise of top Indian incomes during the recent period was not due to the revival of top capital incomes (the rise of top wages did play a key role, like in the U.S.). Although our data does not allow us to identify precisely the causal channels at work, and in particular to isolate the impact of globalization, we note that the fact that the rise in income inequality was so much concentrated within top incomes seems more consistent with a theory based on rents and market frictions (see e.g. Banerjee and Newman (2003)) than with a theory based solely on skills and technological complementarity (i.e. inequality rises in the South because low-skill southern workers are too low-skill to benefit from globalization; see e.g. Kremer and Maskin (2003)).

Insert Figure 5: The top 0,01% income share in India, France and the U.S., 1922-2000

Insert Figure 6: The top 0,1% income share in India, France and the U.S., 1922-2000

Insert Figure 7: The top 1% income share in India, France and the U.S., 1922-2000

¹³ This would of course need to be studied in greater length, first by computing effective tax rates by income fractile over the entire period. Note also that the rise of very top shares in India during the 1930s seem strange, and might be due to the fact that the national income series computed by Sivasubramonian (2000)

4. Measurement issues

Our presumption so far has been that what we have measured is the actual income share of the rich. There are a number of reasons why this may not be true. First, despite our best efforts, we were unable to discover the changes that occurred during the 1990s in the procedure for generating the sample used to create the tax tables. Our sense, from informal conversations with Indian tax officials, is that, at least in recent years, the procedure is more an informal attempt to sample randomly than a precise random sample. To the extent that this increases the risk of the data being clustered, the implication is that the within sample variance might overstate the precision of our data. While this remains a possibility, we take some consolation from the fact that the trends, for the most part, seem quite stable. While our results for single years or sets of years may reflect sampling variation, the fact that in every year between 1973-74 and 1992-93, the share of the top 0.01% was less than 0.85% (and in every year but two it was less than 0.7%) and that in every year including and after 1995-96 it was greater than 1.5%, seems much more robust. Moreover the intervening two years, 1993-94 and 1994-95 do show, as we might have hoped for, shares for the top 0.01% that were between 0.7% and 1.5%.

A more serious problem is that the surge in top incomes may reflect improvements in the income tax department's ability to measure (and hence tax) the incomes of the wealthy. One reason for this may be that tax cuts in the early 1990s, simply reduced the incentives for evading taxes among the wealthy. Note however that the overall decline in the top marginal rate, though non-monotonic, was quite moderate: the top marginal tax rate dropped from 50% in 1987-8 to 40% in 1999-2000 (see figure 8). By comparison the change in the share of the top 0.01% was enormous: It went up from 0.7% in 1987-88 to over 1.5% in 1999-2000. If this entire change is to be explained by a shift in tax rates, the implied elasticity would have to be enormous.

and used by us to calculate income shares might overestimate nominal income fall in India during the 1930s (our nominal top income series do fall during the 1930s, but they fall less than national income).

Insert Figure 8: The top 0,01% income share and the top marginal income tax rate in India, 1981-2000

Of course, the effect of these tax changes could have been reinforced by an spectacular improvements in the collection technology. There were, after all, a number of innovations in tax collection in the 1990s, such as the introduction of the “one in six rule” (in 1998) that required everyone who satisfied at least one out of six criteria (owning a car, travel abroad, etc.) to file a tax return.

To see if this is the whole story, we redid the exercise above exclusively for wages. Wages are clearly much less subject to tax evasion than non-wage incomes, since taxes are typically deducted at source and the employer has a strong incentive to report what he pays, since he gets to deduct the wages from his own taxes. Therefore if all that was happening was better collection, we would expect wage incomes to grow much more slowly than other incomes. To see if this is the case, we compare the evolution of top wages (see table 4 below) and with the evolution of top incomes (see table 2). We find that top wages have increased essentially in step with top incomes during the 1990s. In fact, wage growth among the top percentile of the wage distribution rose by 81% between 1987-8 and 1999-00, while the corresponding figure was 71% for the top percentile of the income distribution. This is consistent with the fact that the share of wages within the total income of the top percentile has increased somewhat during this period (from 28% to 31%). Although very top incomes are still mostly made of non-wage income, the wage part has increased during the 1990s.

A final source of concern is that the evolution of the economy might have increased the share of those industries, such as software, which are easier to tax. However much of the increase in the share of the rich seems to be by 1995-96, at which point the software was still relatively small and hardly in a position to have such a huge distributional impact.

5. The growth paradox of the 1990s

Can the fact that the rich were getting richer help solve what has been called the Indian growth paradox of the 1990s? Table 2 illustrates this paradox: For the period 1987-2000, it compares the growth rate of average consumption as reported in the NSS, with the growth rate of average income and consumption from the national accounts (NAS), as well as the top incomes from the tax returns. 1987-8 and 1999-2000 were chosen because there were large rounds of the NSS surveys in those years, which makes our estimates of the NSS-NAS gap more precise.¹⁴ To eliminate the effect of using different deflators, we first compare nominal growth performance, and then compute real growth performance by using the same deflator for all the series (namely, the CPI).

Insert Table 2: Top income growth during the 1990s: 1999-2000 vs 1987-1988

According to the NSS, real growth was fairly limited in India during the 1990s: per capita consumption increased by only 19% in real terms between 1987-8 and 1999-0. According to national accounts (NAS), however, there real growth was more than twice as large: both per capita GDP and national income increased by more than 50% in real terms, and per capita household consumption increased by 40%. This NSS-NAS gap is what has been called the Indian growth paradox and has been the subject of much discussion in recent years.¹⁵

Table 2 raises the possibility that the very large growth of top incomes during the 1990s might help solve this puzzle. The average income growth among the top percentile of the tax units was 71% in real terms between 1987-8 and 1999-0, which is substantially more than average growth according to the national accounts. Moreover, the higher one goes within the top percentile, the higher the growth (up to +285% for the top 0,01% income fractile).

¹⁴ Intermediate NSS surveys were conducted between the two large surveys of 1987-8 and 1993-4 and between the two large surveys of 1993-4 and 1999-2000 but these were based on smaller samples, and are generally considered as less reliable. Note that we used the 1999-00 per capita consumption estimates reported by Deaton and Dreze (2002), who implement a procedure for correcting the data for changes in the recall period (all surveys until 1993-4 were conducted with a 30-day recall period, but the NSS has experienced with 7-day recall periods since then).

¹⁵ See the references above. Real growth during the 1990s would be somewhat higher if one was to use the GDP deflator instead of the CPI, but the NSS-NAS gap would obviously not change.

What fraction of the NSS-NAS gap can be explained by the huge growth performance of very top incomes? Let's assume that the NSS is unable to record any of the extra growth enjoyed by the top percentile (say the people in the top percentile do not report their extra growth to the NSS, or do not report anything at all). According to our calculations, the top percentile share in total consumption was around 8% in 1987-8.¹⁶ Since the average income of the top percentile increased by 71% in real terms between 1987-8 and 1999-00 according to the tax returns (as opposed to +19% for average NSS consumption), this implies that NSS growth was 3.55% less than what would have been without the misreporting.¹⁷ This implies that the growing incomes among the top percentile can explain at most 20.1% of the total NSS-NAS gap (see table 2).¹⁸ This is significant, but leaves 80% of the puzzle unexplained. The problem lies in the fact that almost all the extraordinary growth was among the top 0.1% and the weight of this group is simply not large enough to have an impact on aggregate statistics of the necessary magnitude. For the rise of inequality to explain fully the NSS-NAS gap, there would have to have been very high income growth at the bottom of the top percentile, and not simply among those in the top 0.1%.

Top income growth can explain a larger proportion of the NSS-NAS gap if we start in the 1980s. For instance, under the same assumptions, the top percentile can explain almost 40% of the cumulative NSS-NAS gap over the 1981-2000 period (see table 3). This is because the bottom of the top percentile enjoyed rapid income growth in the 1980s. (see figures 2 to 4). The booming Indian elite of the 1980s-1990s seems to thin to explain all of the growth puzzle, but large enough to account for a non-negligible part of it.

Insert Table 3: Top income growth during the 1980s-1990s: 1999-2000 vs 1981-1982

Insert Table 4: Top wage growth during the 1990s: 1999-2000 vs 1987-1988

6. Conclusion

¹⁶ According to our estimates (computed with 70% of national income as the income denominator), the top percentile income share was 8.12% in 1987-8 (see table A3).

¹⁷ $0.0812 \times (1.71 / 1.19 - 1) = 3.55$.

Our results suggest that the gradual liberalization of the Indian did make it possible for the rich (the top 1%) to substantially increase their share of total income. However, while in the 1980s the gains were shared by everyone in the top percentile, in the 1990s it was only those in the top 0.1% who big gains. The 1990s was also the period when the economy was opened. This suggests the possibility that the ultra-rich were able to corner most of the income gains in the 90s because they alone were in a position to sell what the world markets wanted.¹⁹ It would interesting to see whether in the coming years, as more and more people position themselves to benefit from the world markets, the share of the rich and the ultra-rich stops growing and even shrinks. For this and other reasons, we hope that this study would launch a trend towards more research (and better data) that focuses on the rich.

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¹⁸ $3.55/(1.40/1.19-1) = 20.1$. This is in a sense a lower bound, since we are using the 1987-8 top percentile share as our baseline for this computation, and the share was higher for later years.

¹⁹ The point is that one does not have to be rich on a global scale to be counted among the rich in India and even among the ultra-rich (See table 1). Even those who got paid like an average American, make it into the group of the ultra-rich.

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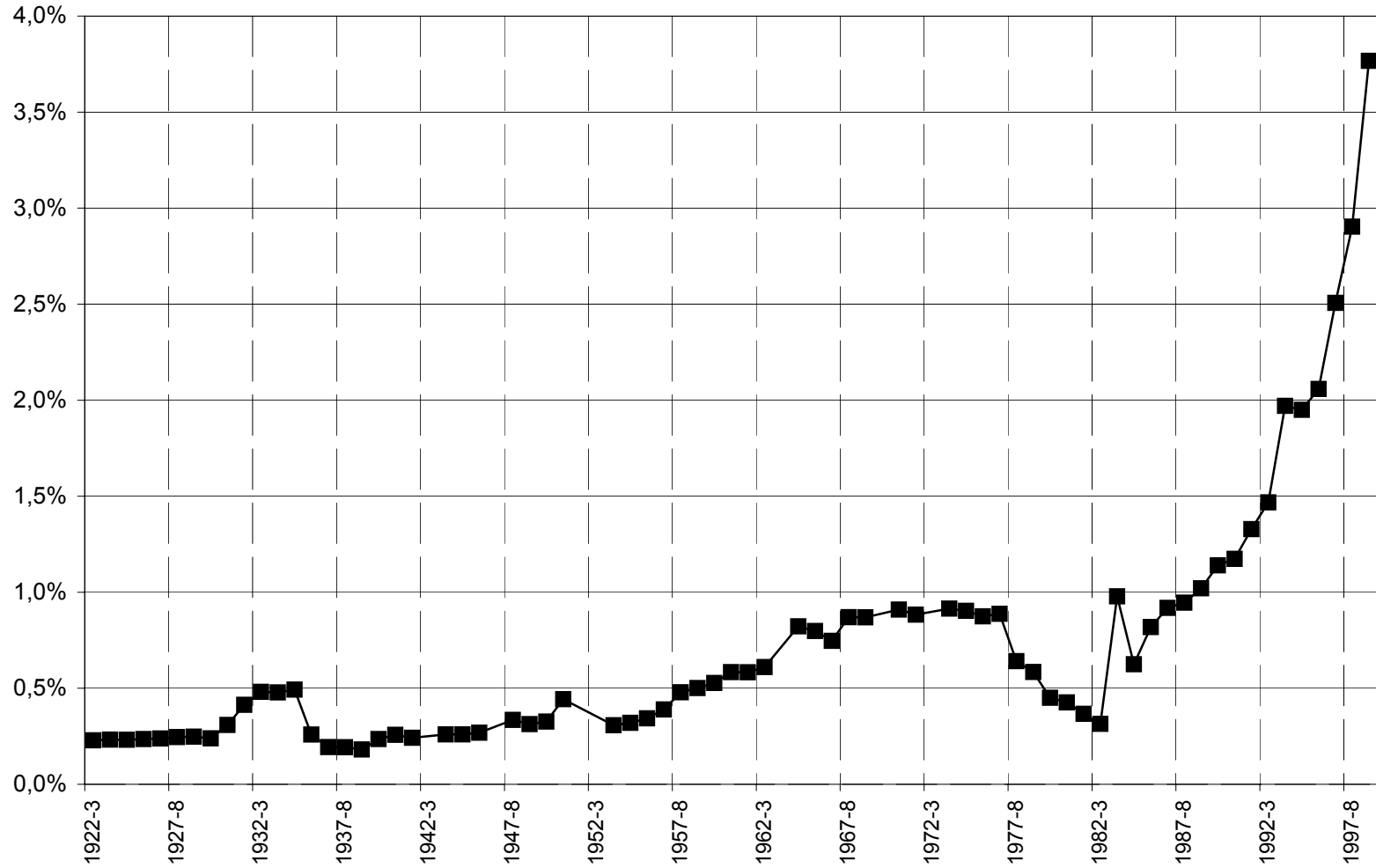
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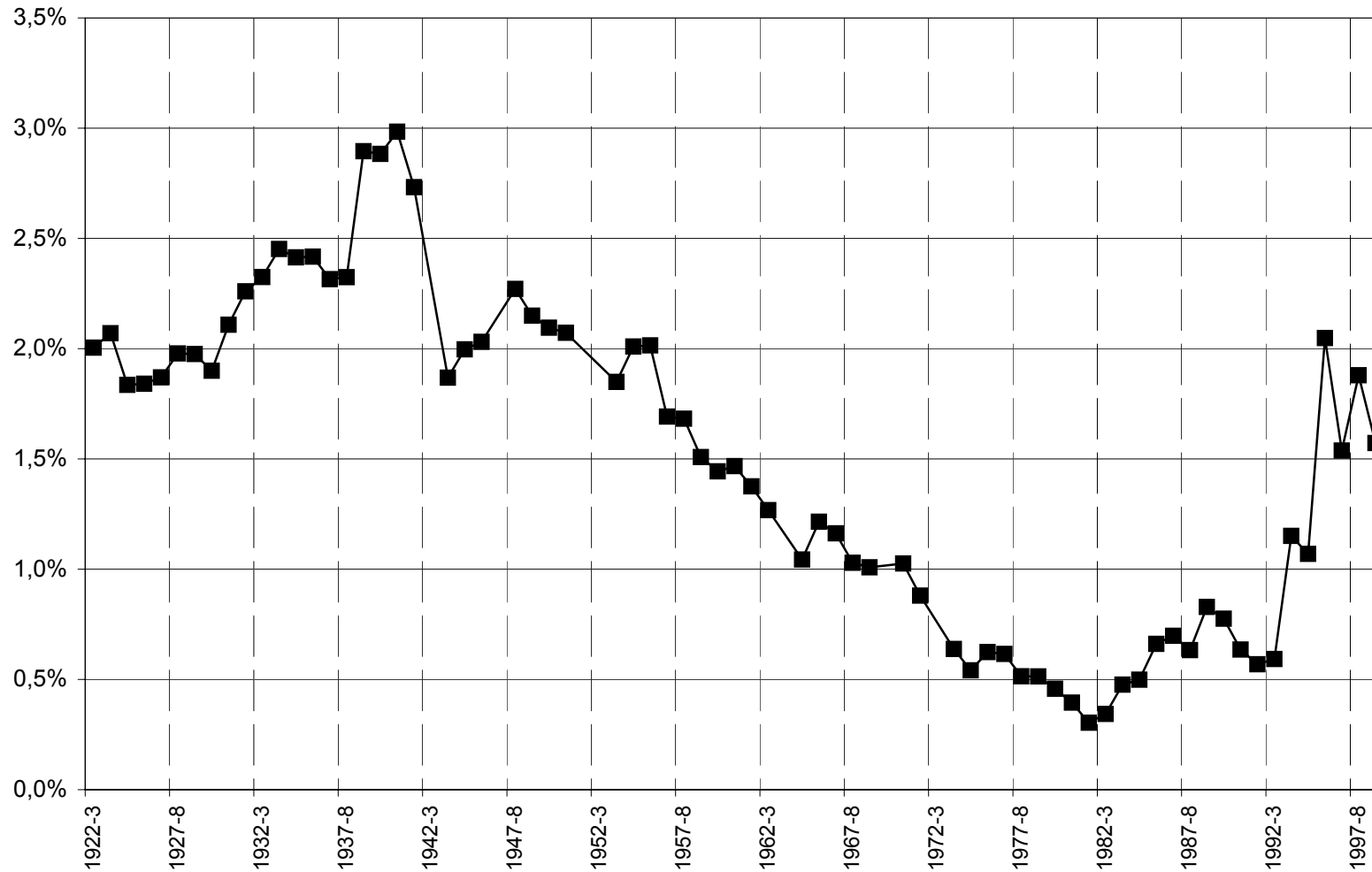
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Figure 1 : The proportion of taxable tax units in India, 1922-2000



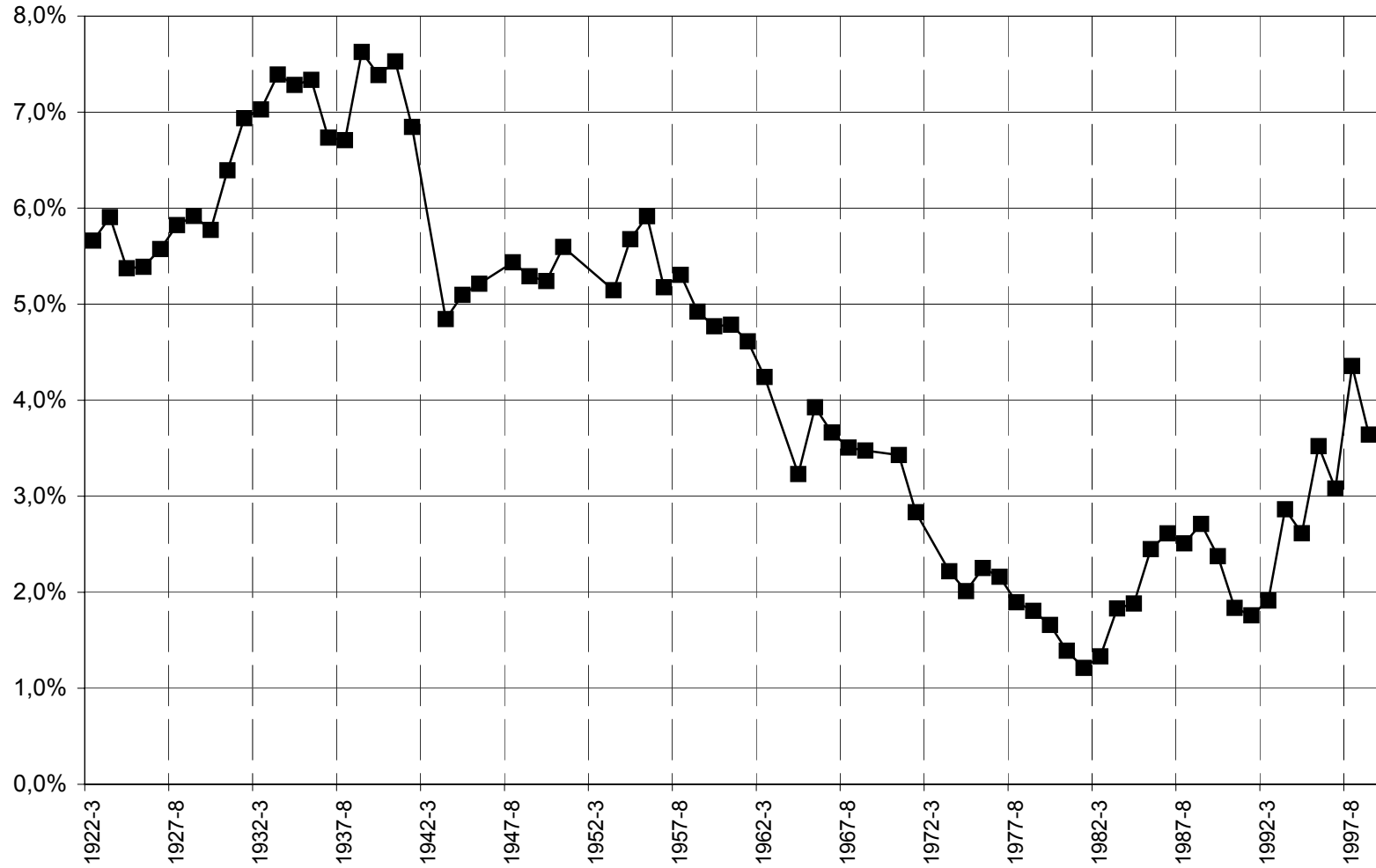
Source: Table A0, col. (4)

Figure 2 : The top 0,01% income share in India, 1922-2000



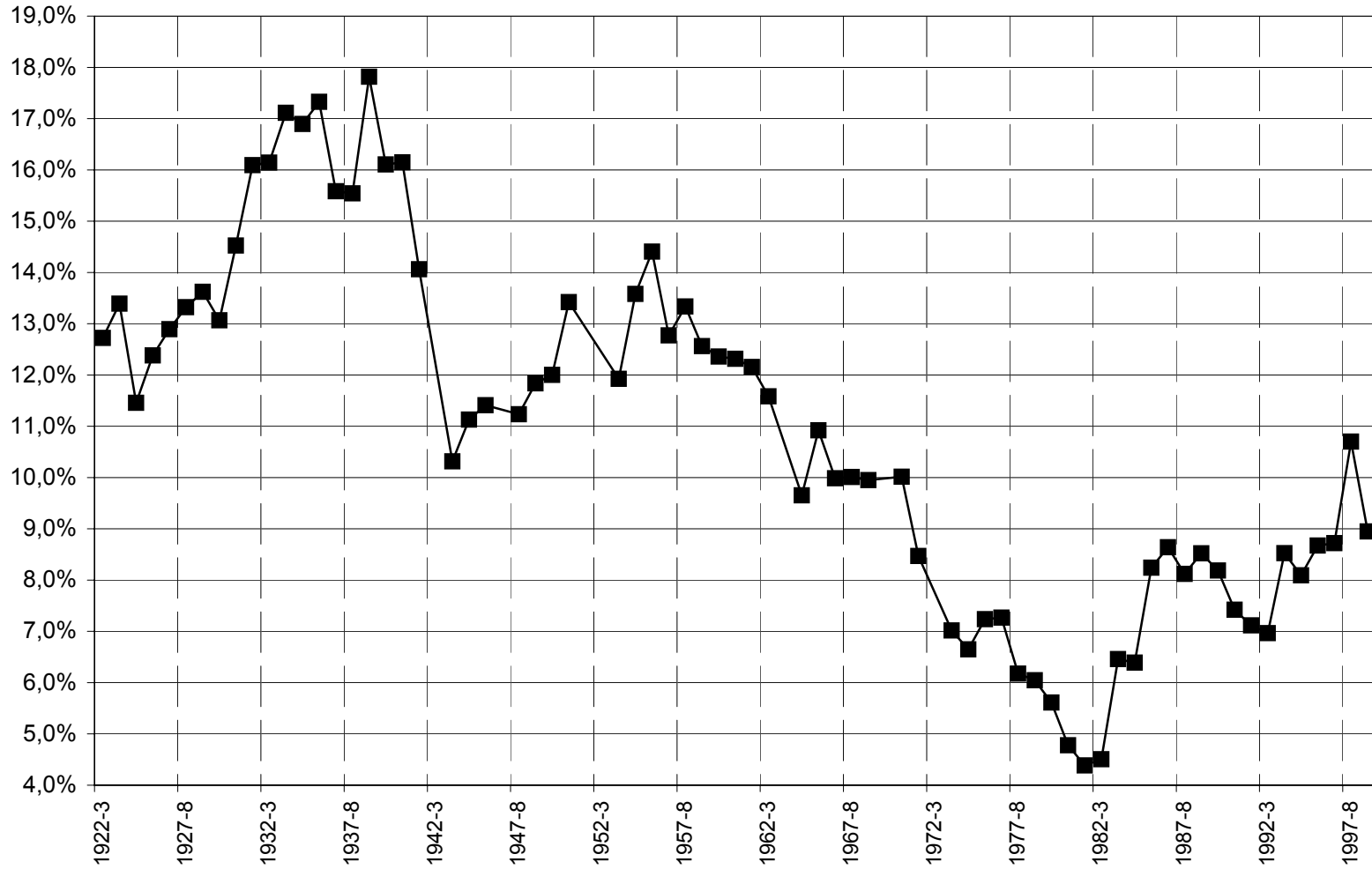
Source: Table A3, col. (4)

Figure 3 : The top 0,1% income share in India, 1922-2000



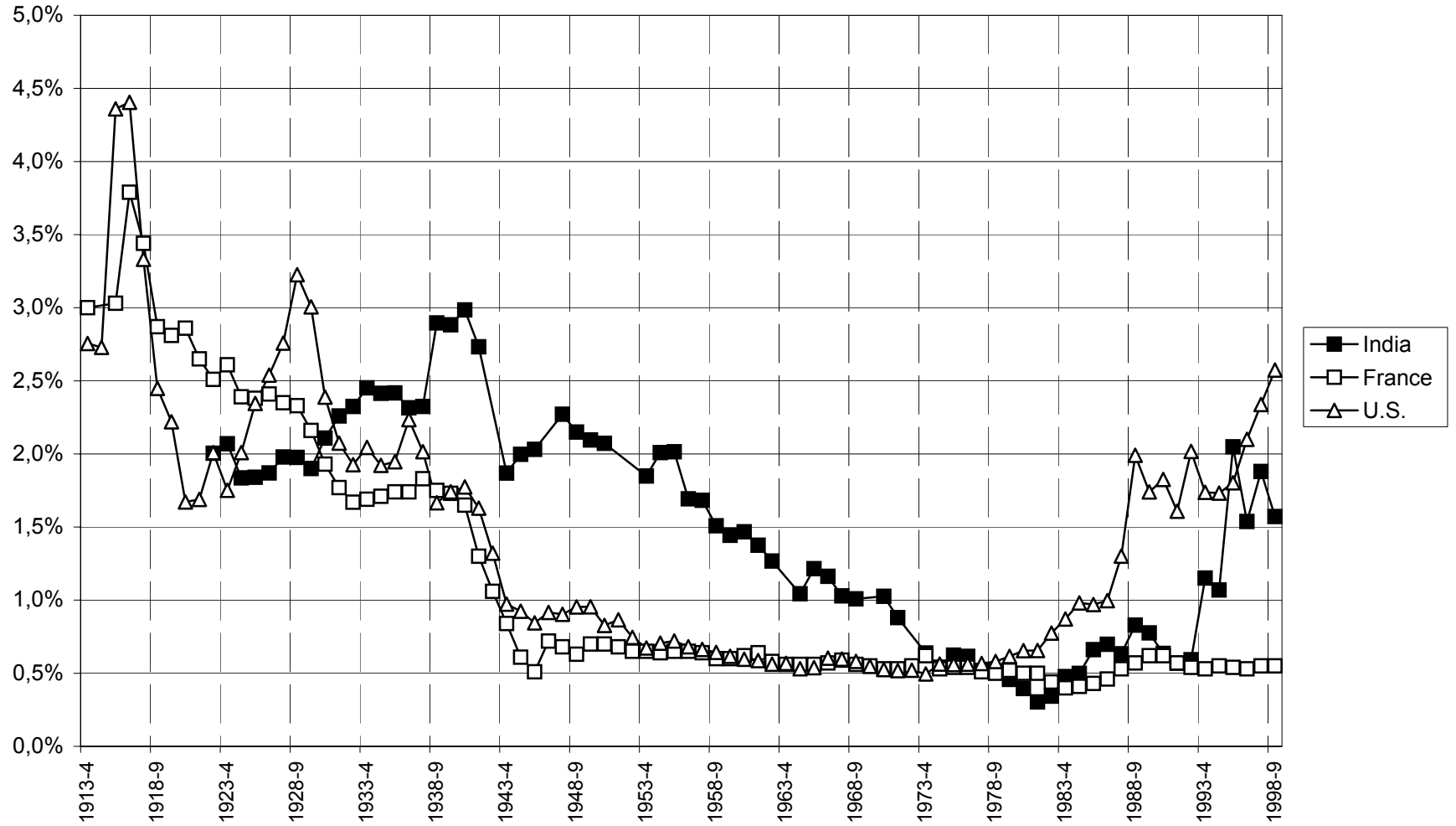
Source: Table A3, col. (4)

Figure 4 : The top 1% income share in India, 1922-2000



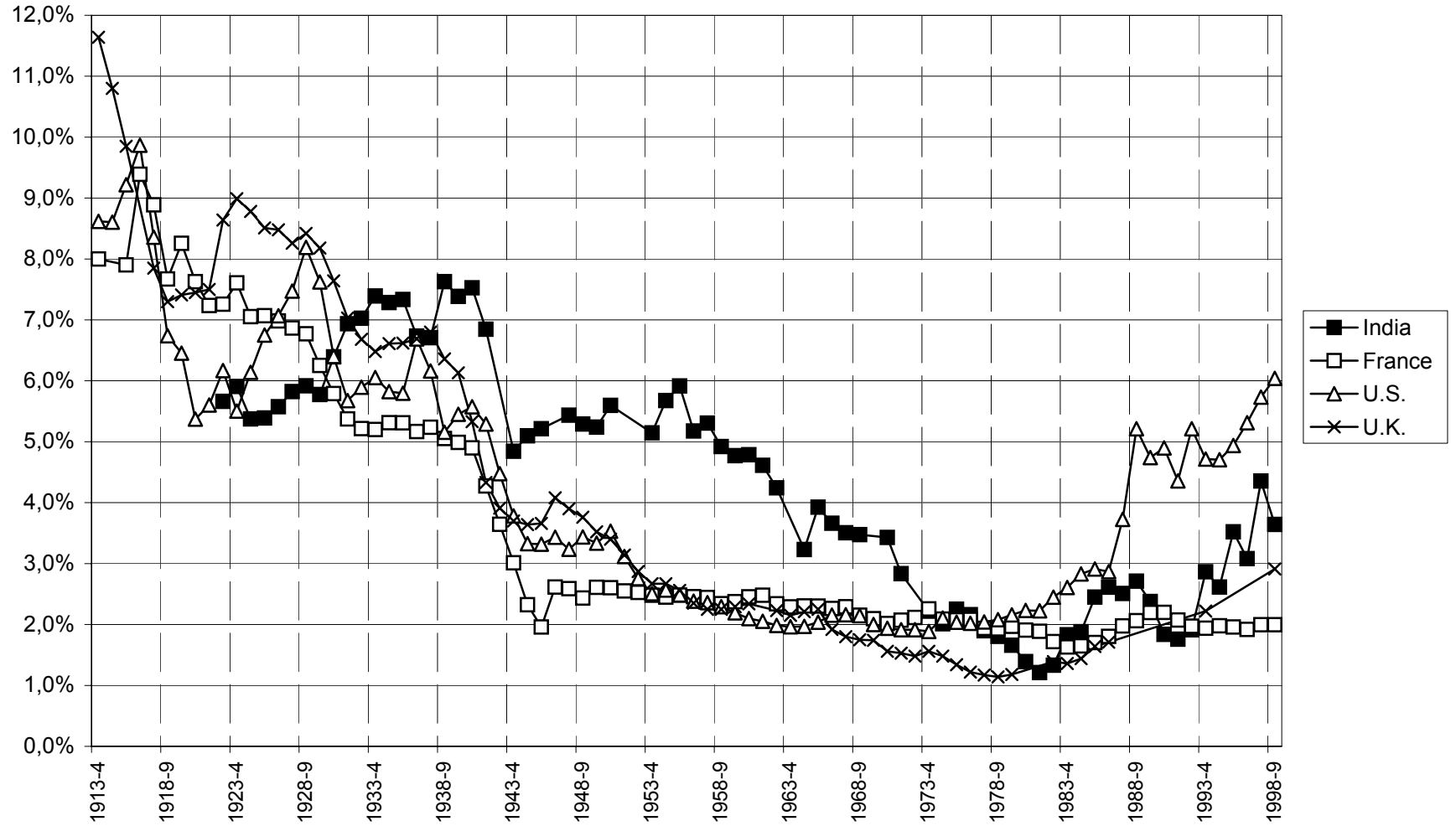
Source: Table A3, col. (1)

Figure 5 : The top 0,01% income share in India, France and the U.S., 1913-2000



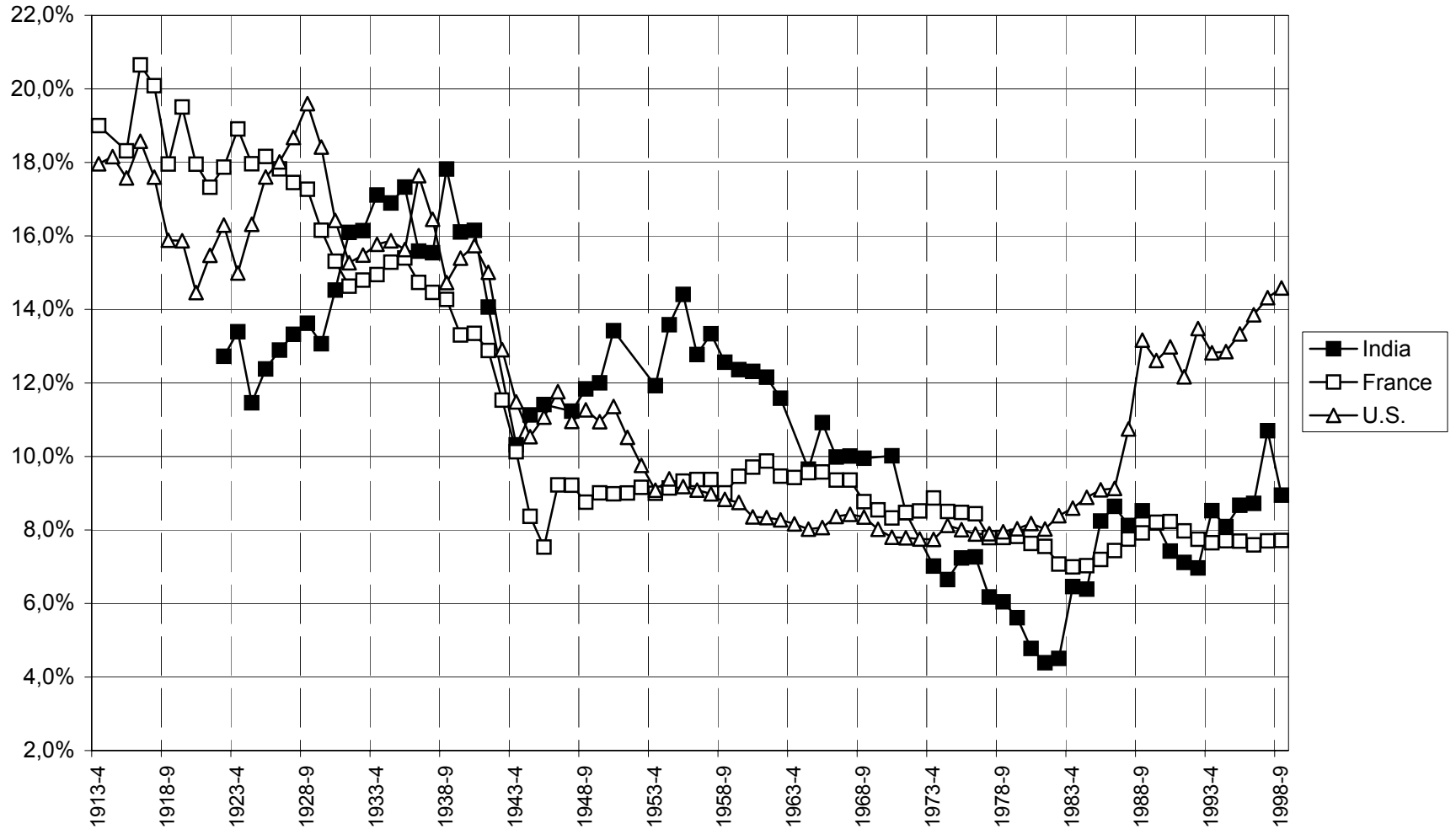
Source: India: this paper, table A3; France: Piketty (2003); U.S. : Piketty and Saez (2003)

Figure 6 : The top 0,1% income share in India, France, the U.S. and the U.K., 1913-2000



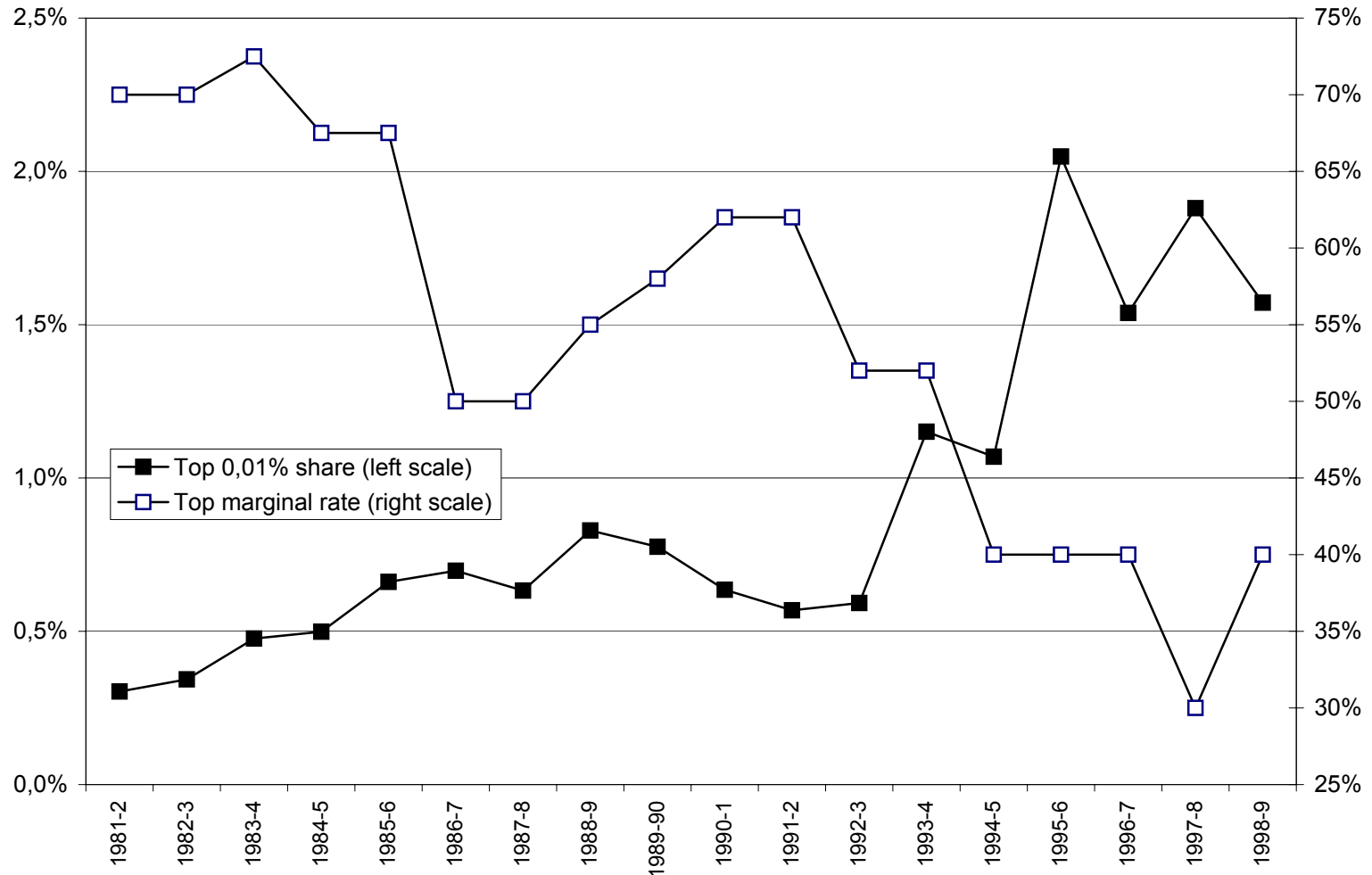
Source: India: this paper, table A3; France: Piketty (2003); U.S. : Piketty and Saez (2003); U.K.: Atkinson (2003)

Figure 7 : The top 1% income share in India, France and the U.S., 1913-2000



Source: India: this paper, table A3; France: Piketty (2003); U.S. : Piketty and Saez (2003)

Figure 8 : The top 0,01% income share and the top marginal income tax rate in India, 1981-2000



Source: Table A3 (col.(4))

Table 1: Top Indian incomes in 1999-2000

Thresholds	Income level (Rs)	Income level (US \$) (market exchange rate)	Income level (US \$) (PPP conversion factor)	Fractiles	Number of tax units	Average Income (Rs)	Average Income (US \$) (market exchange rate)	Average Income (US \$) (PPP conversion factor)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
				Full Population	396 400 000	25 670	596	2 968
P99	87 633	2 035	10 131	P99-99.5	1 982 000	98 842	2 295	11 427
P99.5	147 546	3 427	17 057	P99.5-99.9	1 585 600	216 929	5 038	25 079
P99.9	295 103	6 853	34 116	P99.9-99.99	356 760	590 488	13 713	68 264
P99.99	1 383 930	32 140	159 992	P99.99-100	39 640	4 034 289	93 690	466 392

Source: Table A0 and Table A1, row 1999-00. Amounts in \$ have been computed by applying the average 1999-2000 market exchange rate (that is, 1\$=43,06Rs) and the average 1999-2000 PPP conversion factor (that is, 1\$=8,65Rs) to amounts in current 1999-2000 Rs.

Table 2: Top income growth during the 1990s : 1999-2000 vs 1987-1988

	1999-00 vs 1987-8 (nominal growth)	1999-00 vs 1987-8 (real growth)
Household consumption/capita (NSS)	+242%	+19%
GDP/capita (NAS)	+337%	+52%
Household consumption/capita (NAS)	+304%	+40%
National income/tax unit (NAS)	+346%	+55%
Top income fractile P99-100 (tax returns)	+392%	+71%
Top income fractile P99,5-100 (tax returns)	+412%	+78%
Top income fractile P99,9-100 (tax returns)	+548%	+125%
Top income fractile P99,99-100 (tax returns)	+1009%	+285%
Top income fractile P99-99,5 (tax returns)	+331%	+50%
Top income fractile P99,5-99,9 (tax returns)	+317%	+45%
Top income fractile P99,9-99,99 (tax returns)	+393%	+71%
Top income fractile P99,99-100 (tax returns)	+1009%	+285%
Consumer price index	+188%	
Share of growth gap accounted for by P99-100		20,1%
Share of growth gap accounted for by P99,5-100		17,2%
Share of growth gap accounted for by P99,9-100		12,7%
Share of growth gap accounted for by P99,99-100		8,0%

Source: Table A0, Table A1 and Table A2, row 1999-00/1987-8

Table 3: Top income growth during the 1980s-1990s : 1999-2000 vs 1981-1982

	1999-00 vs 1981-2 (nominal growth)	1999-00 vs 1981-2 (real growth)
Household consumption/capita (NSS)	+487%	+25%
GDP/capita (NAS)	+700%	+70%
Household consumption/capita (NAS)	+599%	+49%
National income/tax unit (NAS)	+688%	+68%
Top income fractile P99-100 (tax returns)	+1508%	+242%
Top income fractile P99,5-100 (tax returns)	+1747%	+293%
Top income fractile P99,9-100 (tax returns)	+2270%	+404%
Top income fractile P99,99-100 (tax returns)	+3980%	+767%
Top income fractile P99-99,5 (tax returns)	+992%	+132%
Top income fractile P99,5-99,9 (tax returns)	+1392%	+217%
Top income fractile P99,9-99,99 (tax returns)	+1698%	+282%
Top income fractile P99,99-100 (tax returns)	+3980%	+767%
Consumer price index	+370%	
Share of growth gap accounted for by P99-100		39,7%
Share of growth gap accounted for by P99,5-100		33,5%
Share of growth gap accounted for by P99,9-100		19,1%
Share of growth gap accounted for by P99,99-100		9,3%

Source: Table A0, Table A1 and Table A2, row 1999-0/1981-2

Table 4: Top wage growth during the 1990s : 1999-2000 vs 1987-1988

	1999-00 vs 1987-8 (nominal growth)	1999-00 vs 1987-8 (real growth)
Household consumption/capita (NSS)	+242%	+19%
GDP/capita (NAS)	+337%	+52%
Household consumption/capita (NAS)	+304%	+40%
National income/tax unit (NAS)	+346%	+55%
Top wage fractile P99-100 (tax returns)	+420%	+81%
Top wage fractile P99,5-100 (tax returns)	+492%	+105%
Top wage fractile P99,9-100 (tax returns)	+551%	+126%
Top wage fractile P99,99-100 (tax returns)	+955%	+266%
Top wage fractile P99-99,5 (tax returns)	+246%	+20%
Top wage fractile P99,5-99,9 (tax returns)	+470%	+98%
Top wage fractile P99,9-99,99 (tax returns)	+448%	+94%
Top wage fractile P99,99-100 (tax returns)	+955%	+266%
Consumer price index	+188%	

Source: Table A0, Table A4 and Table A5, row 1999-0/1987-8

Table A3 : Top fractiles income shares in India, 1956-2000
(income shares are expressed as % of total income)

	P99-100	P99,5-100	P99,9-100	P99,99-100	P99-99,5	P99,5-99,9	P99,9-99,99	P99,99-100
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1922-3	12,72	9,97	5,66	2,00	2,75	4,31	3,66	2,00
1923-4	13,39	10,47	5,91	2,07	2,92	4,56	3,84	2,07
1924-5	11,46	9,18	5,37	1,84	2,28	3,81	3,54	1,84
1925-6	12,38	9,64	5,39	1,84	2,74	4,25	3,55	1,84
1926-7	12,89	10,02	5,57	1,87	2,87	4,45	3,70	1,87
1927-8	13,32	10,39	5,82	1,98	2,93	4,57	3,84	1,98
1928-9	13,62	10,61	5,92	1,98	3,01	4,69	3,94	1,98
1929-30	13,07	10,25	5,77	1,90	2,81	4,48	3,87	1,90
1930-1	14,53	11,40	6,39	2,11	3,12	5,01	4,28	2,11
1931-2	16,09	12,55	6,94	2,26	3,55	5,61	4,68	2,26
1932-3	16,14	12,64	7,03	2,32	3,50	5,62	4,70	2,32
1933-4	17,11	13,37	7,39	2,45	3,75	5,97	4,94	2,45
1934-5	16,90	13,17	7,28	2,41	3,73	5,89	4,87	2,41
1935-6	17,33	13,42	7,34	2,42	3,91	6,08	4,92	2,42
1936-7	15,58	12,13	6,73	2,31	3,46	5,39	4,42	2,31
1937-8	15,54	12,09	6,71	2,32	3,45	5,38	4,38	2,32
1938-9	17,82	13,80	7,63	2,90	4,02	6,17	4,73	2,90
1939-40	16,11	12,74	7,38	2,88	3,37	5,35	4,50	2,88
1940-1	16,15	12,83	7,53	2,98	3,32	5,31	4,54	2,98
1941-2	14,06	11,32	6,85	2,73	2,74	4,48	4,11	2,73
1942-3								
1943-4	10,32	8,22	4,84	1,87	2,10	3,37	2,98	1,87
1944-5	11,13	8,80	5,10	2,00	2,33	3,70	3,10	2,00
1945-6	11,41	9,01	5,21	2,03	2,40	3,80	3,18	2,03
1946-7								
1947-8	11,23	9,05	5,44	2,27	2,19	3,61	3,16	2,27
1948-9	11,84	9,29	5,29	2,15	2,55	4,00	3,14	2,15
1949-50	12,00	9,35	5,24	2,10	2,65	4,11	3,14	2,10
1950-1	13,42	10,37	5,60	2,07	3,05	4,78	3,52	2,07
1951-2								
1952-3								
1953-4	11,92	9,41	5,15	1,85	2,51	4,27	3,30	1,85
1954-5	13,58	10,55	5,68	2,01	3,03	4,88	3,67	2,01
1955-6	14,41	11,15	5,92	2,01	3,26	5,23	3,90	2,01
1956-7	12,77	9,85	5,18	1,69	2,92	4,67	3,48	1,69
1957-8	13,34	10,26	5,31	1,68	3,08	4,95	3,62	1,68
1958-9	12,56	9,64	4,92	1,51	2,92	4,72	3,41	1,51
1959-60	12,36	9,44	4,77	1,44	2,92	4,67	3,33	1,44
1960-1	12,31	9,45	4,79	1,47	2,87	4,66	3,32	1,47
1961-2	12,15	9,29	4,61	1,38	2,86	4,68	3,24	1,38
1962-3	11,58	8,75	4,24	1,27	2,83	4,51	2,97	1,27
1963-4								
1964-5	9,65	6,99	3,23	1,04	2,67	3,75	2,19	1,04
1965-6	10,92	8,23	3,93	1,21	2,69	4,30	2,71	1,21
1966-7	9,99	7,57	3,66	1,16	2,41	3,91	2,50	1,16
1967-8	10,01	7,59	3,51	1,03	2,42	4,09	2,48	1,03
1968-9	9,95	7,52	3,48	1,01	2,43	4,04	2,47	1,01
1969-70	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
1970-1	10,02	7,74	3,43	1,03	2,28	4,31	2,40	1,03
1971-2	8,47	6,31	2,83	0,88	2,16	3,48	1,95	0,88
1972-3	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
1973-4	7,02	5,24	2,22	0,64	1,78	3,02	1,58	0,64
1974-5	6,65	4,77	2,01	0,54	1,88	2,76	1,47	0,54
1975-6	7,24	5,30	2,25	0,62	1,94	3,05	1,63	0,62
1976-7	7,27	5,19	2,16	0,62	2,07	3,03	1,55	0,62
1977-8	6,18	4,55	1,90	0,51	1,63	2,65	1,38	0,51
1978-9	6,05	4,33	1,81	0,51	1,72	2,52	1,29	0,51
1979-80	5,61	3,90	1,66	0,46	1,71	2,24	1,20	0,46
1980-1	4,78	3,30	1,39	0,40	1,48	1,91	1,00	0,40
1981-2	4,39	3,00	1,21	0,30	1,39	1,79	0,91	0,30
1982-3	4,51	3,13	1,33	0,34	1,38	1,79	0,99	0,34
1983-4	6,46	4,35	1,83	0,48	2,11	2,51	1,35	0,48
1984-5	6,39	4,48	1,88	0,50	1,91	2,59	1,38	0,50
1985-6	8,24	5,98	2,45	0,66	2,26	3,54	1,79	0,66
1986-7	8,64	6,43	2,61	0,70	2,21	3,82	1,91	0,70
1987-8	8,12	6,13	2,51	0,63	2,00	3,62	1,88	0,63
1988-9	8,52	6,38	2,71	0,83	2,14	3,67	1,88	0,83
1989-90	8,19	6,17	2,38	0,78	2,02	3,79	1,60	0,78
1990-1	7,42	5,16	1,84	0,64	2,26	3,33	1,20	0,64
1991-2	7,12	4,85	1,76	0,57	2,27	3,09	1,19	0,57
1992-3	6,96	4,81	1,91	0,59	2,16	2,89	1,32	0,59
1993-4	8,53	6,02	2,86	1,15	2,51	3,16	1,71	1,15
1994-5	8,09	5,82	2,61	1,07	2,28	3,20	1,55	1,07
1995-6	8,67	6,61	3,52	2,05	2,06	3,09	1,47	2,05
1996-7	8,72	6,47	3,08	1,54	2,26	3,39	1,54	1,54
1997-8	10,70	8,40	4,36	1,88	2,30	4,04	2,48	1,88
1998-9	8,95	7,02	3,64	1,57	1,93	3,38	2,07	1,57
1999-00	8,95	7,02	3,64	1,57	1,93	3,38	2,07	1,57

Source: Authors' computations using income tax returns data (All-India Income Tax Statistics, 1922-2000)

Table A4 : Top fractile wage levels in India, 1987-2000
(wages are expressed in current Rs)

	P99-100	P99,5-100	P99,9-100	P99,99-100	P99-99,5	P99,5-99,9	P99,9-99,99	P99,99-100	P99	P99,5	P99,9	P99,99
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1987-8	22 860	32 470	43 262	80 942	13 250	29 772	39 075	80 942	11 238	15 962	25 901	47 310
1988-9	28 051	39 563	54 670	123 950	16 539	35 786	46 972	123 950	14 135	19 936	29 827	64 502
1989-90	29 933	42 456	58 197	133 071	17 411	38 521	49 877	133 071	14 841	21 049	31 240	68 131
1990-1	32 718	44 935	58 380	131 744	20 500	41 574	50 229	131 744	17 740	24 365	26 363	57 958
1991-2	36 956	48 712	63 142	158 045	25 199	45 104	52 597	158 045	22 230	29 301	26 922	71 978
1992-3	43 215	51 650	70 759	178 481	34 780	46 872	58 790	178 481	32 099	38 364	30 171	84 610
1993-4	42 126	63 482	144 468	487 871	20 770	43 236	106 312	487 871	17 203	25 924	72 935	151 514
1994-5	56 211	80 710	155 368	452 012	31 712	62 045	122 408	452 012	26 875	38 588	85 933	146 952
1995-6	64 379	93 558	180 337	532 192	35 199	71 864	141 242	532 192	29 660	43 104	97 135	164 540
1996-7	74 035	107 592	207 387	612 021	40 479	82 643	162 428	612 021	34 109	49 569	111 705	189 221
1997-8	81 439	118 351	228 126	673 223	44 526	90 908	178 671	673 223	37 520	54 526	122 876	208 143
1998-9	110 663	178 710	262 134	794 328	42 616	157 853	203 001	794 328	34 145	55 141	72 901	166 757
1999-00	118 962	192 113	281 794	853 903	45 812	169 693	218 226	853 903	36 706	59 277	78 369	179 263
1999-2000/ 1987-1988	5,20	5,92	6,51	10,55	3,46	5,70	5,58	10,55	3,27	3,71	3,03	3,79

Source: Authors' computations using income tax returns data (*All-India Income Tax Statistics*, 1922-2000)

Table A5 : Top fractile wage levels in India, 1987-2000
(wages are expressed in 1999-2000 Rs)

	P99-100	P99,5-100	P99,9-100	P99,99-100	P99-99,5	P99,5-99,9	P99,9-99,99	P99,99-100	P99	P99,5	P99,9	P99,99
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1987-8	65 853	93 537	124 624	233 169	38 169	85 765	112 563	233 169	32 373	45 982	74 612	136 286
1988-9	73 874	104 190	143 974	326 427	43 557	94 244	123 702	326 427	37 226	52 503	78 552	169 868
1989-90	74 257	105 322	144 371	330 114	43 192	95 560	123 733	330 114	36 816	52 218	77 498	169 014
1990-1	74 482	102 295	132 904	299 915	46 669	94 643	114 347	299 915	40 386	55 467	60 017	131 943
1991-2	73 882	97 385	126 234	315 965	50 379	90 173	105 152	315 965	44 442	58 579	53 822	143 899
1992-3	77 286	92 370	126 546	319 196	62 201	83 826	105 140	319 196	57 406	68 610	53 959	151 316
1993-4	70 832	106 741	242 912	820 320	34 923	72 698	178 755	820 320	28 925	43 589	122 635	254 760
1994-5	85 757	123 134	237 035	689 606	48 381	94 659	186 750	689 606	41 001	58 871	131 102	224 195
1995-6	89 107	129 495	249 606	736 614	48 719	99 467	195 494	736 614	41 053	59 660	134 446	227 741
1996-7	94 032	136 652	263 401	777 325	51 412	104 965	206 299	777 325	43 322	62 958	141 877	240 328
1997-8	96 520	140 268	270 371	797 895	52 772	107 742	211 758	797 895	44 468	64 623	145 631	246 688
1998-9	115 830	187 055	274 375	831 422	44 606	165 225	212 481	831 422	35 740	57 716	76 306	174 544
1999-00	118 962	192 113	281 794	853 903	45 812	169 693	218 226	853 903	36 706	59 277	78 369	179 263
1999-2000/ 1987-1988	1,81	2,05	2,26	3,66	1,20	1,98	1,94	3,66	1,13	1,29	1,05	1,32

Source: Authors' computations using income tax returns data (*All-India Income Tax Statistics*, 1922-2000)