

Trends in Poverty and Inequality in India

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Most of the research on which this talk is based is ongoing joint work with Rishabh Kumar (U Mass, Boston). I have also briefly drawn on some of my ongoing work with Linchuan Xu (LSE).

Plan for the Talk

- I will start the talk with two empirical puzzles relating to poverty and inequality in India
- I will then turn to looking at trends in poverty, including an alternative measure that allows us to assess the reported decline in extreme poverty
- Finally, I will talk about broad trends in income inequality in India, exploring whether inequality of growth has been causing growth of (income) inequality

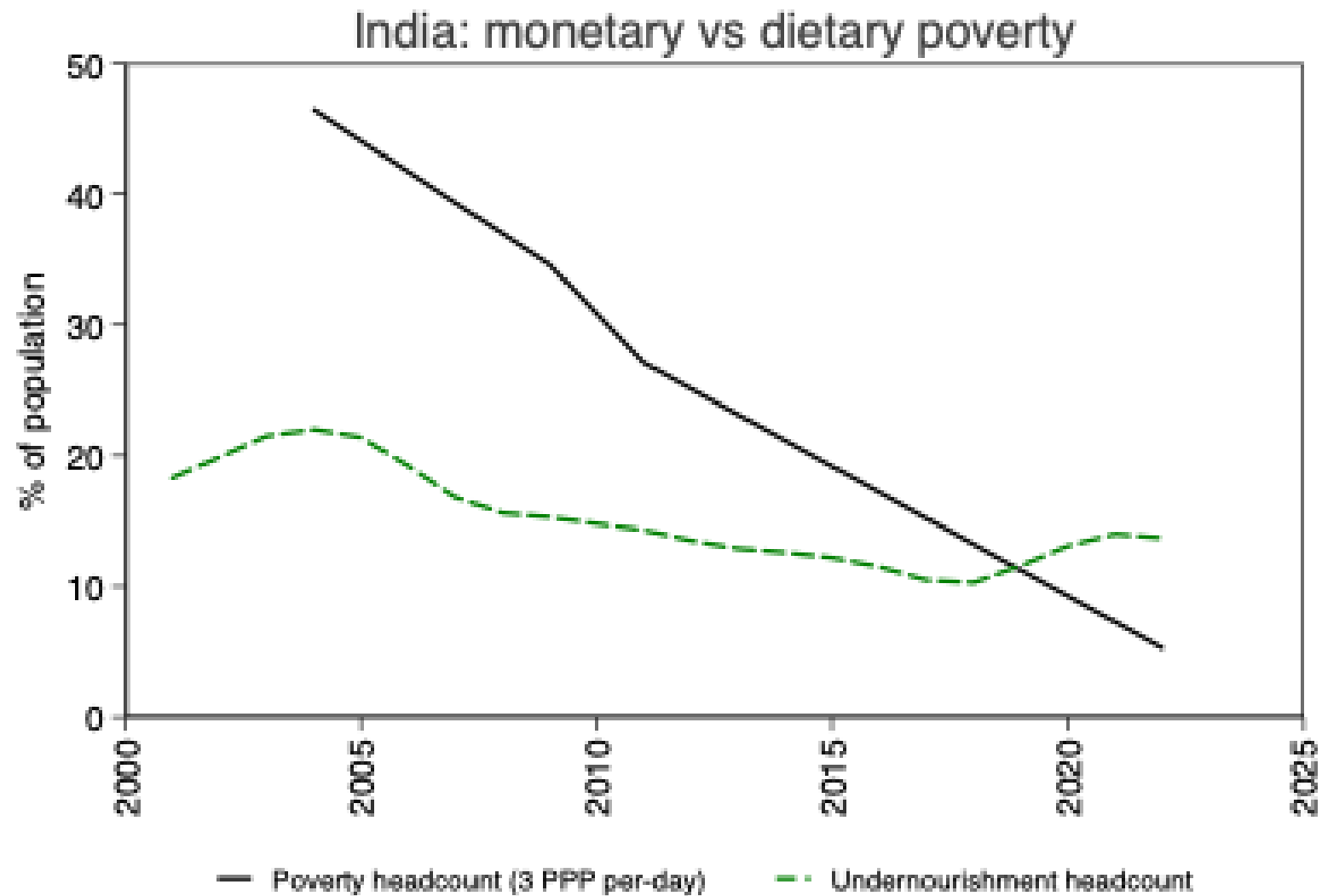
Part 1: Two Puzzles

Two Puzzles

- One concerning poverty and another concerning inequality...

A Puzzle About Poverty

- If you look at poverty head count ratio using a standard poverty line like the World Bank's \$3 per person per day (with purchasing power parity adjustment) it seems to have declined over the last decade or so after consumer expenditure surveys started being published again
- Yet, “food poverty” or undernourishment head count seems to be stagnant

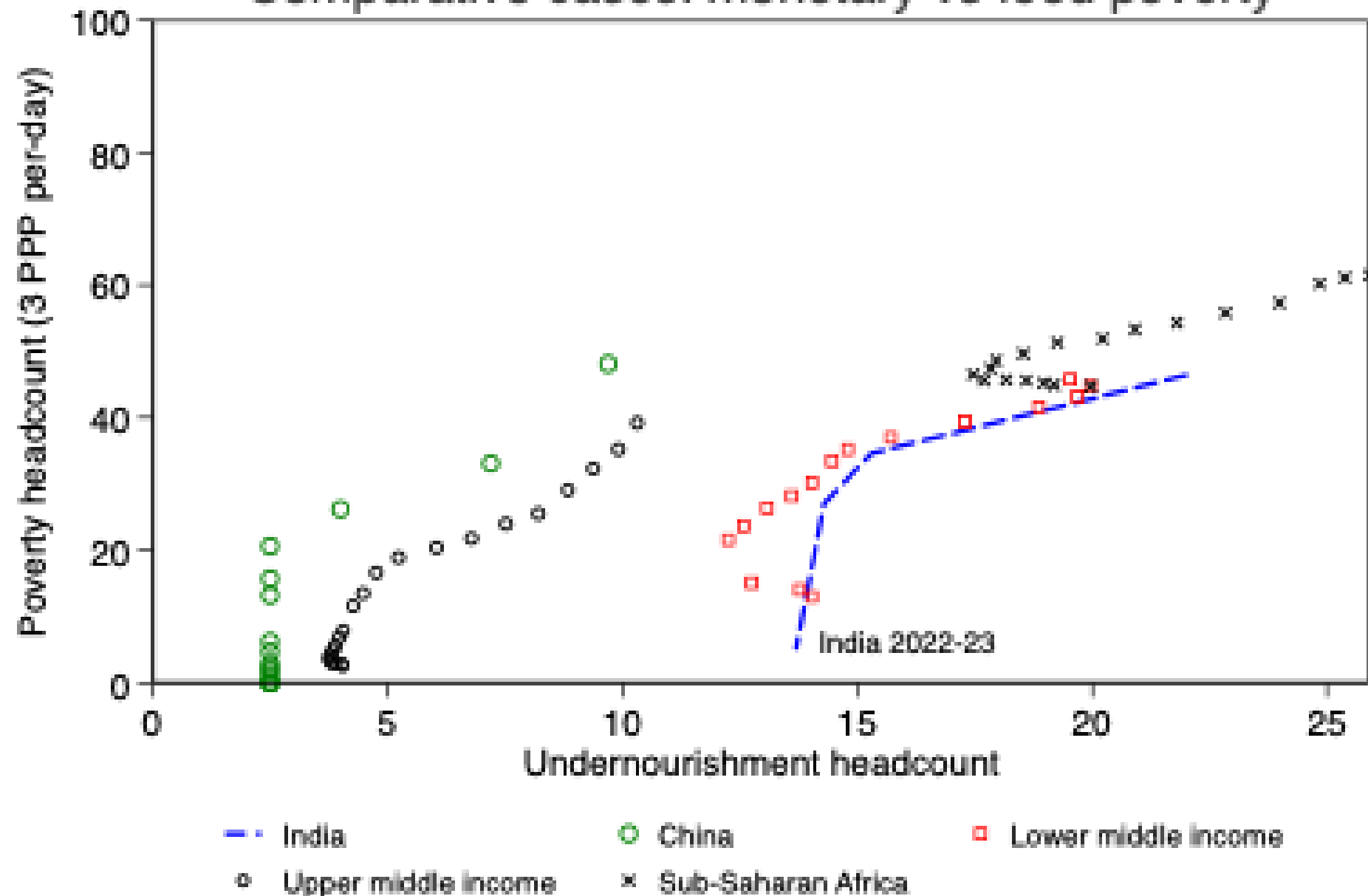


<https://pip.worldbank.org/poverty-calculator?src=IND>

- The Prevalence of Undernourishment (PoU) is FAO's traditional indicator used to monitor hunger at the global and regional levels.
- The PoU is an estimate of the proportion of the population persistently consuming an insufficient amount of food to provide the dietary energy levels that are required to maintain a normal active and healthy life.
- FAO has been publishing global and regional estimates since 1974 and estimates for countries since 1999 - provides useful information about general trends and changes in hunger over time.

- Even when we compare with other countries, the case of India seems odd
- In the next figure, we plot poverty and undernourishment headcount ratios against each other over time for the period 2004 to 2022 for India against that of China and some regional aggregates like sub-Saharan Africa, lower-middle income countries, and upper-middle income countries,
- To read the graph, one has to look at how the points move from right to left as over time, these head counts tend to go down
- Moreover, the closer is a point to the origin, the better

Comparative cases: monetary vs food poverty



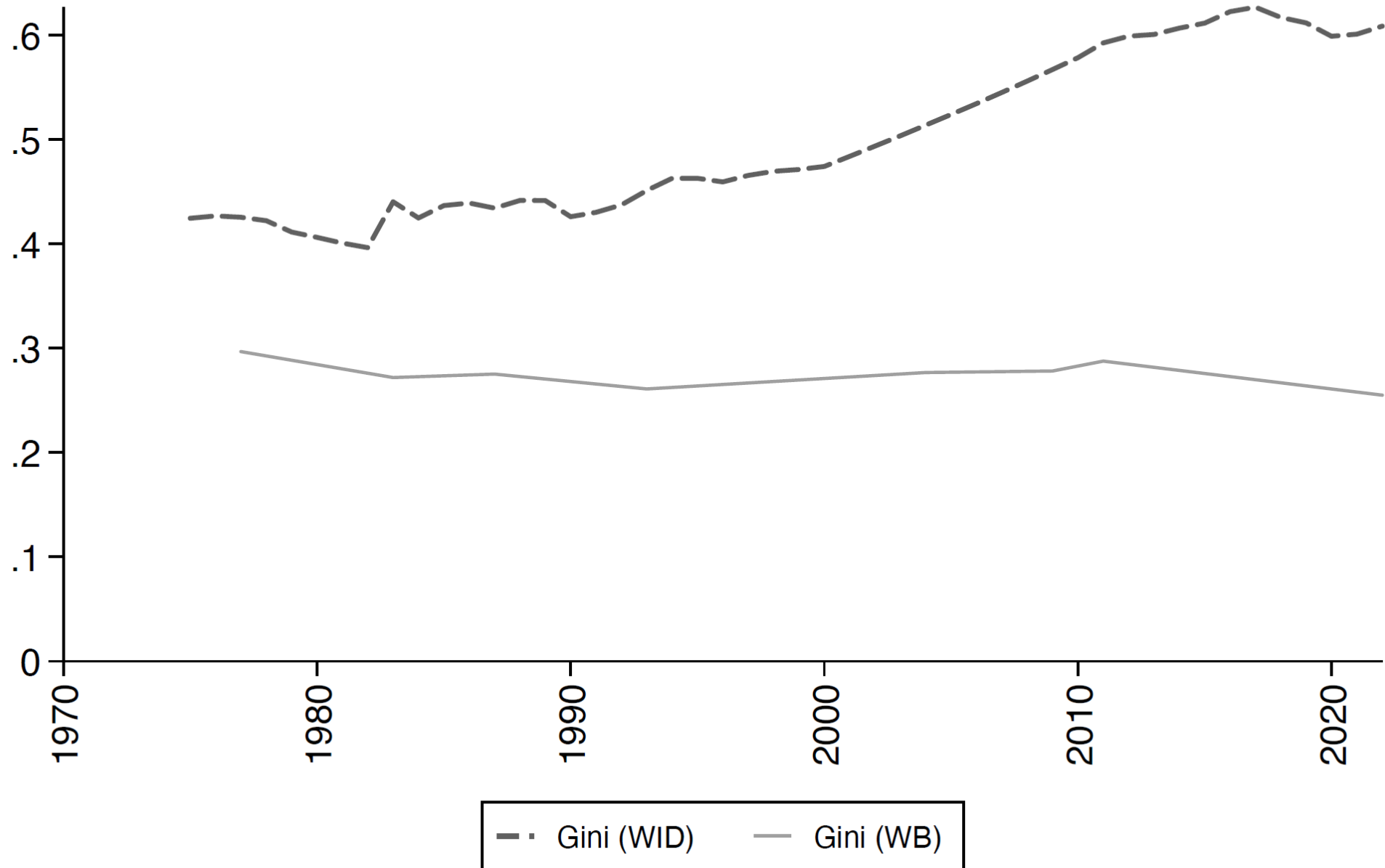
- We can see decline in poverty head count ratio (HCR) according to WB extreme poverty line for all the countries/regions
- For India, the horizontal intercept is relatively large
- Food poverty is still considerable

A Puzzle About Inequality

- Consumption inequality, based on household expenditure surveys that have resumed in India recently after a gap of more than a decade, seems to be decreasing, while income inequality (combines consumer expenditure data with income tax data following WID methodology) seems to be increasing

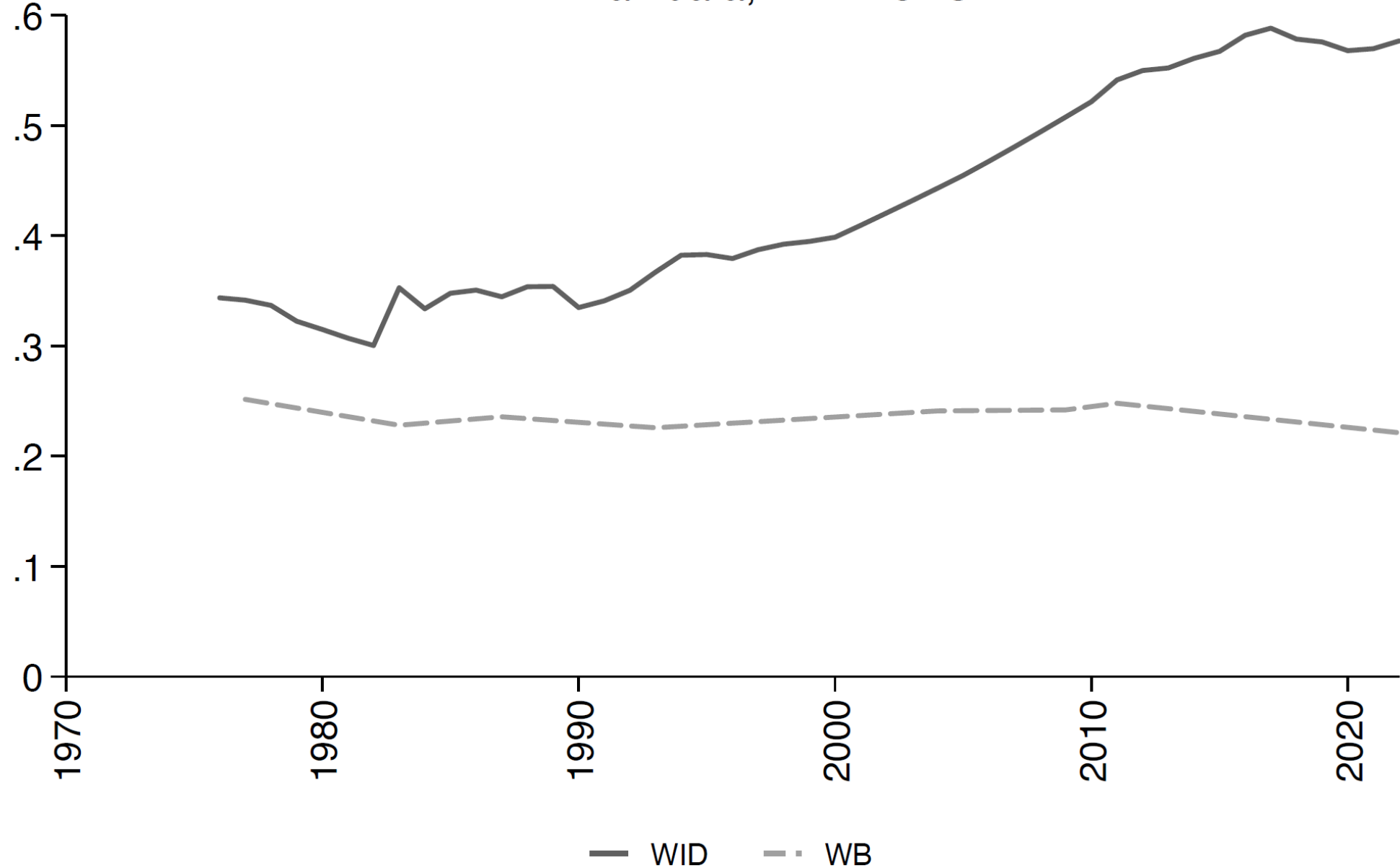
India: Gini

World Bank: HCES | WID: tax-data



India: Top 10% shares

WID: tax-data, WB: HCES



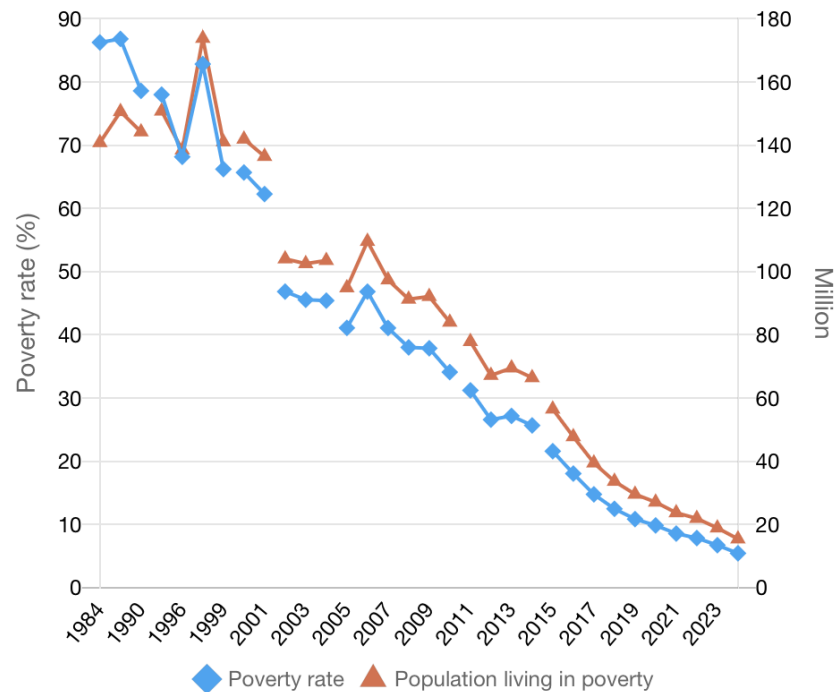
Part 2: Trends in Poverty

The Great Poverty Debate in India 2.0

- Has there has been sufficient improvements in the *absolute* living standards of the poorer sections?
- Until last year, consumption expenditure survey data was not available since 2011-12, leading to the rise of “synthetic” methods (e.g., use CPHS by matching distributions, imputation methods) – led to lots of debates
- Since June 2024 we now have two rounds of data from the HCES which suggests a large drop in poverty since 2011-12

As of 2023-24, less than 20 million in India live in 'extreme poverty' according to the World Bank

Share of the population and population living in poverty at **\$3.00** per day (2021 PPP) (1984-2024) [i](#)



TOI The Times of India

270 million pulled out of poverty! How Modi government achieved a remarkable dip in extreme poverty & wha

Marking a big achievement over the last decade, extreme poverty in India has dropped substantially from 27.1% in 2011-12 to 5.3% in 2022-23,...

1 month ago

\$ Swarajyamag

India Has Nearly Eliminated Extreme Poverty, Sharp Reduction In Inequality Over Last 12 Years: Study

Extreme Poverty Nearly Eliminated. The study reports that at the World Bank's \$3.65 PPP poverty line, India's poverty rate has fallen from 52...

Mar 2, 2025



The Great Poverty Debate in India 2.0

- The broad direction is confirmed by other researchers, though they come up with more cautious conclusions
- Himanshu, Lanjouw, and Schirmer (EPW, March 2025) calculate updated official Tendulkar Committee poverty lines for 2022–23.
- Based on different methods of calculating the updated poverty lines, their estimate of rural poverty is in the range of 5.8-12.1 (rural) 2.5-4.5 (urban) and 4.9-9.9 (combined)
- They note that serious comparability issues between the 2022–23 and earlier surveys remain unresolved, making this conclusion tentative at best.

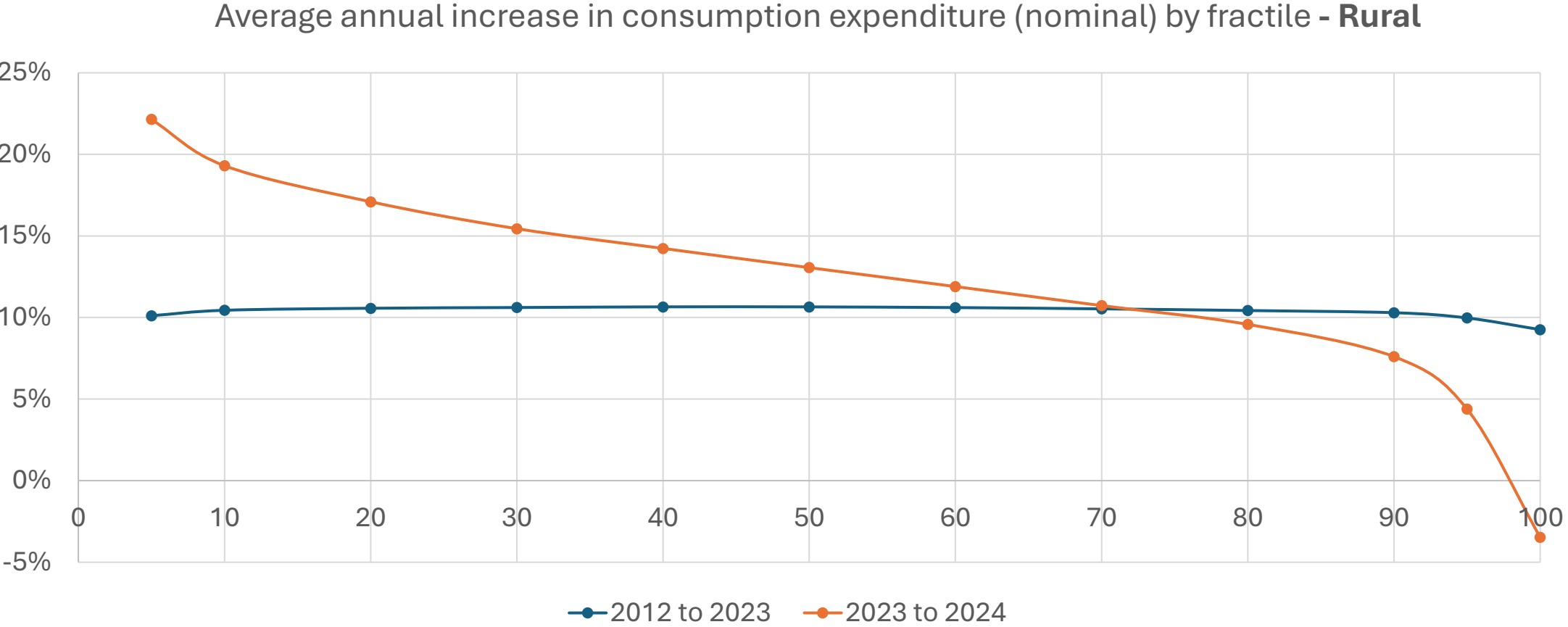
The Great Poverty Debate in India 2.0

- Mishra (EPW, April 2025) have computed poverty estimates of rural, urban and combined areas for 2022–23
- Items were matched from the consumer price index, 2012 base with items matched from poverty level baskets of Tendulkar and poverty line basket (PLB) weights were assigned to the matched items, and state sector-specific (sector denotes rural or urban areas) PLB-specific inflation indices of 2022–23 over 2011–12 were computed.
- In 2022–23, for India, the updated Tendulkar poverty lines indicate a poverty incidence of 6.4% (rural), 3.1% (urban), and 5.3% (combined)

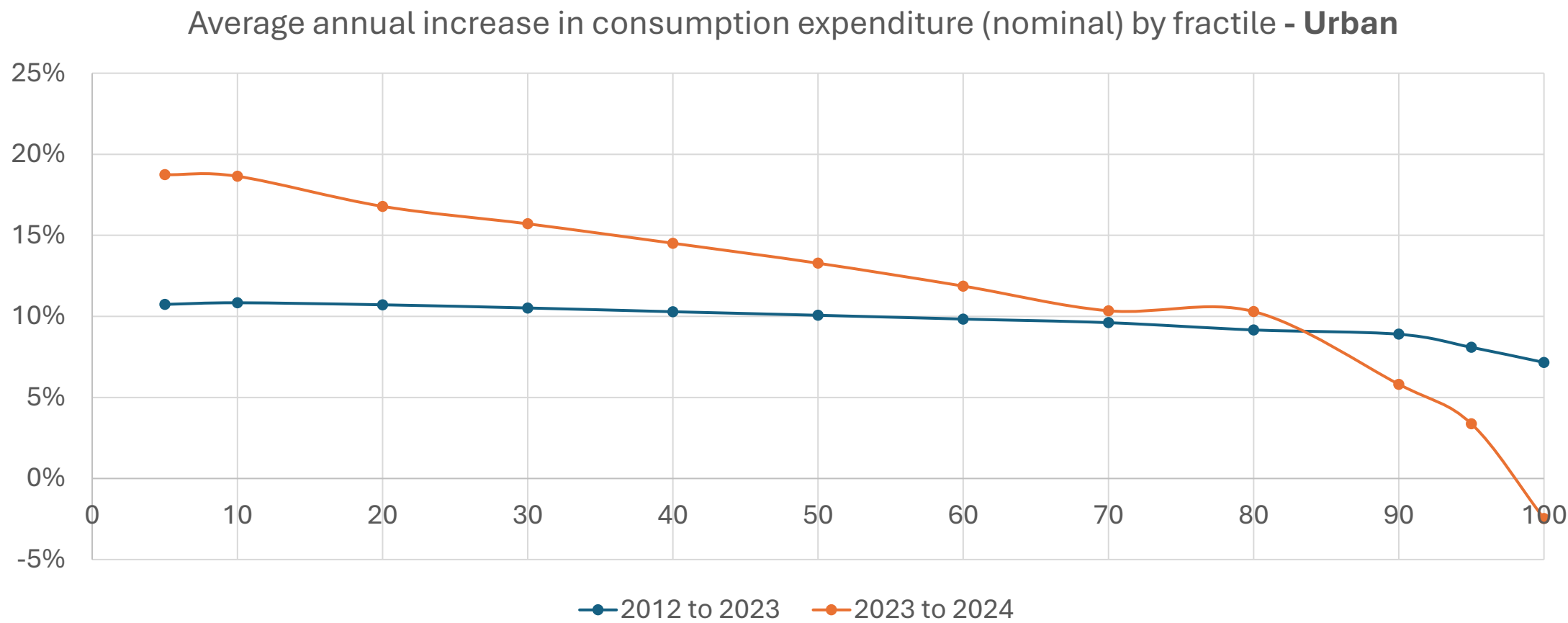
Taking stock

- This is clearly a remarkable achievement, because:
 - India is still a lower-middle income economy - its GDP per-capita is less than \$3000 in current US dollars, and given high levels of income inequality, median income likely much lower.
 - India's population is still overwhelmingly rural, under-educated, and dependent on low-productivity economic activities like agriculture or casual labor.

Rural India: huge gains in nominal consumption across the distribution. Gains highest at the bottom



Urban India: similar trends



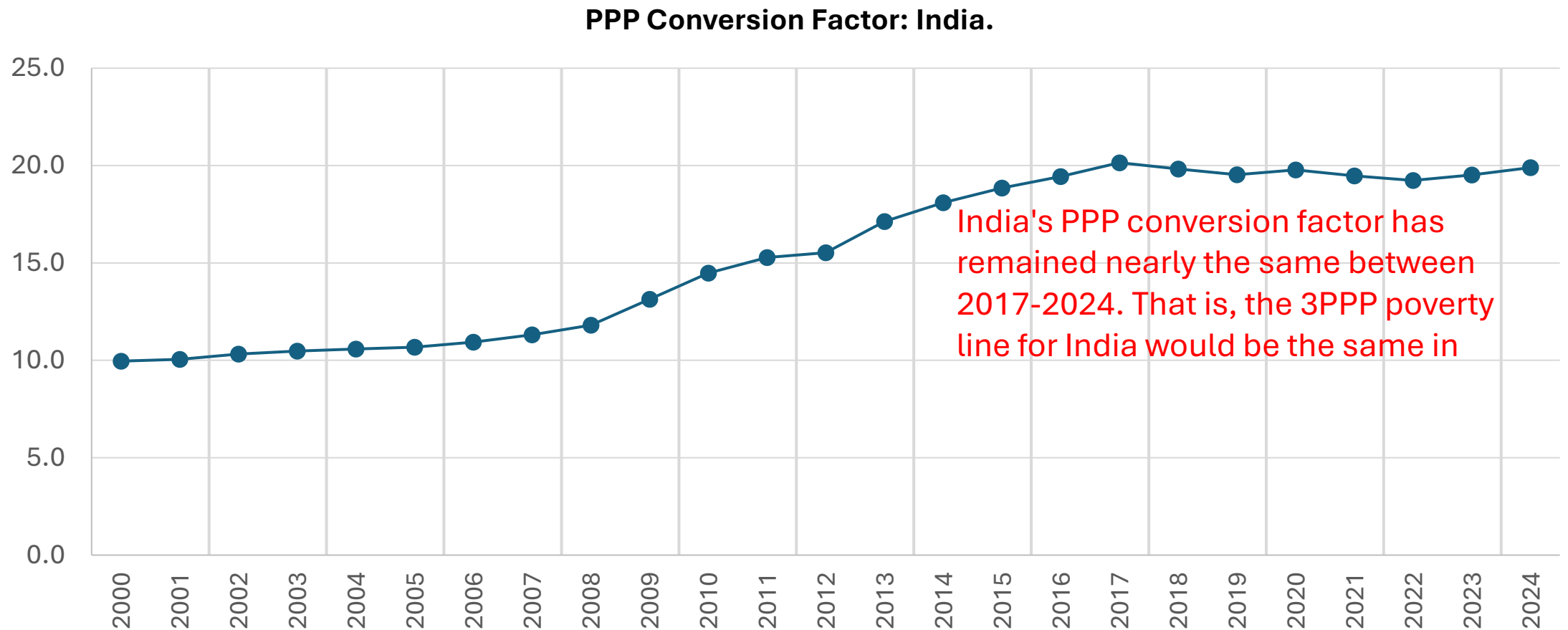
Main question: did consumption rise faster than cost of living?

- Consumer expenditure data suggests one *clear* pattern: growth across the distribution and rise in consumption for all Indians over 2011-12 to 2023-24
- But this is not a sufficient condition for escaping poverty.
- The target *moves over time: cost of living rises with economic growth*. That is, in every year, the poverty headcount is determined by the fraction of individuals whose consumption is less than the specific minimal consumption for that year.
- At this point: India has not furnished a new domestic poverty line.
- Prior line from 2009 (Tendulkar Committee) – 16 years ago, clearly needs updating

The international poverty line

- Concurrently, the WB furnishes its own poverty line, building on the famous “dollar a day”
- At present, the line is 3 PPP dollars a day.
- This number has 2 components: the value of the poverty line, and the conversion factor used to evaluate living standards across countries (PPP).
- The case of the PPP for India is perplexing.

No change in PPP since 2016



Implication

- This implies that the designated cost of the bundle necessary to exit poverty is the same in 2016, as in 2024.
- In 2016, a person consuming goods & services worth Rs 60 per-day would be outside the poverty headcount.
- If this person experienced no change in consumption and continued to spend the exact same amount in 2024, they would be outside poverty again.
- That is, between 2016-2024, the effects of inflation was irrelevant to poverty as far as the World Bank line goes.
- We scrutinize this phenomena.

Our Approach

- Based on Ghatak and Kumar (Ideas for India, May 2024) - how to generate 1800 calories based on a simple *khichdi* recipe taking rice, lentil, one vegetable, onions, & cooking oil
- We exclude every other cost, whether of spices and condiments or fuel or cooking time.
- We use prices of ingredients from the website of the Government of Kerala for the relevant years (our choice is dictated by ready availability of data)
- We take the cheapest varieties & also, allow rice to be free (PDS)
- We then use India to Kerala CPI adjustment factor to make these figures all-India compatible

Reassessment strategy

- We calculate the cost of obtaining 1800 calories per day.
- For India, the FAO estimates a daily calorie intake of around 1806.
- Our strategy is to fix food as an essential basket, create a universally used recipe for all-India (*khichdi*) with minimal ingredients and calculate the cost of calories.
- We expect that with inflation, the domestic price of essential calories will better capture the minimum food requirement as a proxy for the poverty line.

Recipe to calculate daily calories

Ingredients	Quantity	Calories
Rice	180g	234
Lentil	90g	104.5
Vegetables	250g	163
2 Tbsp vegetable oil	30 g	250
2 small sized onions	250g	100
Calories per meal		851.5

Calorie to Cost calculations

2012

(Source: Kerala Price Bulletin January 2012)

	Type	Cost per kg	Quantity (gm)	Calories	Total Cost (Rs)	Free rice (Rs)
Rice	Red Chamba	24.16	180	234	4.3	
Lentil	Peas Dhall	37.04	90	104.5	3.3	
Vegetable	Ladies Finger	27.5	250	163	6.9	
Oil	Coconut	82.47	30	250	2.5	
Small Onions		23.13	250	100	5.8	
TOTAL				851.5	22.8	18.5
Cost per Calorie					0.0268	0.0217

<div>2023</div> <div>(Source: Kerala Price Bulletin January 2023)</div>						
	Type	Cost per kg	Quantity (gm)	Calories	Total Cost	Free rice
Rice	Red Chamba	44.5	180	234	8.0	
Lentil	Peas Dhall	79.58	90	104.5	7.2	
Vegetable	Ladies Finger	67.71	250	163	16.9	
Oil	Postman	158.5	30	250	4.8	
Small Onions		76.79	250	100	19.2	
TOTAL				851.5	56.1	48.0
Cost per Calorie					0.0658	0.0564

Cost of calorie variations: benchmark 1800 calories

All prices are scaled to All-India:Kerala ratio for Urban food CPI

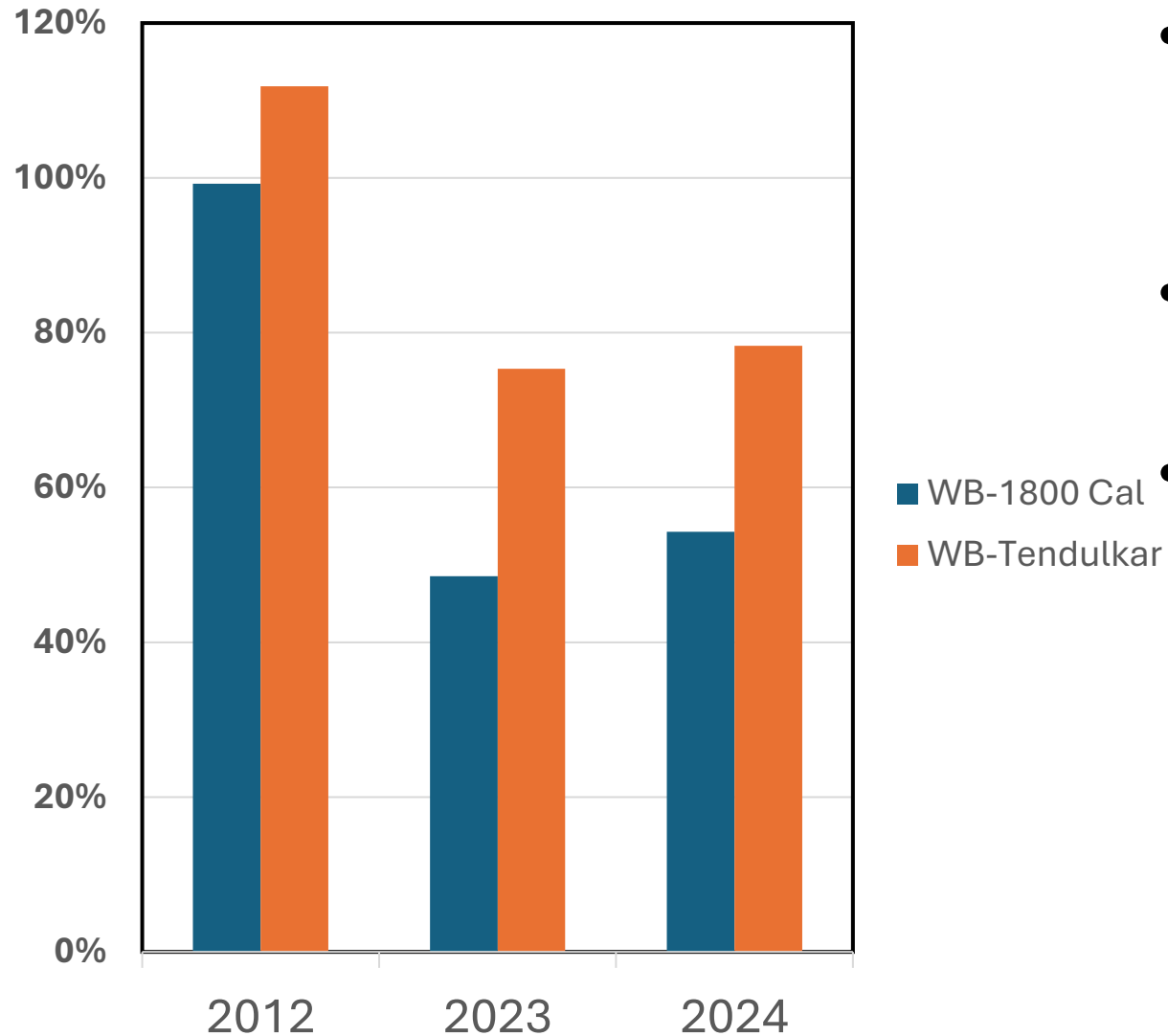
Cost of Calories 2012, scaled to all India			
	Daily (unscaled)	Monthly (unscaled)	Monthly, free rice
1200	32.15	964.5	751.1
1600	42.87	1286.1	1001.5
1800	48.23	1446.8	1126.7
2000	53.59	1607.6	1251.9
2200	58.94	1768.3	1377.1
2400	64.30	1929.1	1502.3
Cost of Calories 2023, scaled to all India			
	Daily (unscaled)	Monthly (unscaled)	Monthly, free rice
1200	78.99	2369.8	1930.1
1600	105.32	3159.7	2573.4
1800	118.49	3554.7	2895.1
2000	131.66	3949.7	3216.8
2200	144.82	4344.6	3538.5
2400	157.99	4739.6	3860.1

- We used ‘khichdi’ recipe to calculate the cost of 1800 calories per day for one month.
- Prices of ingredients were obtained from Govt of Kerala website and rescale to all-India levels using CPI differentials.
- In line with Gol policy, we set the price of rice to be 0

Alternative Poverty Estimates

- Take the calculations in the previous slides as alternative poverty lines
- Then take the consumer expenditure distributions from 2011-12 and 2022-23, for which unit level data is available
- Compare our estimate of cost of meals to provide 1800 calories per person per day with standard poverty lines (World Bank \$3PPP & Tendulkar)
- Note that *all* other consumer expenditure items are being ignored

Comparing WB 3PPP line to 1800 calorie cost



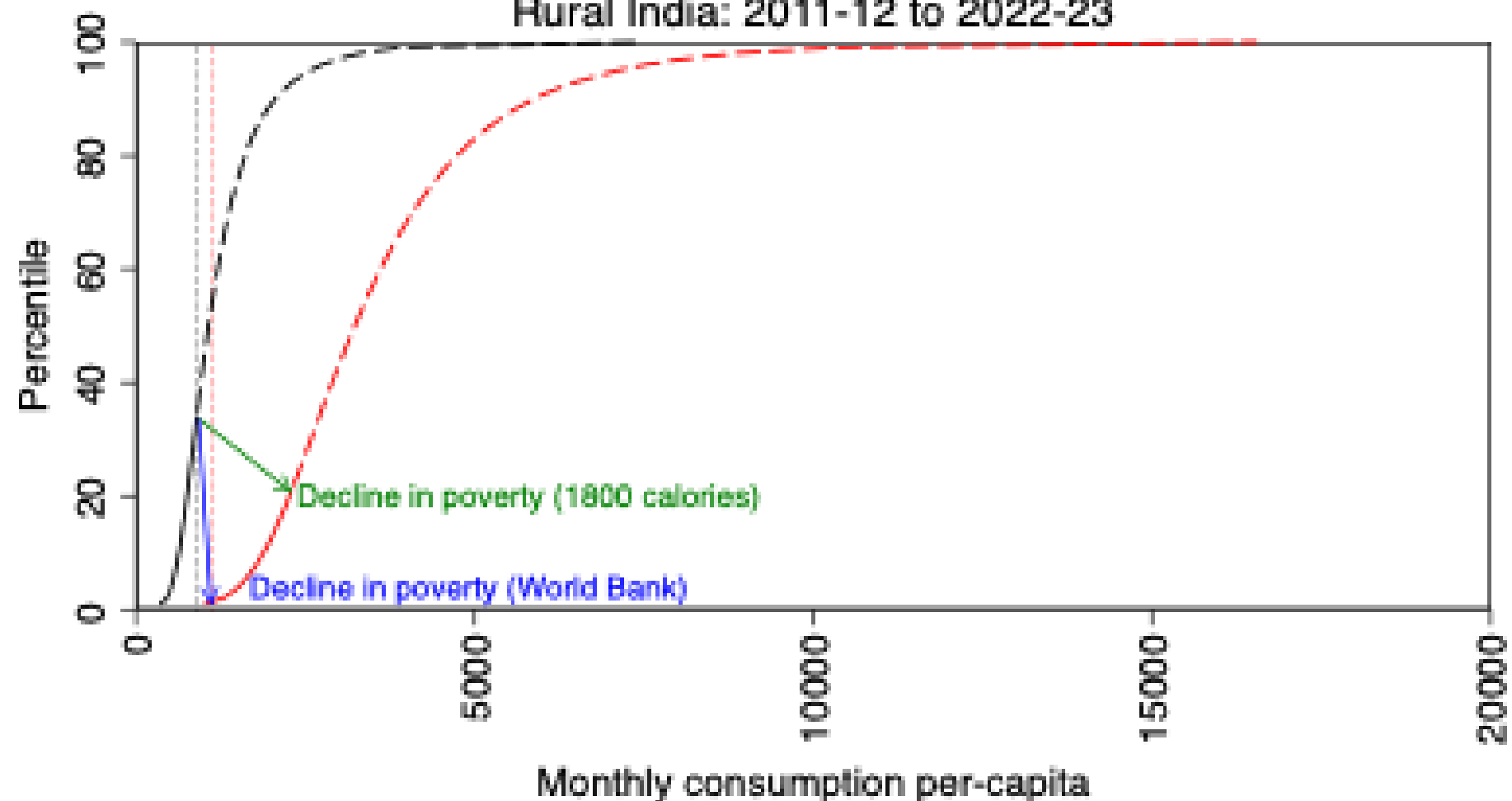
- 2011-12: World Bank line nearly completely captures cost of 1800 calories in India
- 2022-23: World Bank line is less than 50% of the 1800 calorie cost.
- To be sure: to check for arbitrariness, we find the same inadequacy of WB line with Tendulkar line updated using CPI.

What do we conclude from this?

- We see that in 2012, the World Bank Poverty line was very close to the 1800 Calorie line.
- The gap has grown in recent years.
- In 2024, the World Bank Poverty line was worth only 52% of the Calorie cutoff
- The fact that PPP has stayed roughly constant for the last eight years as we saw earlier seems strange
- We now present our main findings that shows this is problematic

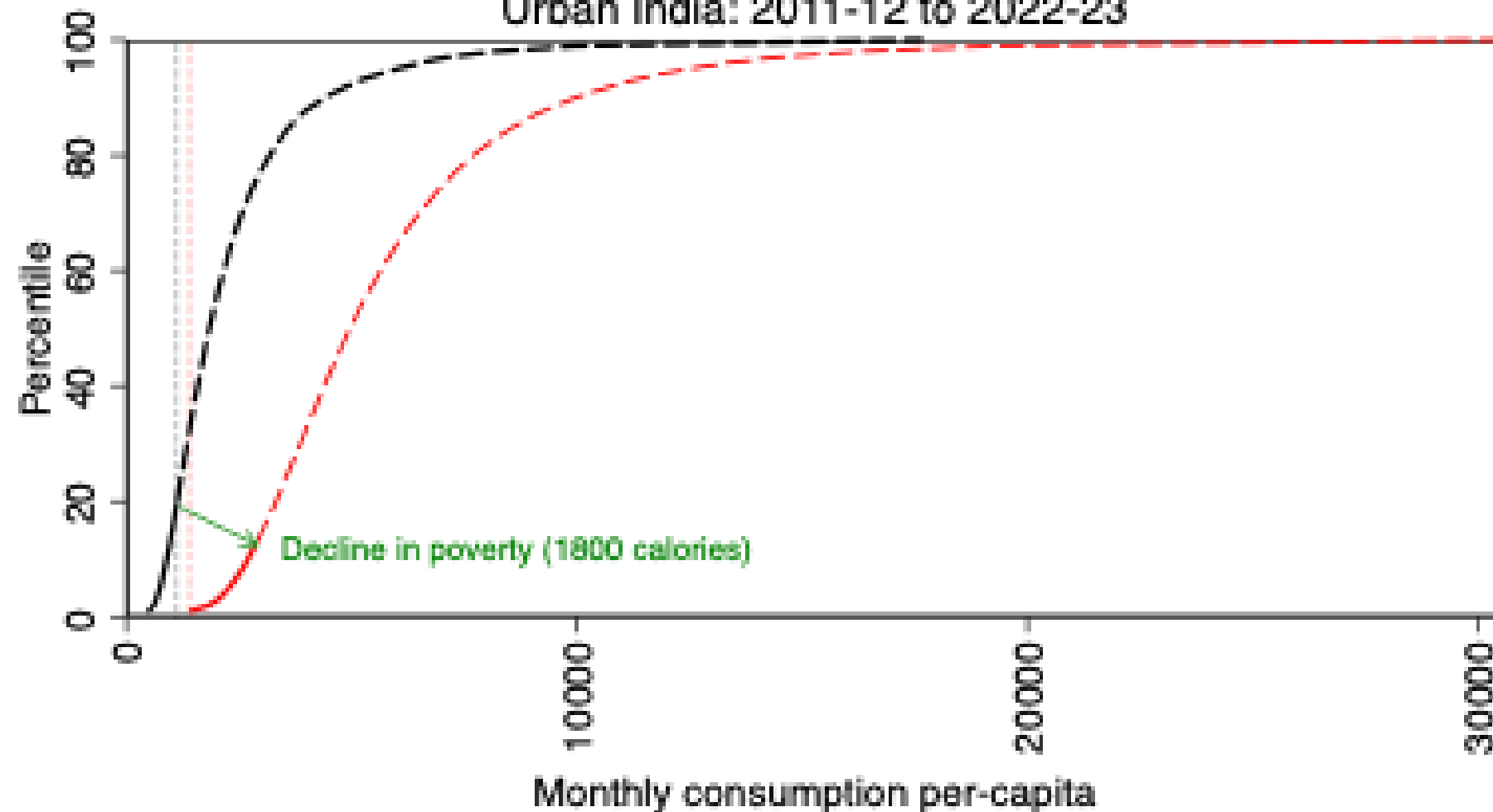
Consumption distribution

Rural India: 2011-12 to 2022-23



Consumption distribution

Urban India: 2011-12 to 2022-23



— 2011-12 in poverty

- - - 2011-12 above poverty

— 2022-23 in poverty

- - - 2022-23 above poverty

Summary numbers

- Our 1800 calorie line (with free rice) suggests much more modest decline in poverty headcount
- 2022-23 Rural India: consumption of bottom 22% below cost of obtaining 1800 calories of food
- 2022-23 Urban India: consumption of bottom 12% below cost of obtaining 1800 calories of food.
- As a comparison: The World Bank estimates that less than 5% of India is below the 3PPP per day poverty line, and those using the Tendulkar line also find numbers of similar magnitudes

What do we conclude from this?

- Poverty estimates are sensitive to the choice of poverty line – lot of density of the poor around those numbers
- What the poverty bundle is, and what prices are used matters hugely
- Our point is not that our “measure” is better – it is to show the sensitivity in a way that is relatable immediately
- Before the HCES results came out, researchers (including us) were taking the 2011-12 Tendulkar line and using average CPI inflation to get poverty lines for more recent years
- Our calculations suggest this is tricky – prices play a huge role.

Implications

- What our exercise illustrates is really that as economies grow and change, what is a poverty bundle and how does one adjust for prices when we update it cannot be based on old formulas
- Also, new goods/services come up, new welfare schemes etc
- As to the headline that extreme poverty has been largely eliminated, we are sceptical - it has declined for sure over a decade and a half, but the exact level is sensitive to how we define and calculate the poverty line

Part 3: Inequality

Returning to the Initial Puzzle

- Why would income inequality tend to increase while consumption-based inequality measures not so much (or even decline slightly)?
- Empirically, it is an observed pattern that wealth tends to be more unequally distributed than income, and in turn, income tends to be more unequal than consumption
- Wealth reflects savings, returns from investments that accumulate over time as well as inheritance and so the long-run cumulative aspect of wealth accumulation makes wealth inequality greater than income inequality, reflecting current circumstances.

Possible Explanation

- While consumption increases with income, the rate at which it increases tends to diminish as income grows, resulting in the well-known stylized fact that the savings rates of the rich tend to be higher than the poor - this factor tends to make inequality in consumption typically less than inequality in income.
- Moreover, to the extent that income flows tend to vary, individuals typically try to maintain their consumption levels.
- Also, the rich are able to take better advantage of growth opportunities than the rest and that could explain the upward trend
- Finally, household expenditure surveys typically do not pick up the very top tail of the distribution

Inequality of Growth and Growth of Inequality

- We now turn to the question: to what extent has growth been inclusive in India?
- After all, inequality may increase and then fall – the famous Kuznets curve.
- Also, it may take a long time for poverty to be eliminated given the high initial levels but that does not necessarily mean inequality of growth (after all, the base effect would mechanically tend to make the growth rates higher the poorer you are)

Inequality of Growth and Growth of Inequality

- We propose a simple method to calculate specific growth rates for different income groups based on national income data and the inequality data presented in the WID (Ghatak and Xu, 2024)
- Since the WID provides income shares of specific income groups annually, one can find this out using their change along with the average growth rate
- Similar to growth incidence curves which apply it directly to time-series data on consumer expenditure

Rising Income Inequality

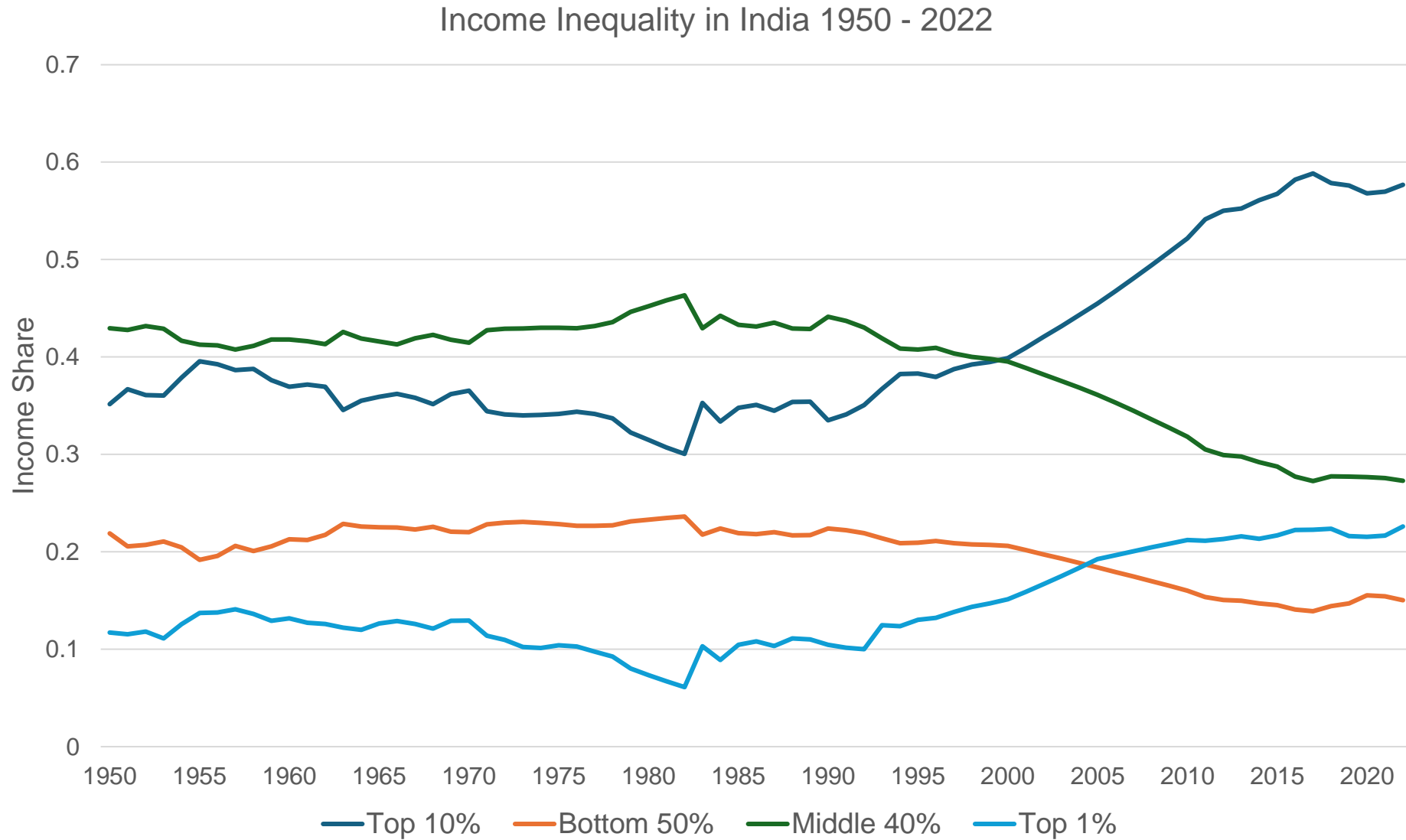


Figure: Income Shares. Source: WID database

Digression - Methodology

- ▶ Suppose that g_R is the growth rate of income among the rich, y_0^R is their initial period total income, and y_t^R is their total income after t years. Then, y_t^R is given by:

$$y_t^R = (1 + g_R)^t y_0^R$$

- ▶ Similarly, suppose that g_P is the growth rate of income among the poor, y_0^P is their initial period total income, and y_t^P is the total income after t years. Then, y_t^P is given by:

$$y_t^P = (1 + g_P)^t y_0^P$$

- ▶ Also, suppose g is the growth rate of income in the economy, y_0 is the initial period total income in the economy, and y_t is the total income in the economy after t years. Then, y_t is given by:

$$y_t = (1 + g)^t y_0$$

Methodology

- ▶ Dividing the first equation by the third, we get:

$$\frac{y_t^R}{y_t} = \frac{(1 + g_R)^t y_0^R}{(1 + g)^t y_0}$$

- ▶ Dividing the second equation by the third, we get:

$$\frac{y_t^P}{y_t} = \frac{(1 + g_P)^t y_0^P}{(1 + g)^t y_0}.$$

- ▶ Typically, $\frac{y_t^R}{y_t}$, $\frac{y_t^P}{y_t}$, and g are known. The expression $\frac{y_t^R}{y_t}$ is the share of income held by the rich in the economy and $\frac{y_t^P}{y_t}$ is the share of income held by the poor in the economy. We can then obtain g_R by taking logarithms and simplifying:

$$\log \left(\frac{y_t^R}{y_t} \right) - \log \left(\frac{y_0^R}{y_0} \right) = t \log \left(\frac{1 + g_R}{1 + g} \right) \approx t(g_R - g)$$

Methodology

- We obtain:

$$g_R = g + \frac{1}{t} \left[\log \left(\frac{y_t^R}{y_t} \right) - \log \left(\frac{y_0^R}{y_0} \right) \right]$$
$$g_P = g + \frac{1}{t} \left[\log \left(\frac{y_t^P}{y_t} \right) - \log \left(\frac{y_0^P}{y_0} \right) \right]$$

- To calculate yearly growth rate, we take $t = 1$. We consider group i 's (which could be top 1%, top 10%, middle 40% and bottom 50%) growth rate as

$$g_t^i = g_t + \log \left(\frac{y_t^i}{y_t} \right) - \log \left(\frac{y_{t-1}^i}{y_{t-1}} \right).$$

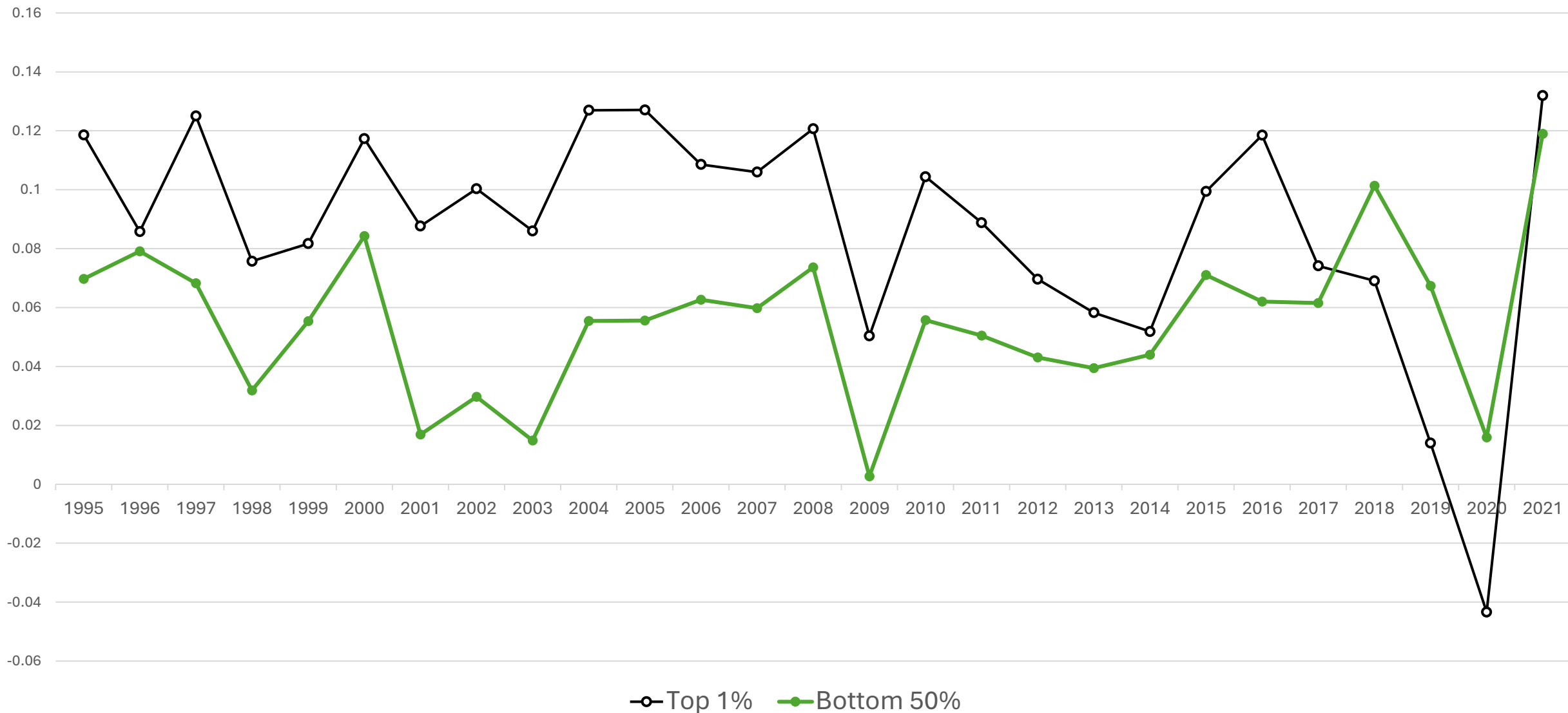
where g_t is the average growth rate, and g_t^i is the growth rate for income group i .

- The intuition: the group specific growth rate equals the average growth rate plus the change of such group's income share (i.e. the change in inequality).

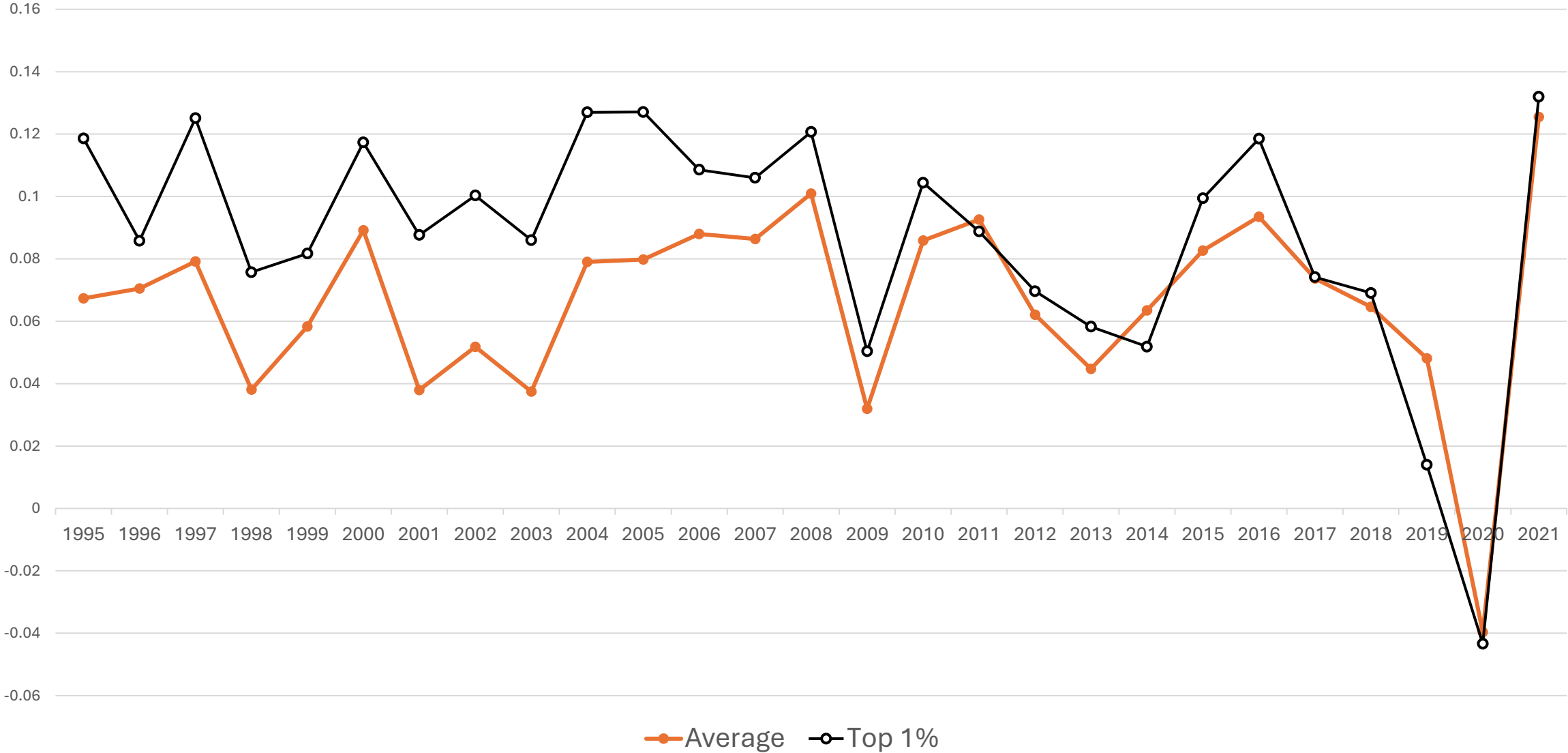
Findings based on this Method

- In most of the time periods (especially during 1995 - 2005), Top 1% and top 10% experienced the highest growth rates compared to other groups (“inequality of growth”).
- Bottom 50% and the middle 40% witnessed very similar growth rates, which were below the average growth rate.
- All this suggests that the growth of income inequality is unlikely to come down soon

Income Growth Rates in India: Top 1% vs Bottom 50% 1995 - 2021



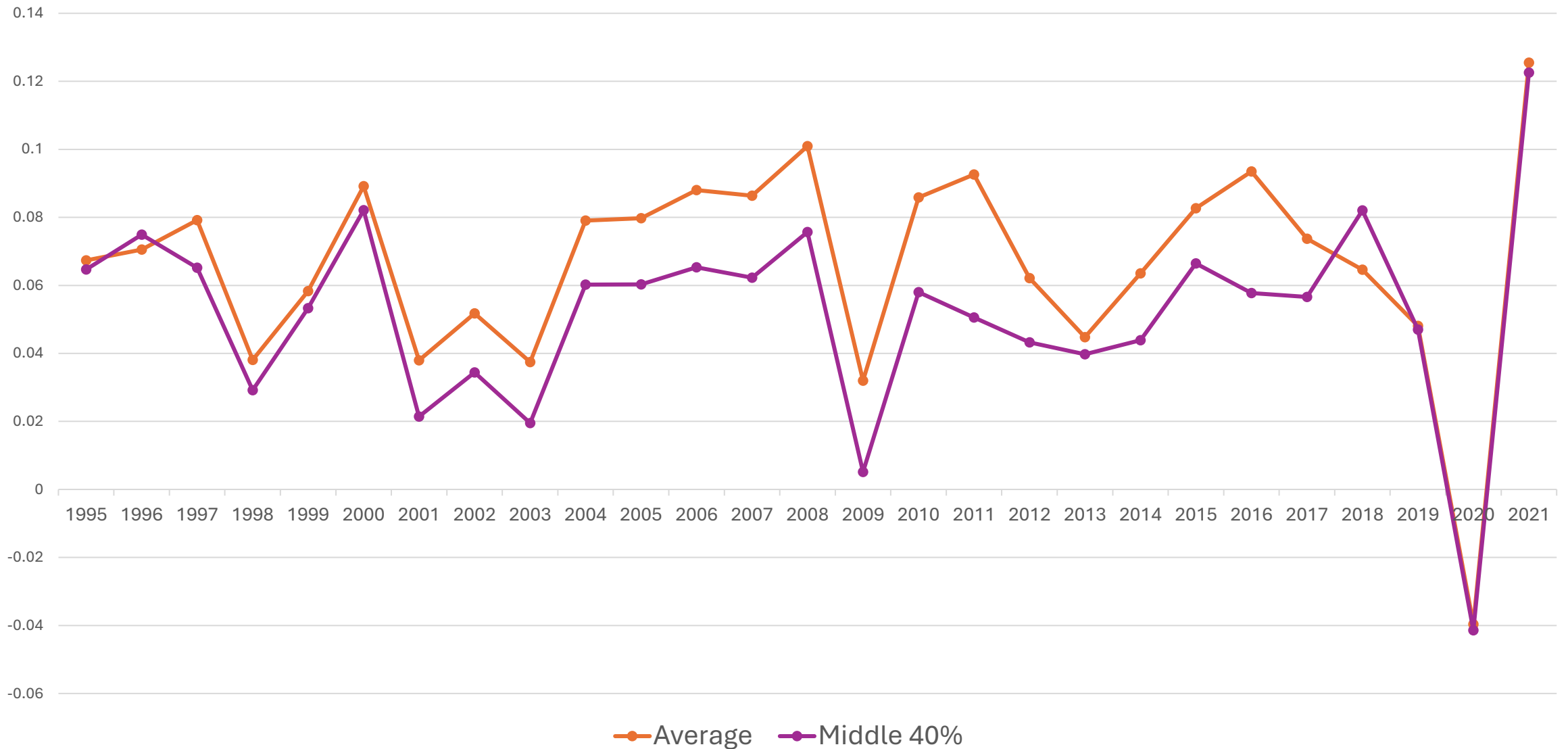
Income Growth Rates in India: **Average** vs Top 1% 1995 - 2021



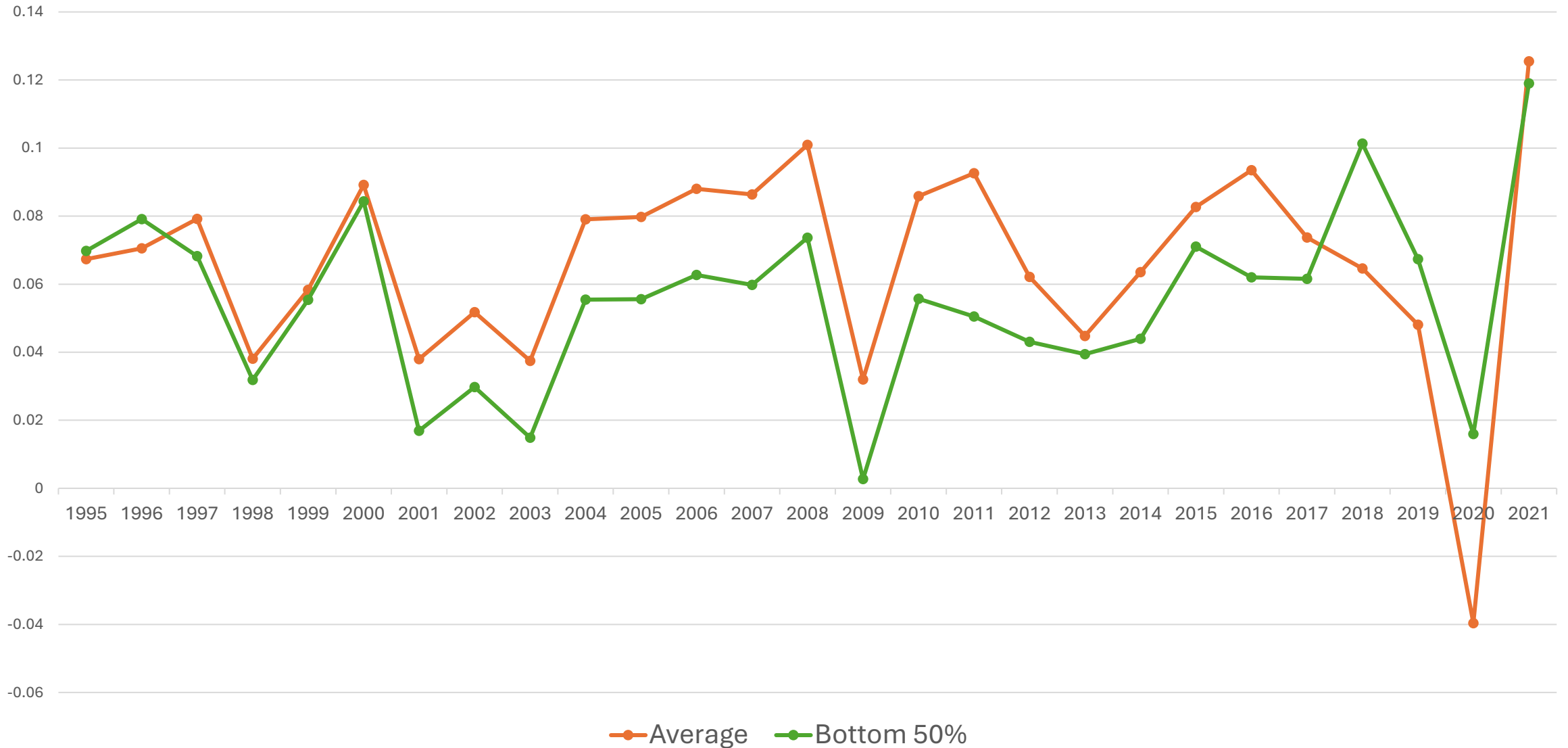
Income Growth Rates in India: Average vs Top 10% 1995 - 2021



Income Growth Rates in India: Average vs Middle 40% 1995 - 2021



Income Growth Rates in India: **Average** vs **Bottom 50%** 1995 - 2021



Is India's Growth Pattern Unusual?

- The recent paper by Bharti et al. (2024) also studies the Indian growth incidence curve. To the extent the richer sections benefit more from growth in general, how inclusive is the India's economic growth *relative* to other countries?
- Comparison with China which grew at a much faster rate since the 1990s in terms of the average growth rate
- When we look at the annualized growth rates by income group an interesting pattern emerges
- While in China income of all groups rose at a faster rate, the gap is particularly noticeable for the bottom 50% as well as the middle 40% (excluding the top 10% and the bottom 50%).

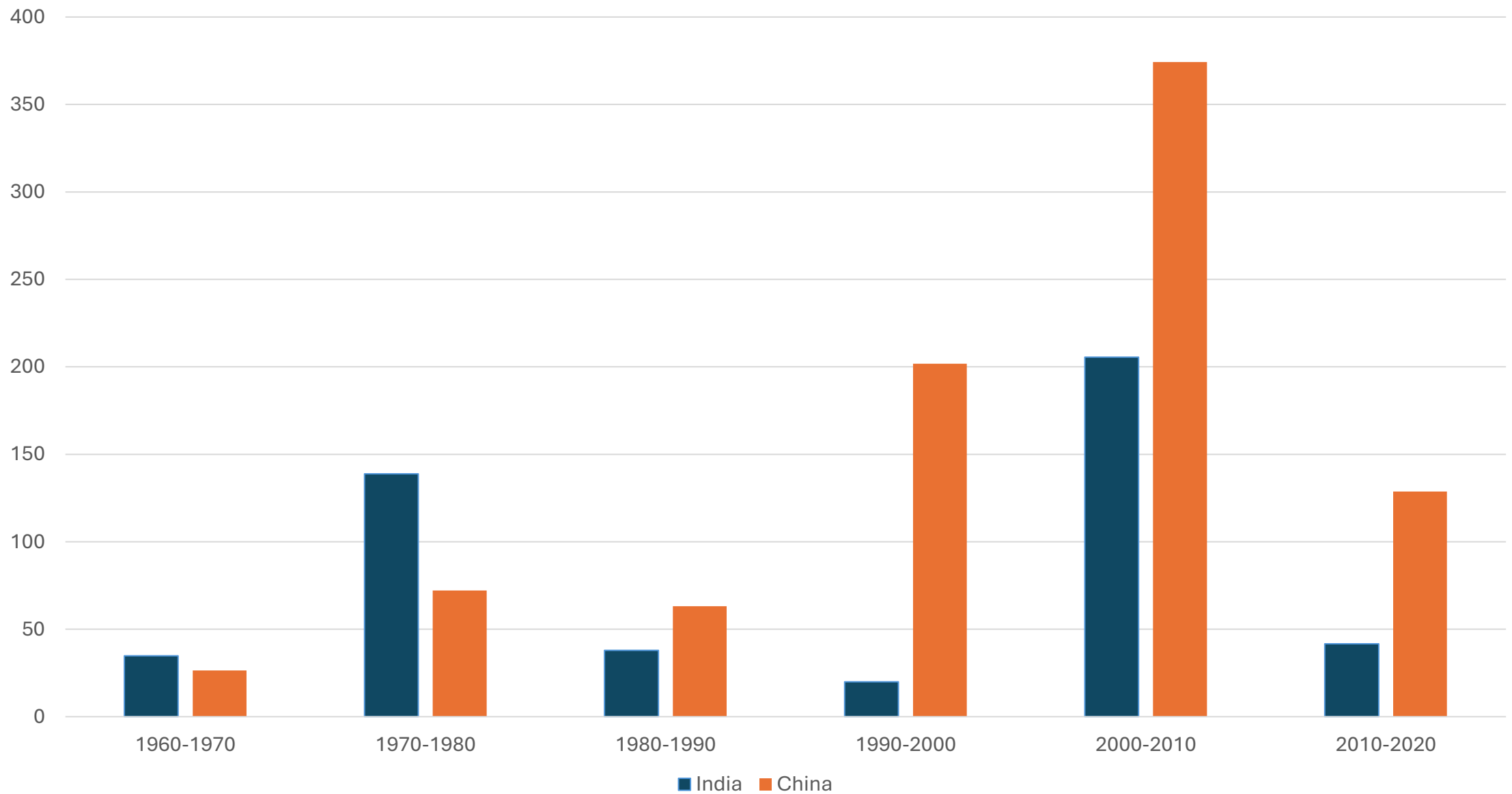


Figure: Decadal Growth in Per Capita GDP, India vs China

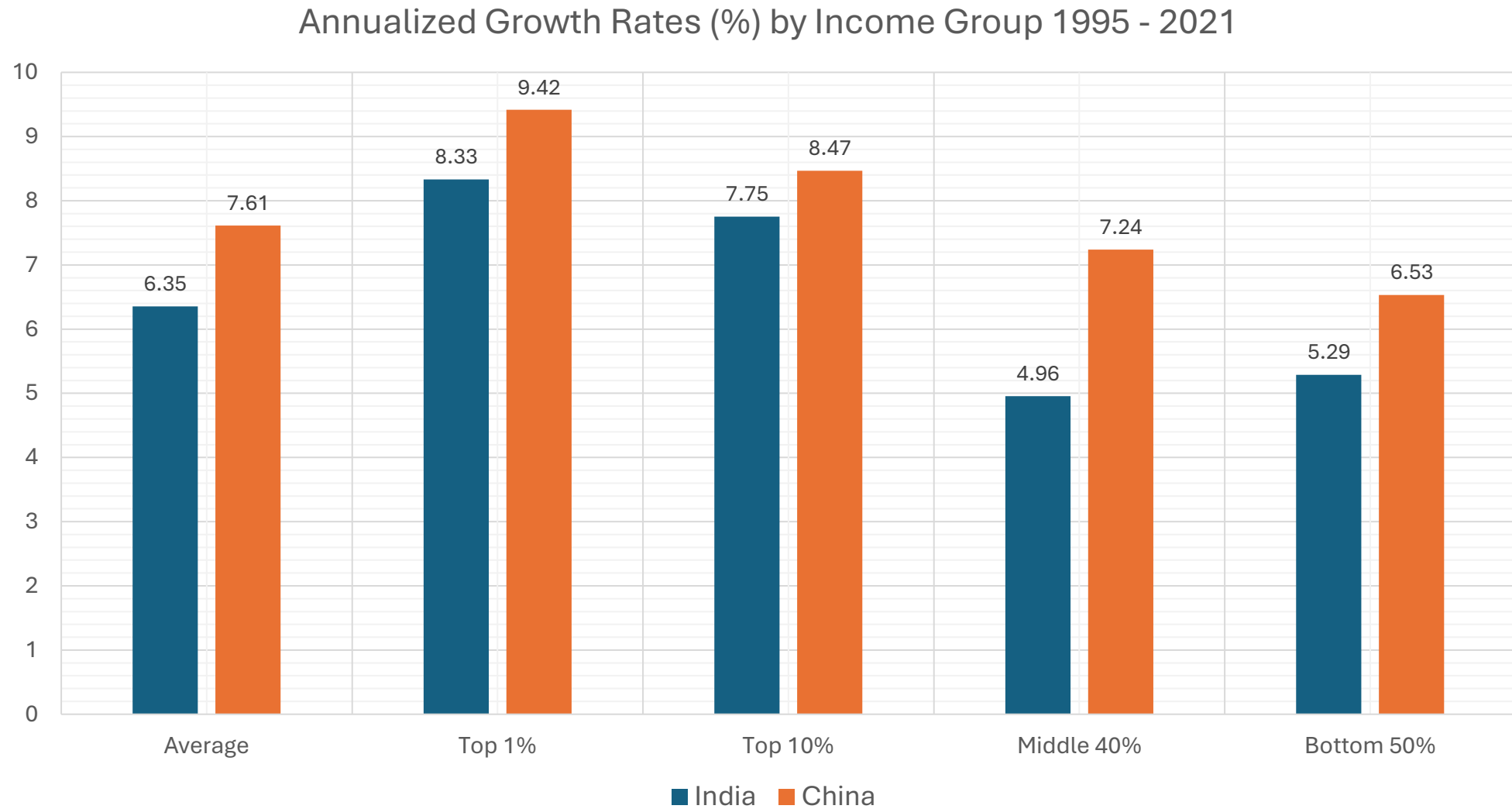


Figure: Annualized Growth Rates by Income Group 1995-2021, India vs China

Conclusions

- Poverty HCR is sensitive to the poverty line and in this, the role of prices play a very important role
- Inequality tends to get underestimated as the top tail of the distribution is not captured
- In developed countries, they “oversample” richer households based on tax data to check the representativeness of consumer expenditure surveys

Conclusions

- Even after several decades of growth, India's per capita income is quite low (total GDP ranking is another matter)
- If you start with a very high level of poverty, it would need a long time to eliminate poverty just relaying on growth
- The evidence on trends in poverty as well as inequality suggest divergence and segregation rather than convergence
- This is reflected in the labour market too – rise in unpaid helpers is one of the fastest growing categories (Ghatak, Jha, and Singh, 2025).

Additional Slides

Cost of Calories 2012, Kerala Prices			
	Daily	Monthly	Monthly, free rice
1200	32.15	964.5	780.7
1600	42.87	1286.1	1040.9
1800	48.23	1446.8	1171.0
2000	53.59	1607.6	1301.1
2200	58.94	1768.3	1431.2
2400	64.30	1929.1	1561.4

Cost of Calories 2012, scaled to all India			
Calories	Daily	Monthly	Monthly, free rice
1200	32.15	964.5	751.1
1600	42.87	1286.1	1001.5
1800	48.23	1446.8	1126.7
2000	53.59	1607.6	1251.9
2200	58.94	1768.3	1377.1
2400	64.30	1929.1	1502.3

Food CPI ratio was used for these calculations

Cost of Calories 2023, scaled to all India			
Calories	Daily	Monthly	Monthly, free rice
1200	78.99	2369.8	1930.1
1600	105.32	3159.7	2573.4
1800	118.49	3554.7	2895.1
2000	131.66	3949.7	3216.8
2200	144.82	4344.6	3538.5
2400	157.99	4739.6	3860.1

Cost of Calories 2024, scaled to all India			
Calories	Daily	Monthly	Monthly, free rice
1200	73.13	2193.9	1760.2
1600	97.51	2925.2	2346.9
1800	109.69	3290.8	2640.2
2000	121.88	3656.5	2933.6
2200	134.07	4022.1	3227.0
2400	146.26	4387.8	3520.3

CPI calculations			
2012	(2010=100)	January of 2012	
	All India	Kerala	
General			Ratio
Rural	114.9	116	0.991
Urban	112.8	116.3	0.970
Food			
Rural	113.1	114.4	0.989
Urban	111.9	116.3	0.962

The World Bank Line and PPP

- The PPP conversion factor is a currency conversion factor and a spatial price deflator
- They convert different currencies to a common currency and, in the process of conversion, equalize their purchasing power by eliminating the differences in price levels between countries, thereby allowing volume or output comparisons of gross domestic product (GDP) and its expenditure components.
- This conversion factor is for household final consumption expenditure and the base currency is the US dollar.

Monthly per-capita expenditure in Nominal Indian Rupees

Based on Household Consumption Expenditure Surveys. Mean consumption within fractile

Fractile	RURAL		
	2012	2023	2024
0-5	476	1373	1677
5-10	598	1782	2126
10-20	700	2112	2473
20-30	809	2454	2833
30-40	909	2768	3162
40-50	1016	3094	3498
50-60	1140	3455	3866
60-70	1292	3887	4304
70-80	1497	4458	4885
80-90	1823	5356	5763
90-95	2333	6638	6929
95-100	3965	10501	10137

Fractile	URBAN		
	2012	2023	2024
0-5	651	2001	2376
5-10	840	2607	3093
10-20	1030	3157	3687
20-30	1252	3762	4353
30-40	1481	4348	4979
40-50	1728	4963	5622
50-60	2018	5662	6334
60-70	2377	6524	7199
70-80	2887	7573	8353
80-90	3751	9582	10139
90-95	5268	12399	12817
95-100	9732	20824	20310

Comparing our Line with Fractile Means

- For 2022-23, unit level data is available
- But for both 2022-23 and 2023-24 fractile means are available
- We can juxtapose our line and get a rough sense of poverty in both years

RURAL

Values less than 100% indicate consumption expenditure falls short of poverty line

Fractile	Consumption Expenditure as a % of World Bank 3 PPP poverty line			Consumption Expenditure as a % of Tendulkar poverty line			Consumption Expenditure as a % of 1800 Calories Cost with free rice		
	2012	2023	2024	2012	2023	2024	2012	2023	2024
0-5	53.2%	122.1%	146.3%	58.3%	91.5%	114.5%	52.8%	59.3%	79.4%
5-10	66.8%	158.5%	185.5%	73.2%	118.8%	145.2%	66.3%	76.9%	100.7%
10-20	78.2%	187.8%	215.7%	85.7%	140.8%	168.9%	77.6%	91.2%	117.1%
20-30	90.5%	218.3%	247.2%	99.2%	163.6%	193.5%	89.8%	106.0%	134.1%
30-40	101.6%	246.2%	275.9%	111.4%	184.5%	216.0%	100.8%	119.5%	149.7%
40-50	113.6%	275.2%	305.2%	124.5%	206.3%	238.9%	112.8%	133.6%	165.6%
50-60	127.4%	307.3%	337.3%	139.7%	230.3%	264.1%	126.4%	149.2%	183.0%
60-70	144.4%	345.7%	375.5%	158.4%	259.1%	294.0%	143.4%	167.8%	203.8%
70-80	167.4%	396.5%	426.2%	183.5%	297.2%	333.7%	166.1%	192.5%	231.3%
80-90	203.8%	476.4%	502.8%	223.4%	357.1%	393.6%	202.2%	231.3%	272.8%
90-95	260.8%	590.4%	604.5%	285.9%	442.5%	473.3%	258.8%	286.6%	328.0%
95-100	443.3%	934.0%	884.4%	485.9%	700.1%	692.4%	439.9%	453.4%	479.9%

URBAN

Values less than 100% indicate consumption expenditure falls short of poverty line

Fractile	Consumption Expenditure as a % of World Bank 3 PPP poverty line			Consumption Expenditure as a % of Tendulkar poverty line			Consumption Expenditure as a % of 1800 Calories Cost with free rice		
	2012	2023	2024	2012	2023	2024	2012	2023	2024
0-5	58.3%	142.4%	165.8%	65.1%	107.2%	129.8%	57.8%	69.1%	90.0%
5-10	75.2%	185.5%	215.9%	84.0%	139.7%	169.0%	74.6%	90.0%	117.1%
10-20	92.1%	224.6%	257.3%	103.0%	169.2%	201.5%	91.4%	109.0%	139.6%
20-30	112.0%	267.7%	303.8%	125.2%	201.6%	237.9%	111.1%	129.9%	164.9%
30-40	132.4%	309.4%	347.5%	148.1%	233.0%	272.1%	131.4%	150.2%	188.6%
40-50	154.5%	353.1%	392.4%	172.8%	266.0%	307.2%	153.3%	171.4%	212.9%
50-60	180.4%	402.9%	442.1%	201.8%	303.4%	346.1%	179.1%	195.6%	239.9%
60-70	212.6%	464.2%	502.4%	237.7%	349.6%	393.4%	211.0%	225.3%	272.7%
70-80	258.2%	538.8%	583.0%	288.7%	405.8%	456.4%	256.2%	261.6%	316.4%
80-90	335.5%	681.8%	707.6%	375.1%	513.5%	554.0%	333.0%	331.0%	384.0%
90-95	471.2%	882.2%	894.5%	526.8%	664.5%	700.4%	467.6%	428.3%	485.4%
95-100	870.4%	1481.7%	1417.5%	973.2%	1116.0%	1109.8%	863.8%	719.3%	769.2%