Foundation Day Lecture, August 8, 2023

Growing Apart?

Growth, Poverty, and Inequality in Post-Liberalization India

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LSE

Two inter-related puzzles

- Why has there been a slowdown of growth that became visible well before the pandemic, starting around 2016?

- And, despite this, why are some estimates of poverty showing a sharp decrease?

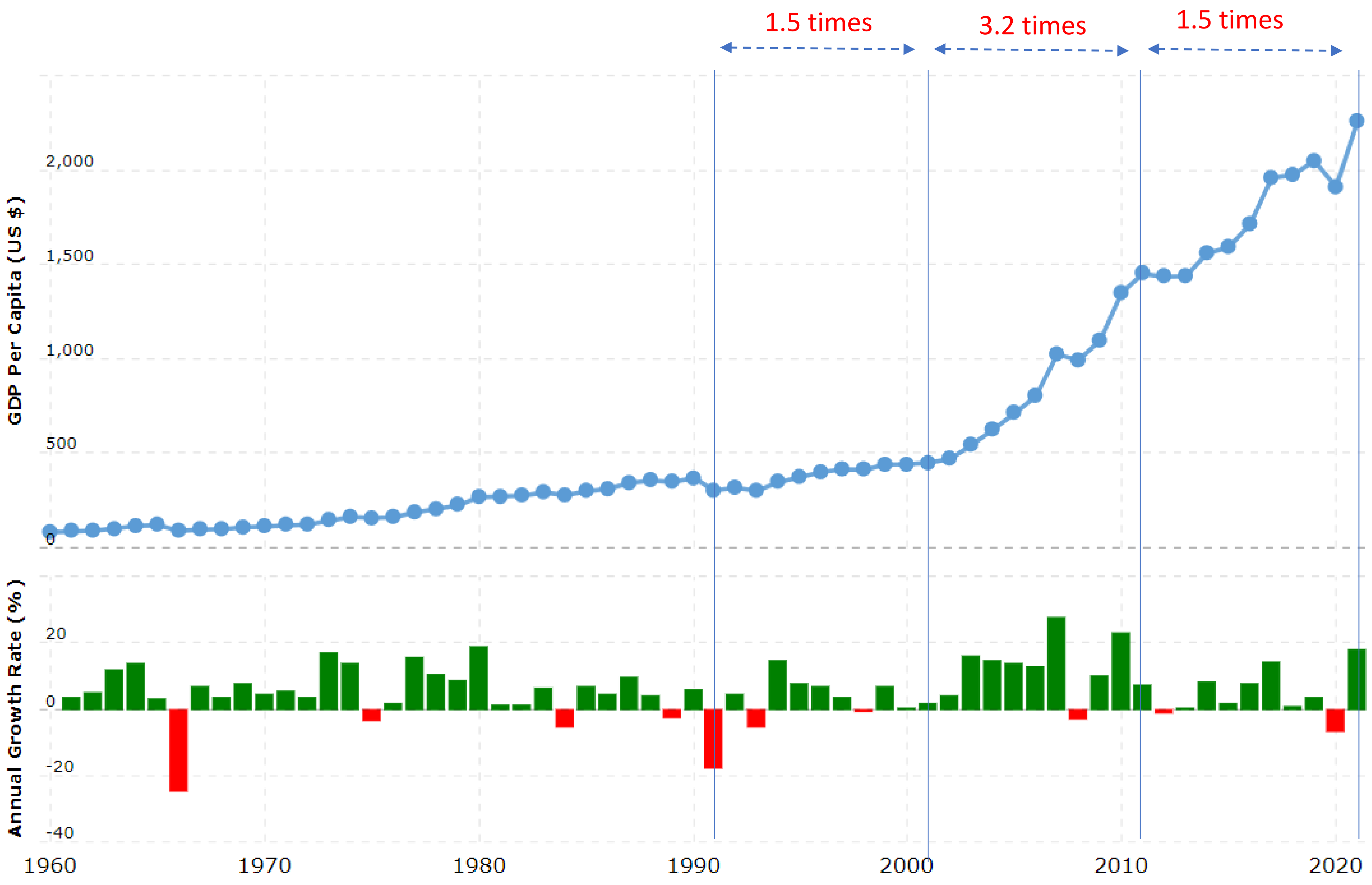
- Drawing on recent joint work with Rishabh Kumar of U Mass Boston, in this lecture, I will put the trends over the last decade in the context of the long-term economic trajectory of India since liberalisation

- We argue that the growth slowdown due to worsening income inequality, which feeds into slack aggregate demand, and the skewed composition of demand that does not generate sufficient income earning opportunities to unskilled workers, creating a negative feedback loop

- I will also present evidence that the reported sharp decrease in poverty despite the absence of official statistics on poverty, and the use of synthetic data to estimate poverty, is misleading and alternative approaches suggest little or no decline in poverty over the last decade

1. India’s Economic Trajectory – A Statistical Snapshot

GDP Per Capita 1960-2023



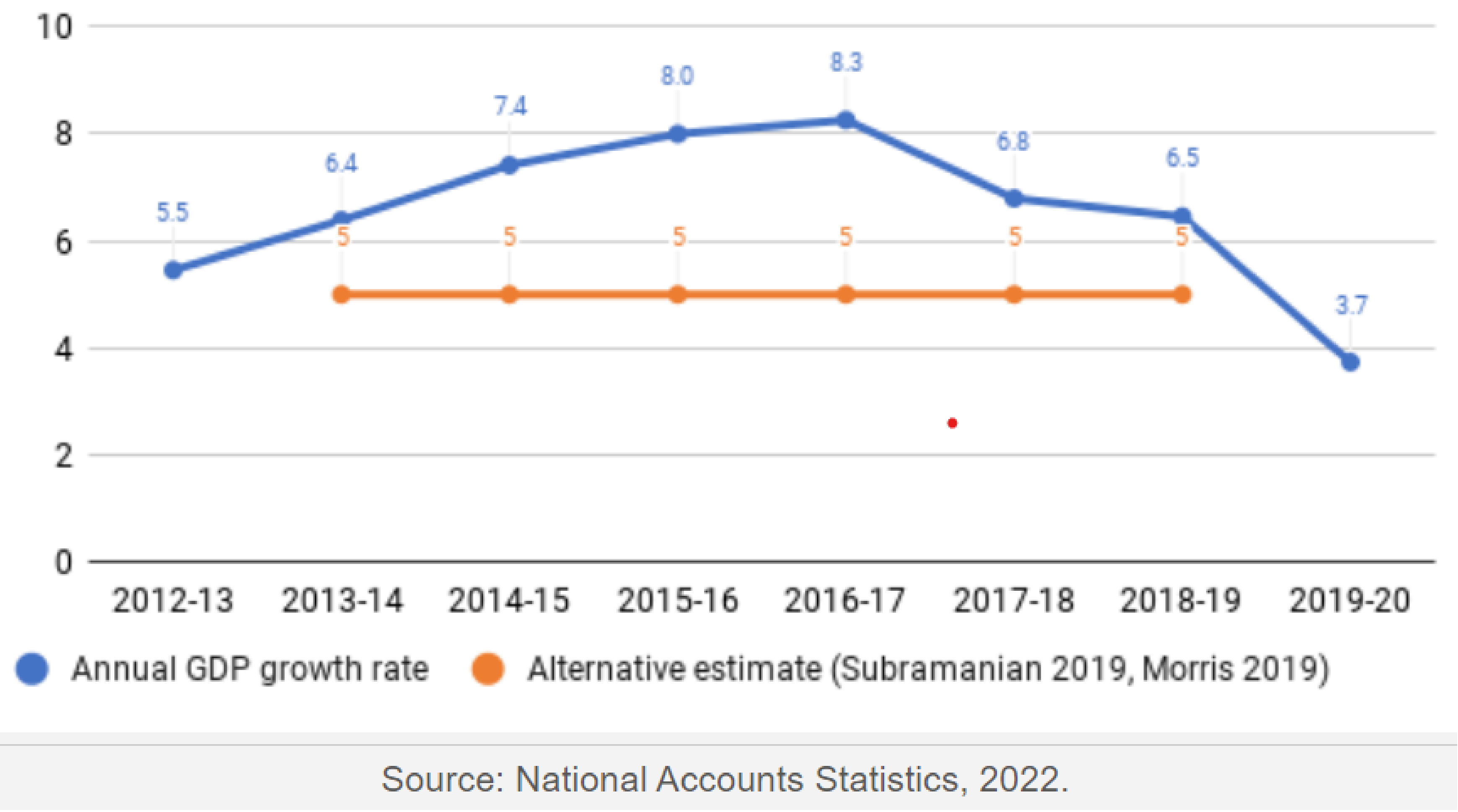
Source: World Bank. Current US $.

Growth rates did go up after liberalisation and were especially high in the second decade

Growth has slowed down during the last decade and if we take a closer look, it will become even more apparent

In addition, there have been debates about methodological changes in national income statistics that suggest official growth estimates may be exaggerated

Official and Alternative Estimates of GDP Growth Rates



Source: Nagaraj (2023)

How does growth spread - channels of transmission

- Demand Side linkage
  - Those whose income grow, demand goods and services from others
  - Demand moves to more high value goods and services (Engel curves)

- Supply Side linkage
  - Demand for factors of production raises their prices (e.g., wages)
  - Returns to skill acquisition goes up
  - Income growth feeds into the demand channel

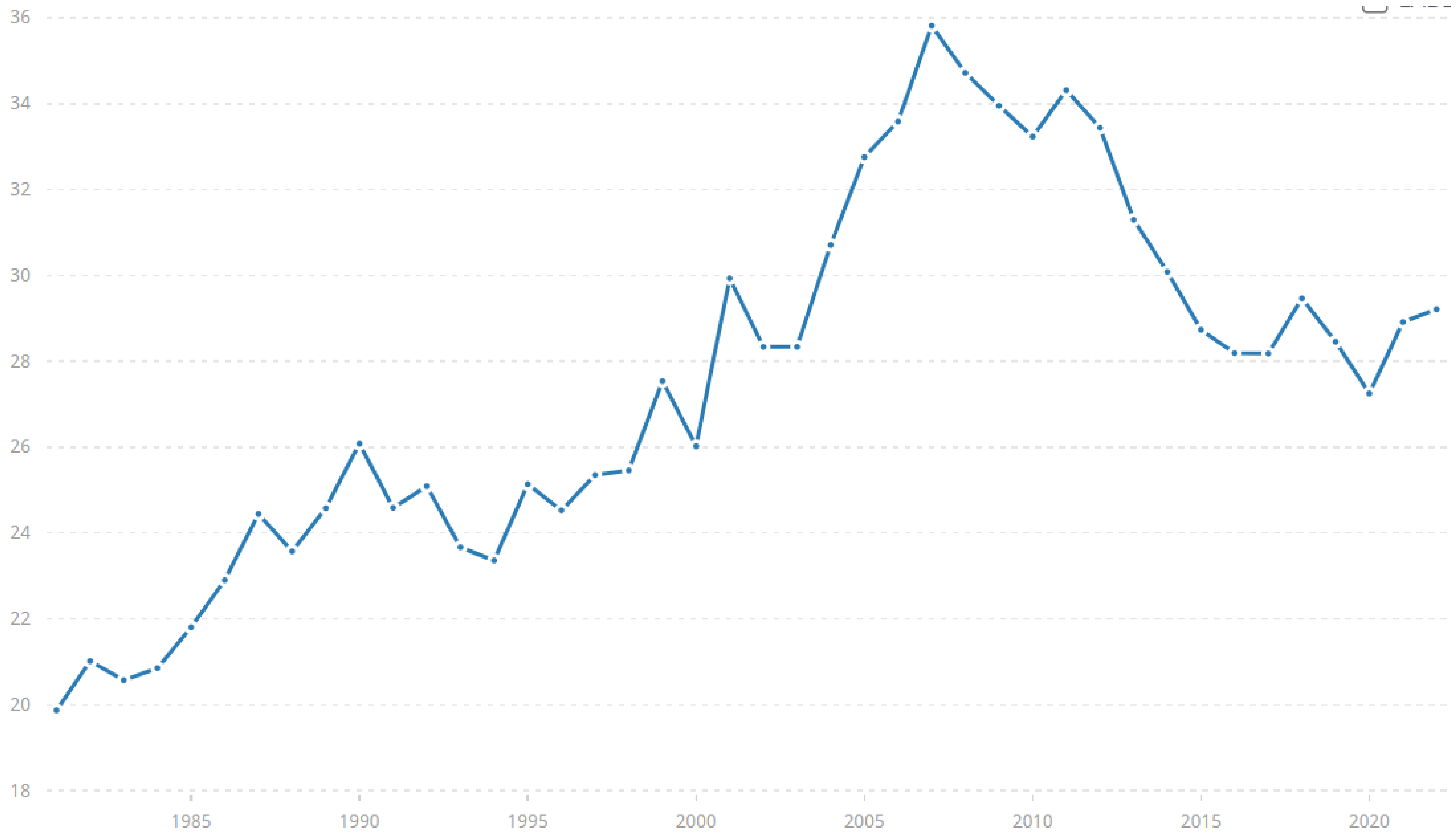
How does growth spread – specific channels

- Migration: People move across sectors, from rural to urban areas
- Firms increase investment anticipating demand growth
- Remittances: those in urban areas send money back to rural areas
- Growth in tax revenue and investment in public health, education, safety net
- Saving and investment
  - By saving and investing (in financial and human capital) people accumulate wealth

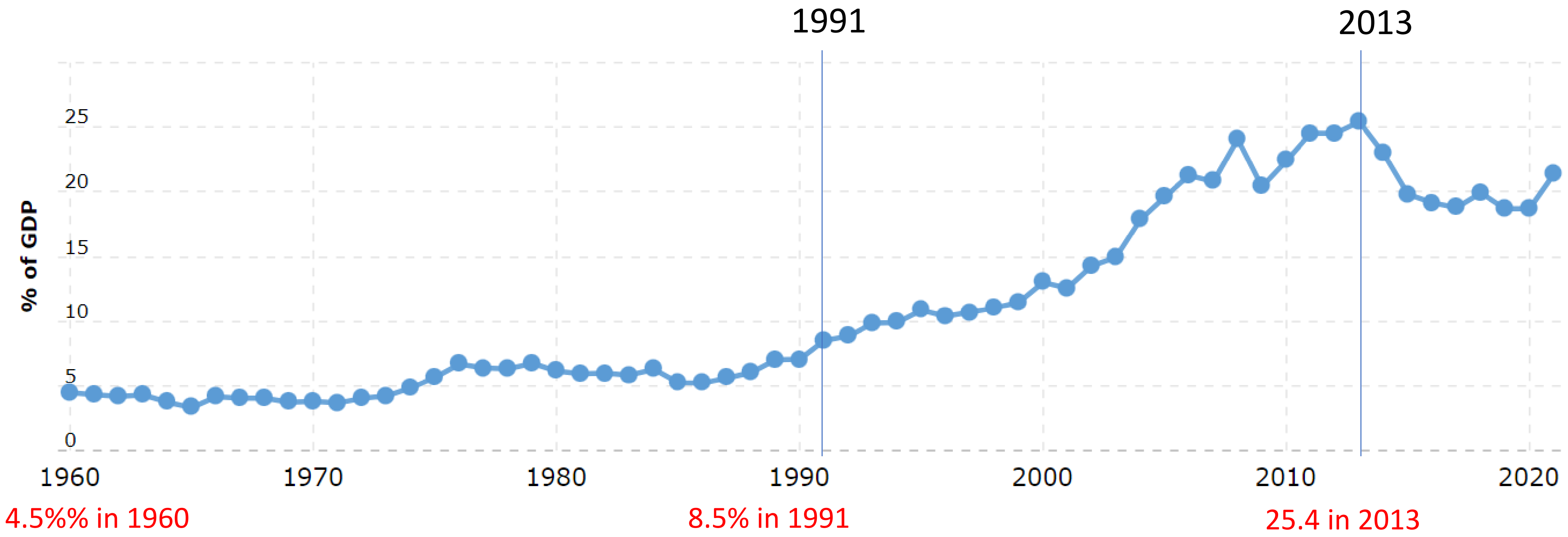
Trends in sources of demand

Investment to GDP Ratio (in %)

Investment to GDP ratio has been declining for more than a decade after growing for three decades

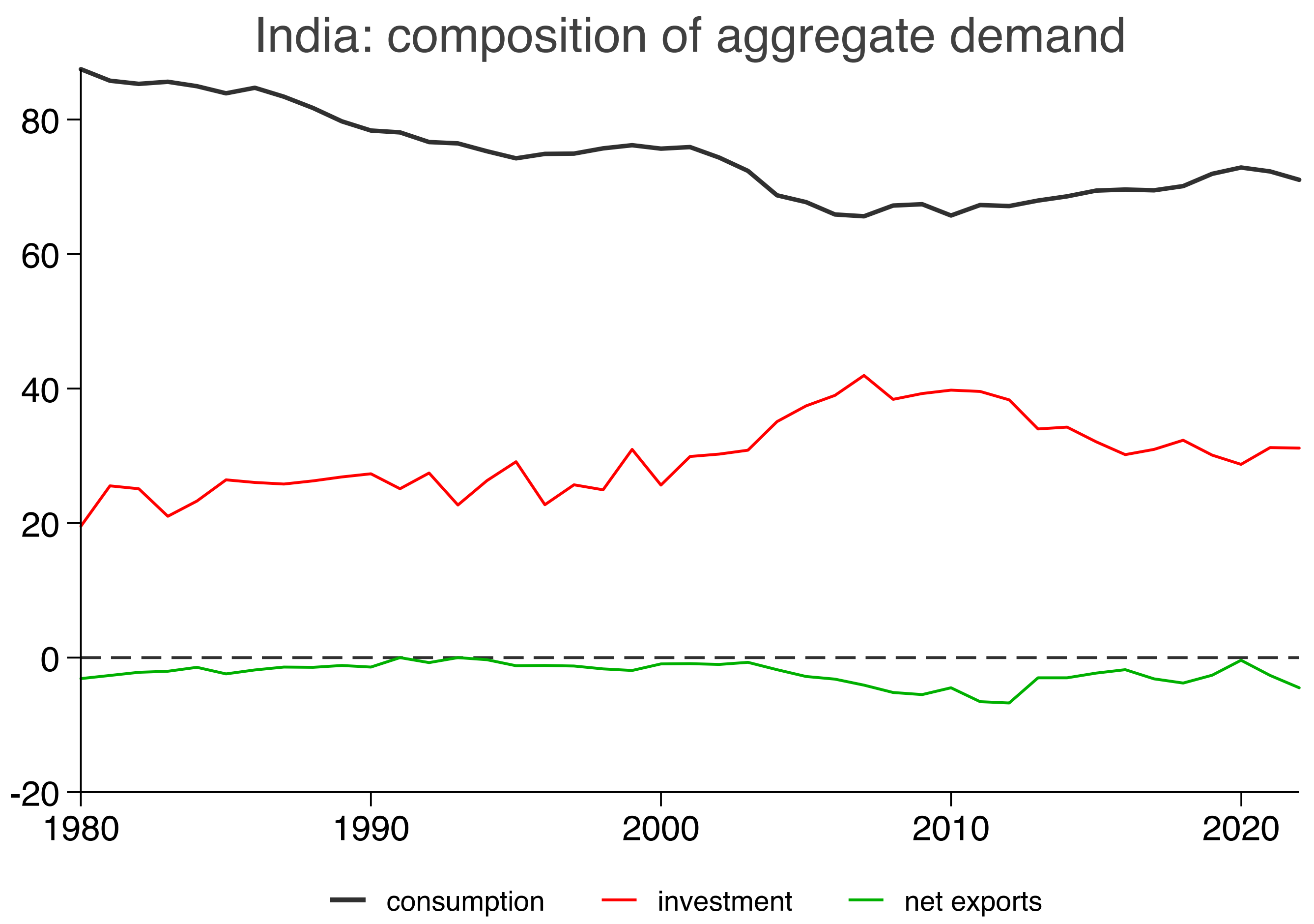


Exports as a fraction of GDP 1960-2023



Data Source: World Bank

Structure of aggregate demand: consumption and investment



Source: World Development Indicators, World Bank

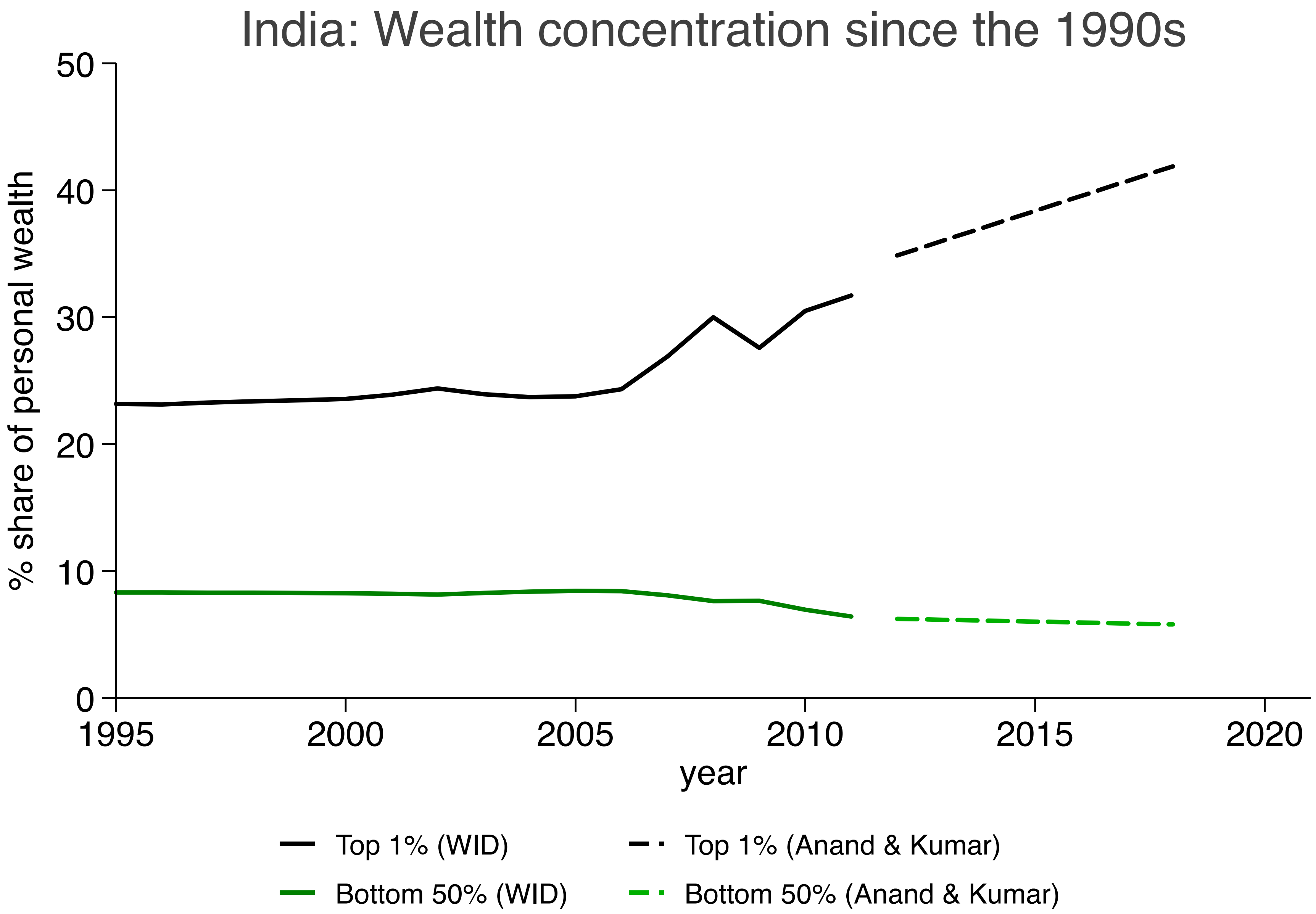
- Signs of slackening demand are apparent over the last decade
- Responses to the economic slowdown in India has focused on supply-side remedies that would increase the profitability of investment.
- The government has focused on many schemes to promote manufacturing sector and to boost domestic and foreign investments in India, such as the GST, reduction in Corporate tax, interventions to improve ease of doing business, FDI policy reforms, measures for reduction in compliance burden, policy measures to boost domestic manufacturing through public procurement orders, Make in India initiative, Phased Manufacturing Programme, introduction of Production Linked Incentive Scheme in various Ministries etc
- Yet, many corporates have shown a great deal of hesitation in making new investments, coming from the perception of investors that they see only lacklustre growth in the demand for their products.

- Whichever sector is experiencing an exogenous growth spurt (e.g., infrastructure and construction, software exports, segments of the manufacturing sector such as pharmaceuticals and auto parts) those whose incomes are directly affected constitute a small part of the overall labour force.
- Any possible transmission of growth impulse depends on how the thin layer of initial beneficiaries from the increased demand for their services spent their higher incomes.
- Do they spend them on goods and services produced by low-skilled and poor workers?
- When most of the growth accrues goes to a thin top layer of the population, the demand for an existing industry does not grow that much.

- When a software engineer experiences a substantial wage hike, she graduates from a two-wheeler to a car. But when her salary moves up further, she does not necessarily go out and buy another car. She would likely save much of the increase or probably plan a trip to Europe.
- Data from the Centre for Monitoring the Indian Economy’s (CMIE) consumer pyramids show that even after nearly two decades of relatively high growth in India, 60% of India's consumer expenditure is on food and energy.
- For the bottom half of the population, this proportion is 70%. The domestic market for goods and services beyond these essentials is still quite limited in India.
- Yet, the propensity to spend is higher, the poorer you are

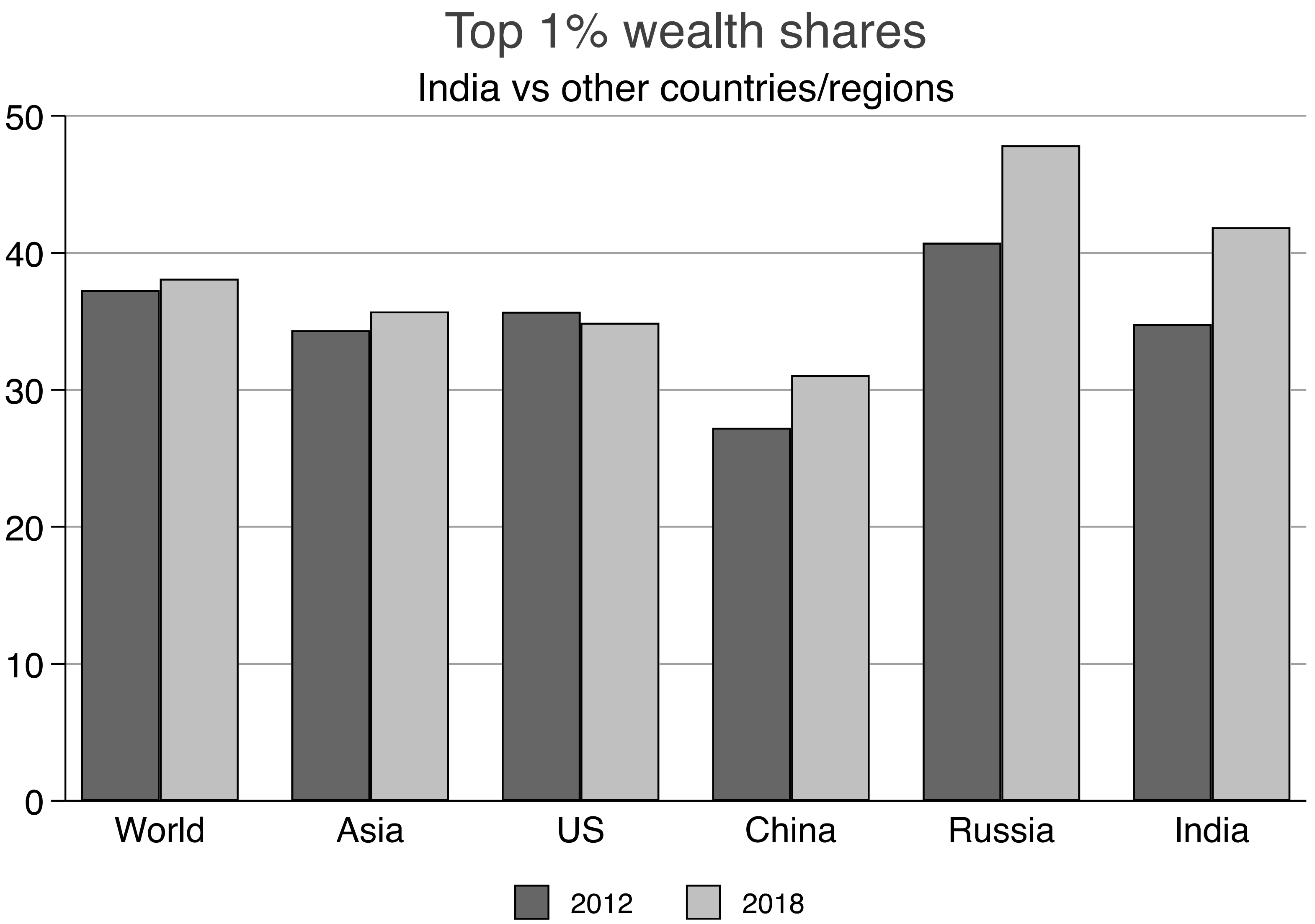
- The richer a household, the higher its savings rate, so when incomes grow for a higher rather than a lower income household, a significant part goes toward savings rather than consumption demand.
- Expenditure elasticities for the richer consumers (the top two urban deciles) are lower than for the bottom 50% of rural consumers for all goods and services, other than appliances and EMIs, recreation, restaurants, bills and rent, and education.
- These items clearly have a greater value added by skilled workers and are typically produced in the organized sector.
- The bottom five rural deciles have far greater expenditure elasticities on all foods, clothing, intoxicants, cosmetics, transport, communications, health, and miscellaneous items.
- So, why aren't they spending more?

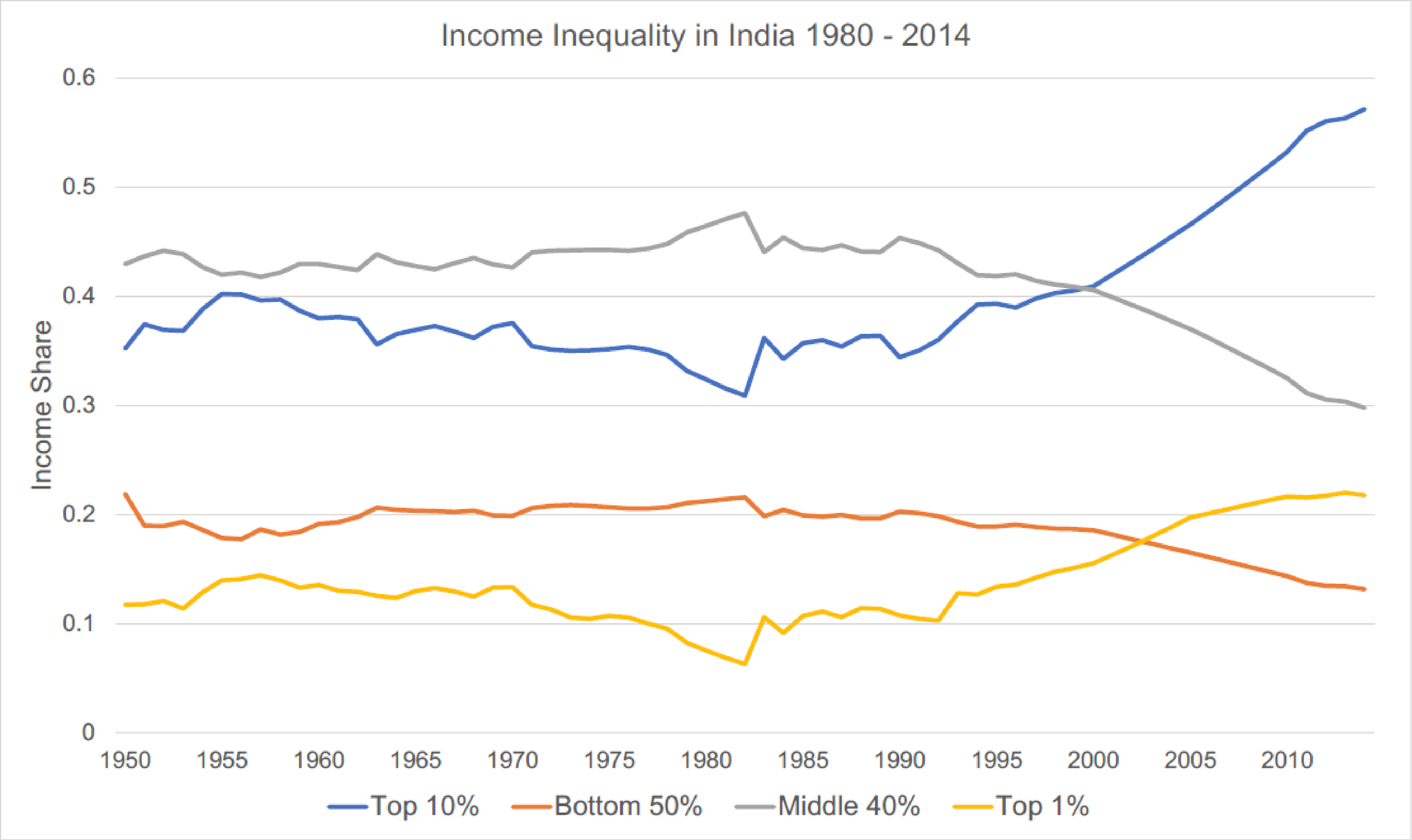
2. Growing Apart? Growth of inequality and inequality of growth



India: Wealth concentration since the 1990s
% share of personal wealth
0
10
20
30
40
50
1995
2000
2005
2010
2015
2020
year
Top 1% (WID)
Top 1% (Anand & Kumar)
Bottom 50% (WID)
Bottom 50% (Anand & Kumar)

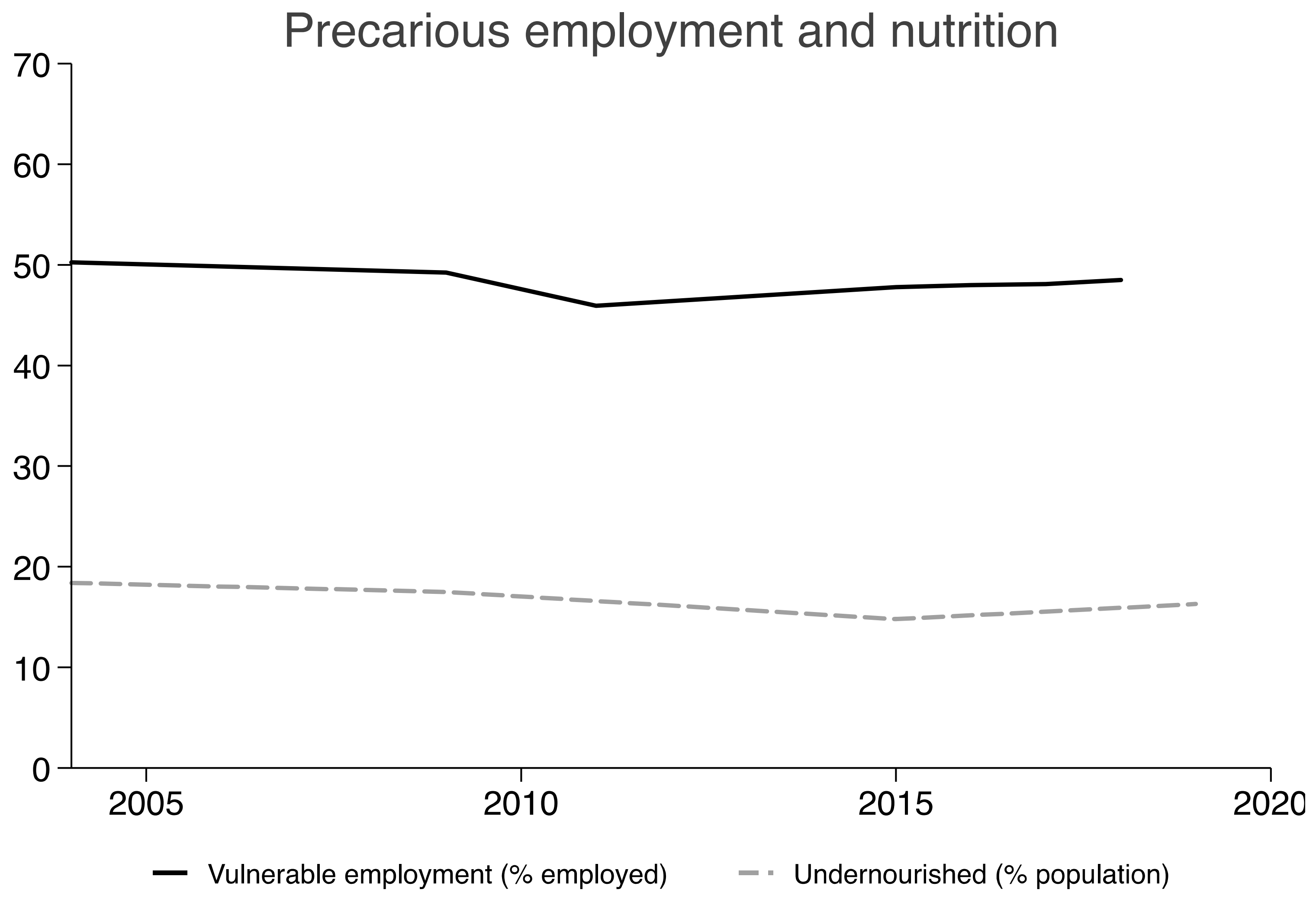
India vs the world





Income Inequality in India 1980 - 2014
0.6
0.5
0.4
0.3
0.2
0.1
0
Income Share
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
Top 10%
Bottom 50%
Middle 40%
Top 1%

How the other half lives: unchanged for two decades



When is growth inclusive?

- Any autonomous increases in incomes of the bottom five rural deciles would create subsequent spending cycles for goods produced by low-skilled and hence low-wage workers (those in the bottom five deciles) as well as for several goods and services produced in the organized sector. This will generate a bottom-up growth that would be sustained for a longer time.
- Growing income and demand elasticities for different goods implies the gradual transition from backward sectors to the more advanced (high value-added or higher productivity) ones.
- The induced changes of factor demands for capital and labour affect how much income agents with different degrees of capital ownership or skills will obtain.

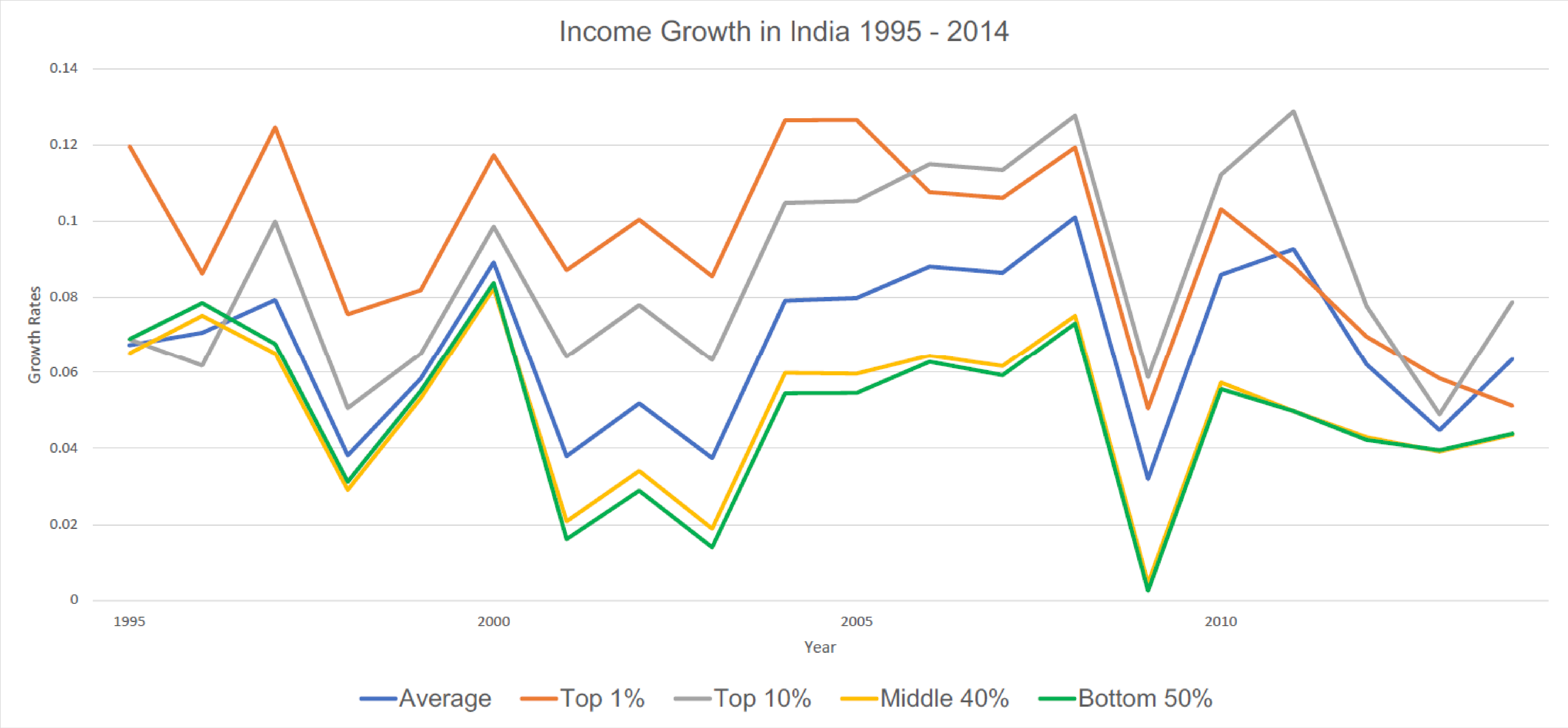
- Income distribution drives demand pattern, that affects induced demand for factors of production, which drives income distribution
- The interplay of these two forces could lead to segregation of the economy in terms of income/wealth with limited trickle down or up

Growing apart?

- Suggestive evidence (Kaul, 2023) that growth sectors in manufacturing and services seem to be luxury items as opposed to mass consumption goods (two-wheelers, small entry-level cars, train travel as opposed to air travel, Fast moving consumer goods –- everyday use items from toothpaste to soap -- especially in rural areas)
- FMCG market volumes have been declining for almost a year and a half, rural market volume is still declining - rural India has been cutting down on the consumption of products of everyday use
- Number of households demanding work under MGNREGS is still greater than in the pre-pandemic years suggesting that the financial state of the rural poor is not really great.
- Coupled with the stagnant labour market picture, real possibility that the engine of growth has gotten disconnected with the compartments where the vast majority of the population belong.

With Linchuan Xu, I propose a simple methodology to calculate specific growth rates for different income groups.

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


Income Growth in India 1995 - 2014
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Growth Rates
1995
2000
2005
2010
Year
Average
Top 1%
Top 10%
Middle 40%
Bottom 50%

- In most of the time periods (especially during 1995 - 2005), Top 1% experienced the highest growth rates compared to other groups.

- An ever-increasing gap between the top income group with the rest of the population.

- Bottom 50% and the middle 40% witnessed very similar growth rates.

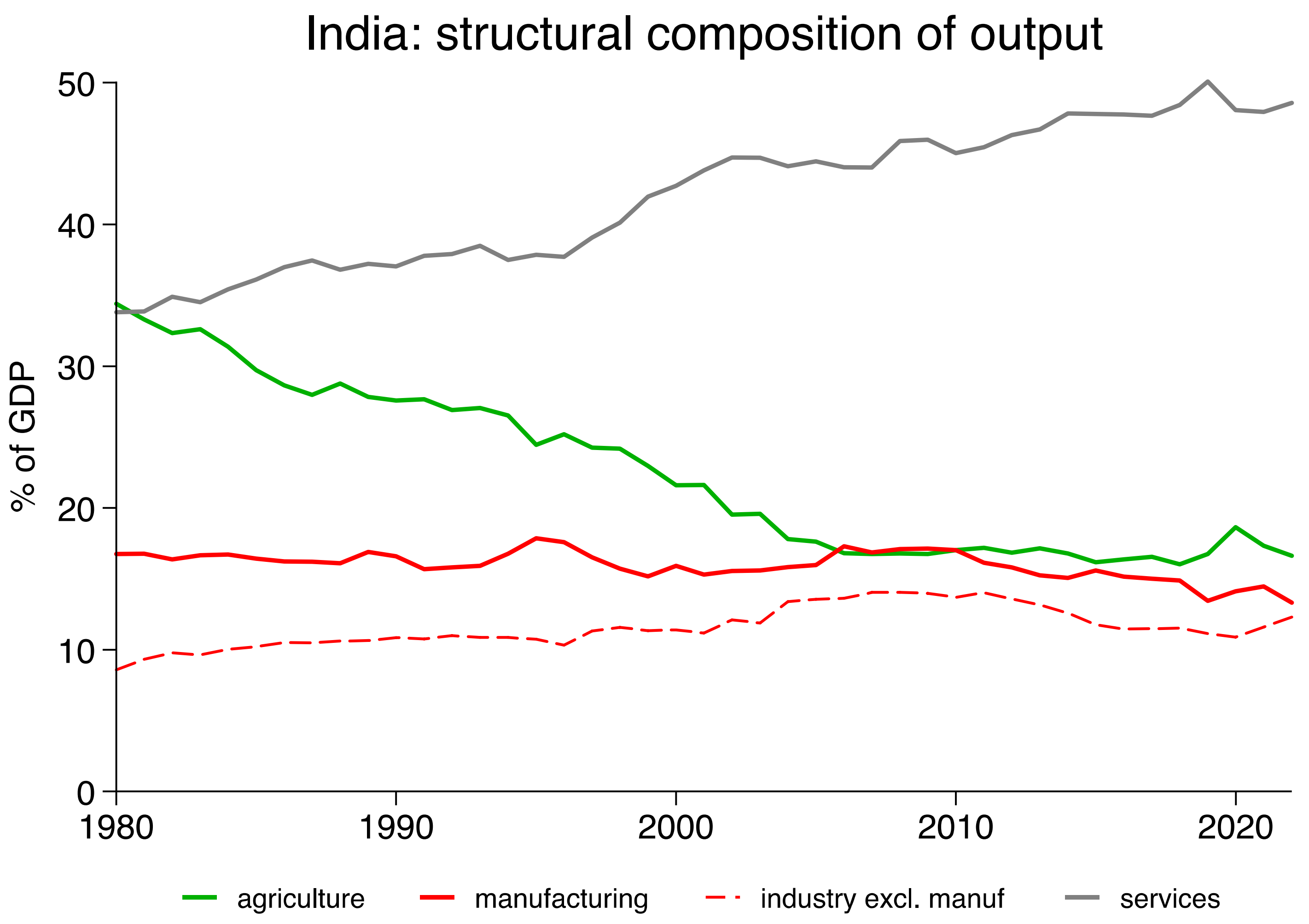
- The relative performance of the bottom 90% has not changed much.

- So, what’s happening to poverty?

3. Understanding trends in poverty over the last decade in the absence of data

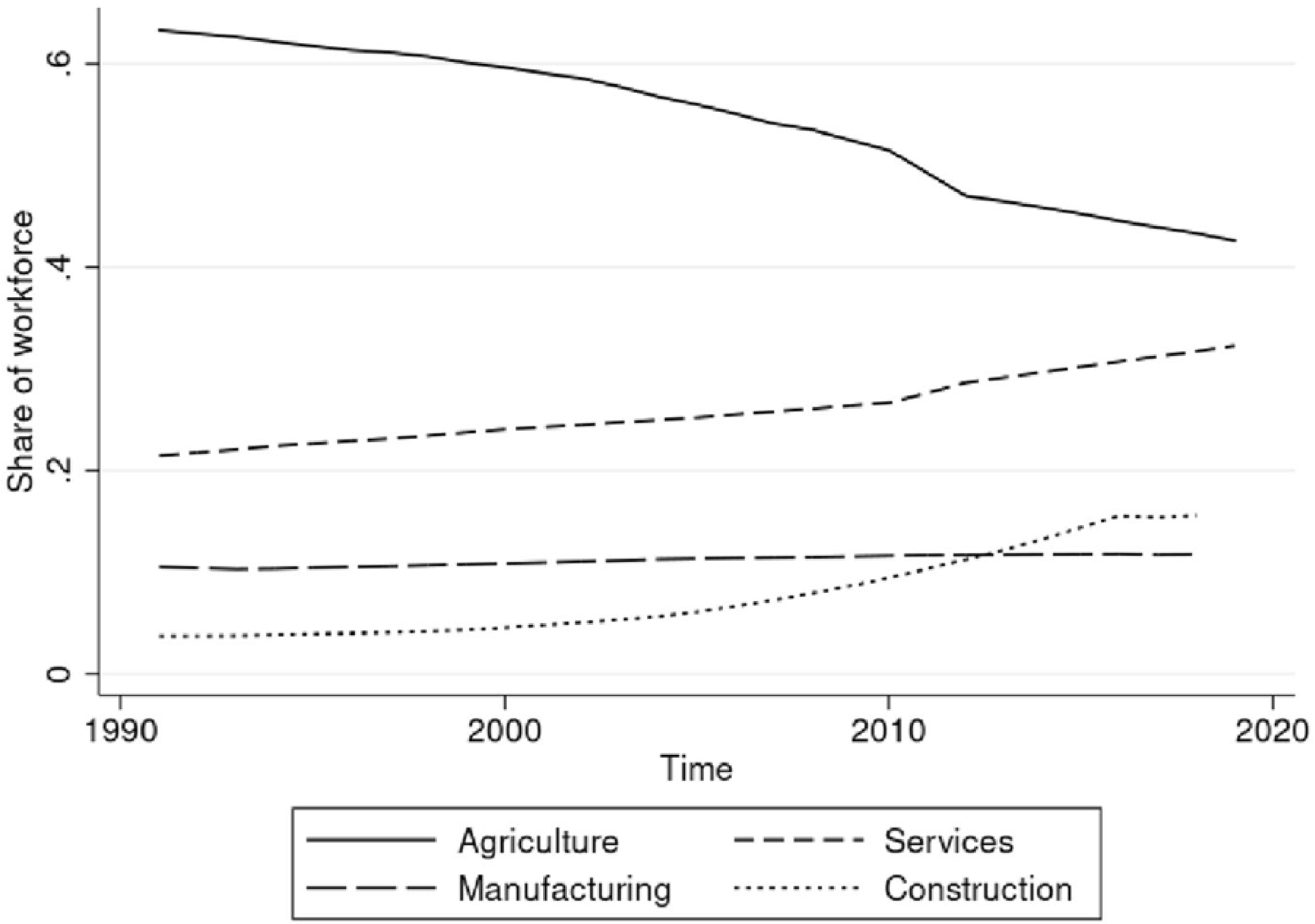
Structural transformation in India has been stable for over a decade as the figures suggest below, which raises the question – if poverty did decline, how did that happen?

India's long term structural composition



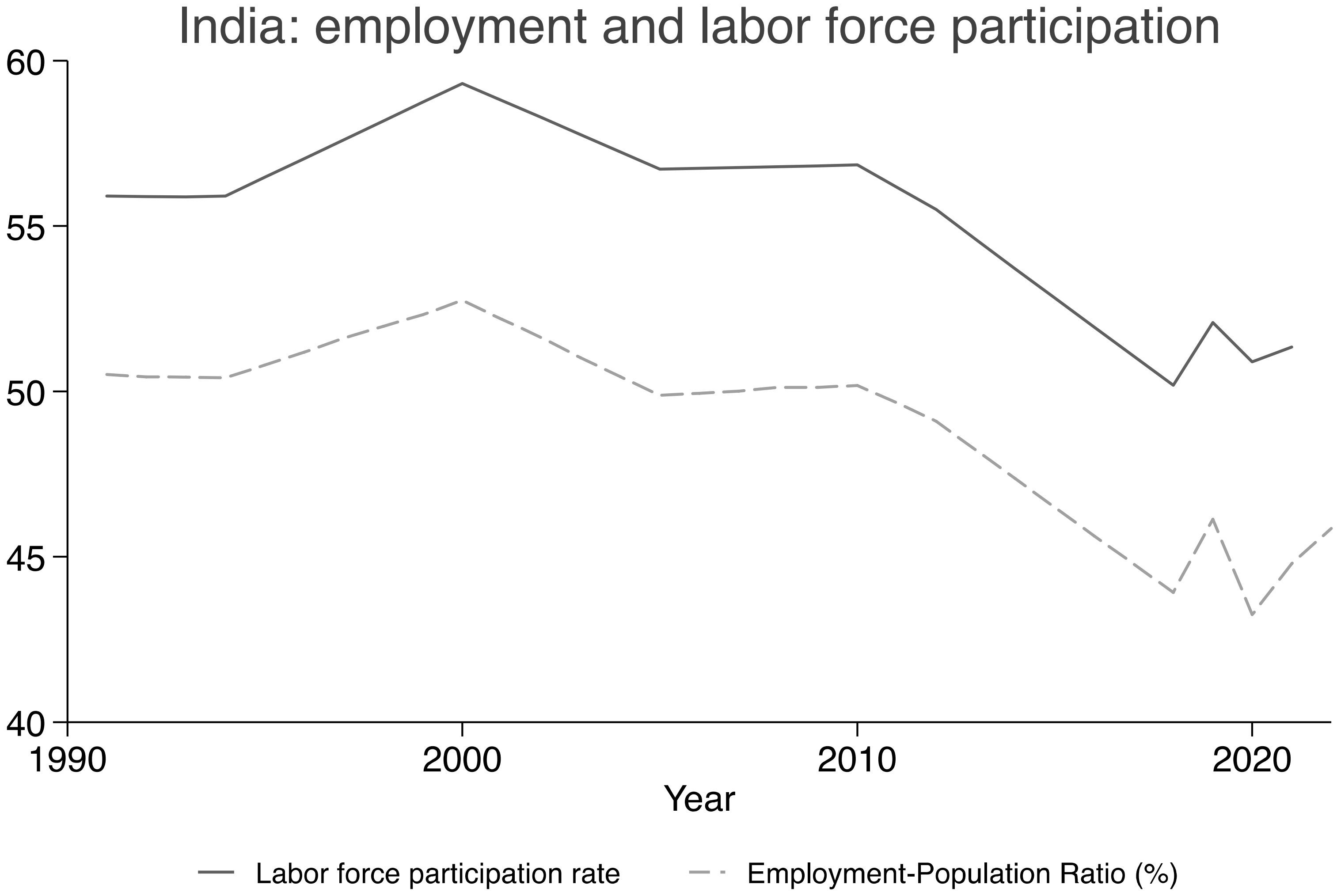
Source: World Development Indicators, World Bank

Employment composition in India



Source: Basole (2022, IJLE) from ILO STAT

India’s labour force in the long run



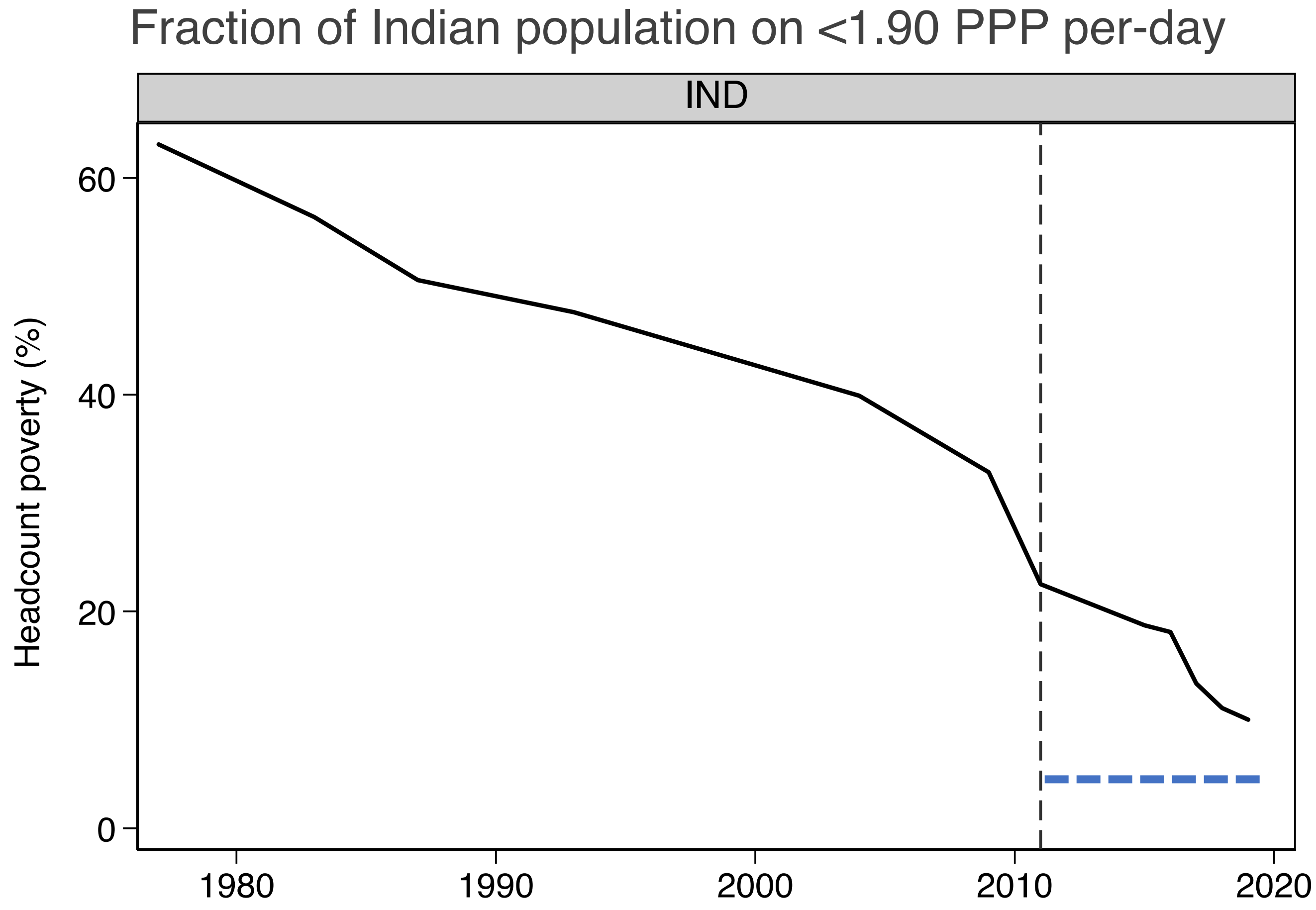
Source: ILO STAT

So, not a lot happening here that would suggest things are changing for the better for the bulk of the population

We turn now to poverty estimates

There is an optimistic narrative

- Recent working papers from the IMF as well as the World Bank suggest that there has been a sharp reduction in extreme poverty ($1.90 per person per day)
- The most optimistic scenarios argue that India removed over 100 million people from poverty between 2016-22.
- Note, in 2016, there were more poor Indians than in Nigeria, or Congo, and by 2022 this number fell to less than the population of Delhi-NCR.
- Due to the lack of Indian consumer expenditure data due to the government's unwillingness to publish it, Indian poverty has been largely 'eradicated' according to synthetic data.
- However, considerable scepticism remains



- This is India's poverty headcount acc to World Bank's new **Poverty & Inequality Platform**.
- Based on estimates by Sinha Roy and Van Der Weide (SRV) using CMIE's private CPHS dataset.
- It proposes that on the eve of the pandemic, just 1 in 10 Indians was living in extreme poverty
- These numbers are contentious, and in fact slightly higher than an even more optimistic case made by Bhalla et al (2022) in an IMF Working Paper (blue dashed line)
- Bhalla et al → by 2019, India nearly eliminated extreme poverty

Does growth eliminate poverty?

- The main **assumption** behind all these synthetic estimates is that growth reduces poverty
- But why does growth reduce poverty? Basic Lewis model: move surplus labour from traditional, low productivity employment to modern, high productivity activities.
- That is, unconditional growth *by itself* is not universally poverty reducing unless it includes structural transformation. In particular, if growth is driven by jobs and incomes in Delhi, Mumbai, Bangalore and Hyderabad, it is less likely to be poverty reducing.
- The assumption of unconditional structural change is woven into most synthetic estimates behind India's post-2011 poverty decline.
- On inspection, structural indicators suggest 2008-present growth (if legitimate) was not structurally transformative.

Two main measures of structural transformation

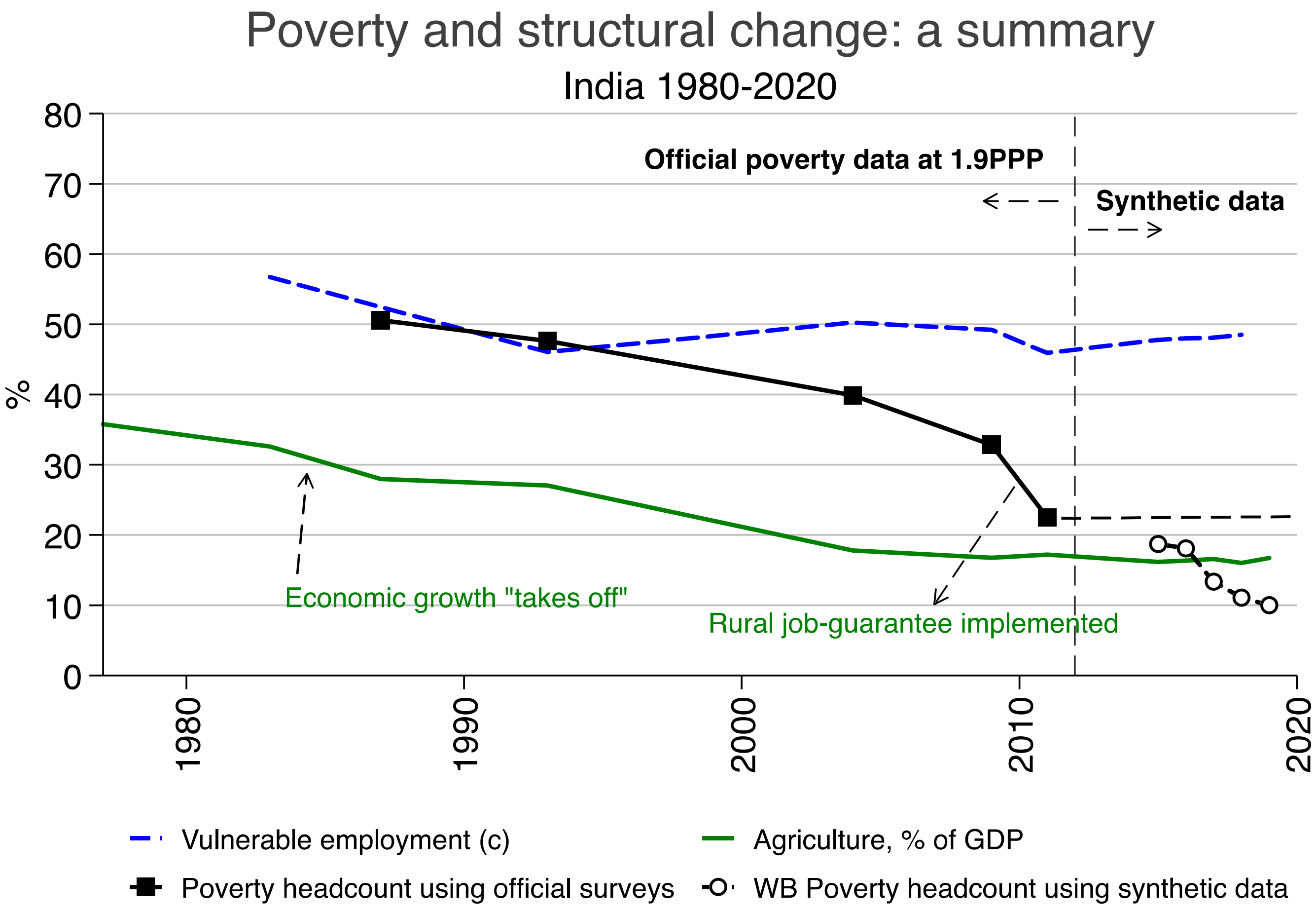
- In conventional models and cross-country data, the traditional sector in output is usually assumed to be agriculture.
- Economic growth → fall of agriculture % of GDP.
- A second, and more robust indicator is the structure of the labour market → self-employment (vs regular, salaried employment)
- The ILO produces a measure of "Vulnerable Employment".
- Self-employed workers, with the subcategories:
  (i) self-employed workers with employees (employers),
  (ii) self-employed workers without employees (own-account workers)
  (iii) members of producers' cooperatives and contributing family workers (also known as unpaid family workers).

VULNERABLE EMPLOYMENT

Why Vulnerable Employment?

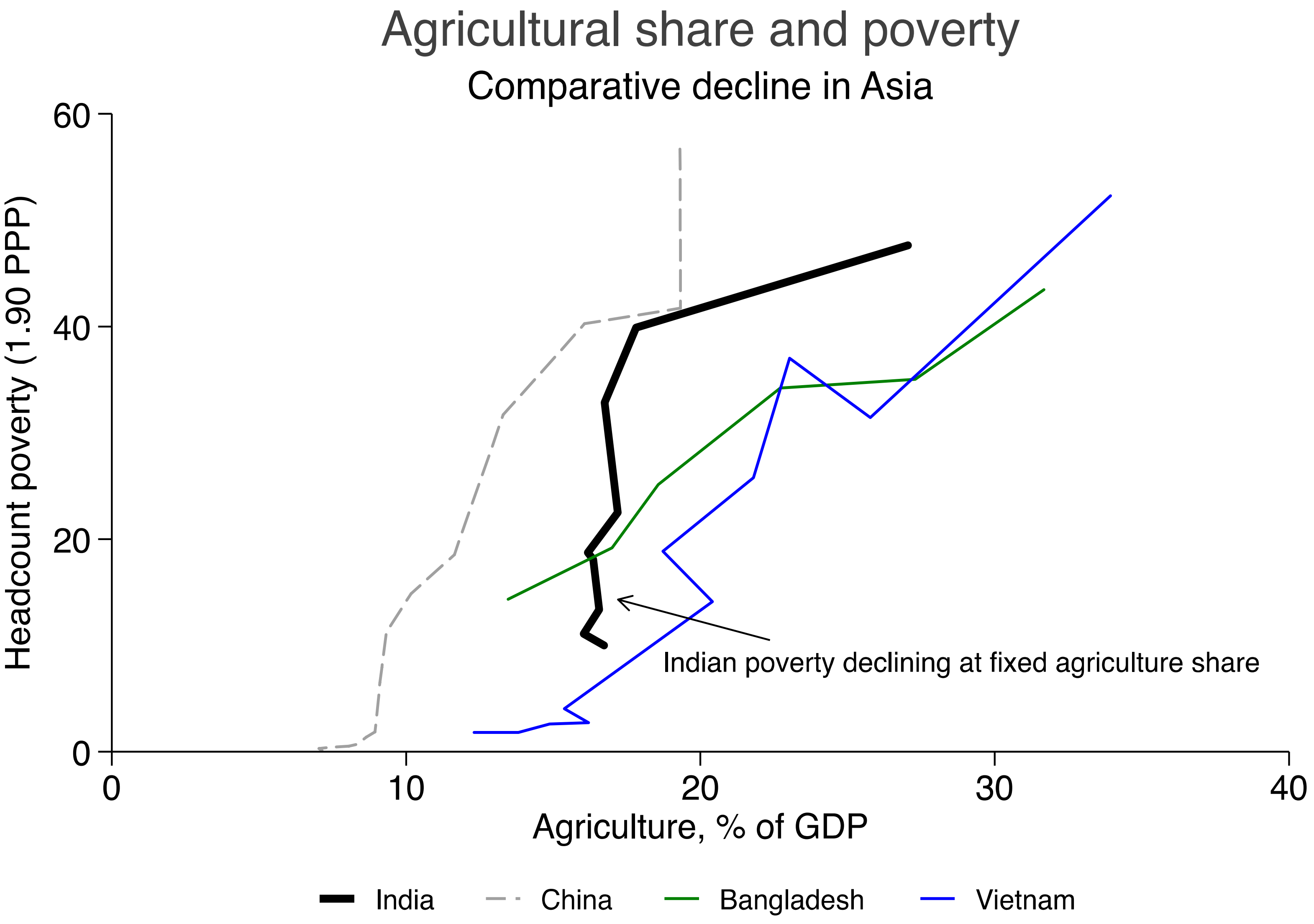
- ILO: *"A high proportion of contributing family workers — generally unpaid, although compensation might come indirectly in the form of family income — may indicate weak development, little job growth, and often a large rural economy. Each status group faces different economic risks, and contributing family workers and own-account workers are the most vulnerable - and therefore the most likely to fall into poverty. They are the least likely to have formal work arrangements, are the least likely to have social protection and safety nets to guard against economic shocks, and often are incapable of generating sufficient savings to offset these shocks…"*
- Vulnerable employment (%) is an excellent predictor of GDP per-capita. Poor countries tend to have >60% vulnerable employment while less than 15% of the workforce is vulnerable in rich countries

Growth, structural change and poverty in India

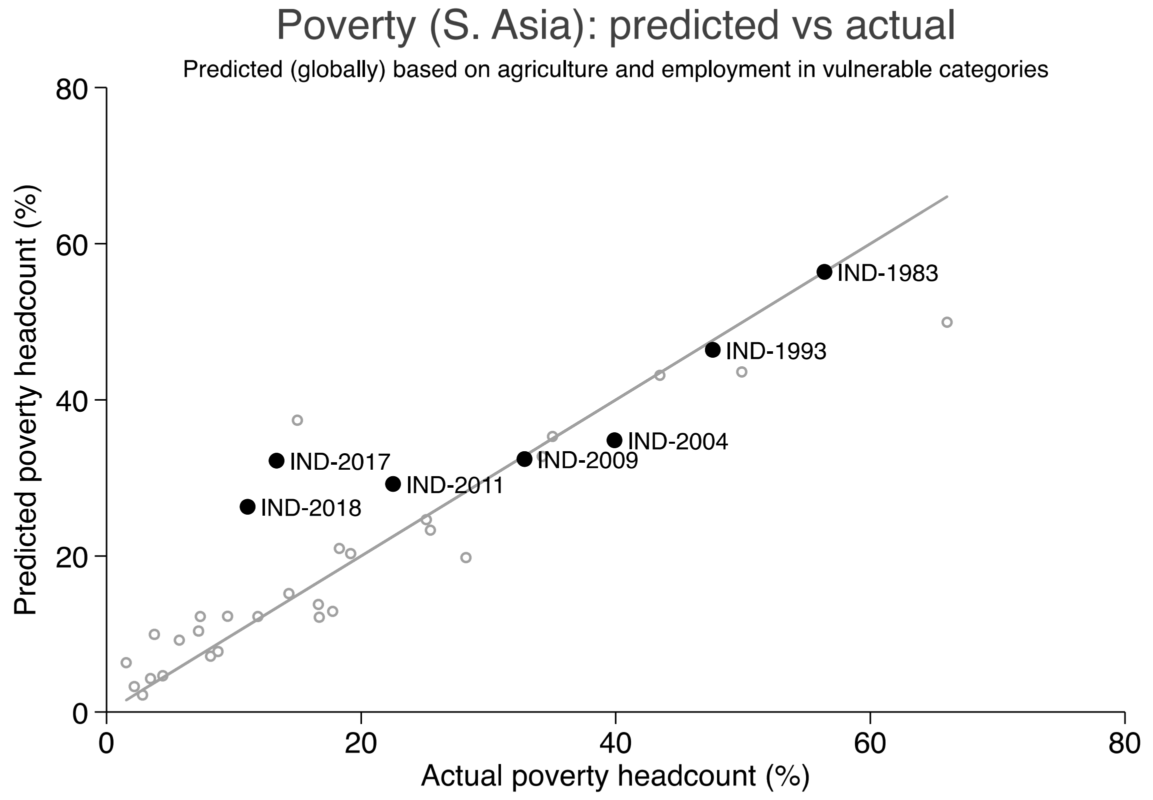


- Indian poverty has undoubtedly reduced at the 1.90 PPP line in the long run.
- Most historic poverty in India has fallen either with agriculture or vulnerable employment.
- That is, either people are getting out of vulnerable employment or agricultural dependency is falling
- Post 2011 period poverty decline is mysterious – no change in structural change (employment, GDP)

On a cross-country basis, Indian poverty appears to fall at a stable share of agriculture over 1980-2021



Predicted poverty using structural change

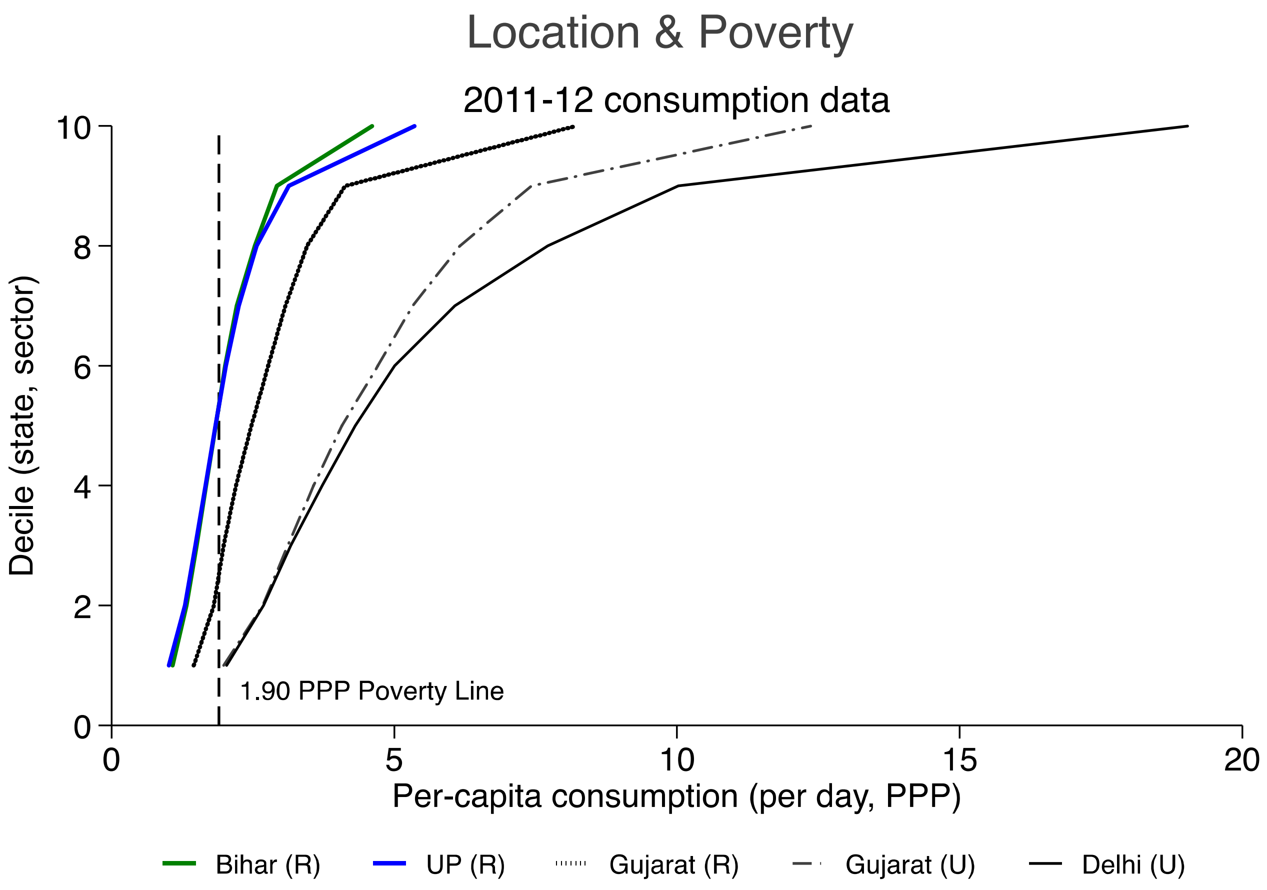


- We tried to predict the Indian poverty headcount, using both indicators.
- These predictions use the World Bank's entire PIP database, estimating: $headcount_{i\,t} = f(agriculture_{i\,t}, vulnerable_{i\,t})$ with country and year fixed effects
- As these predictions show, actual headcounts fall right on the predicted line upto 2009 and then begin to deviate starting in 2011.

So, the claim that poverty in India declined significantly over the last decade leaves sufficient grounds for scepticism

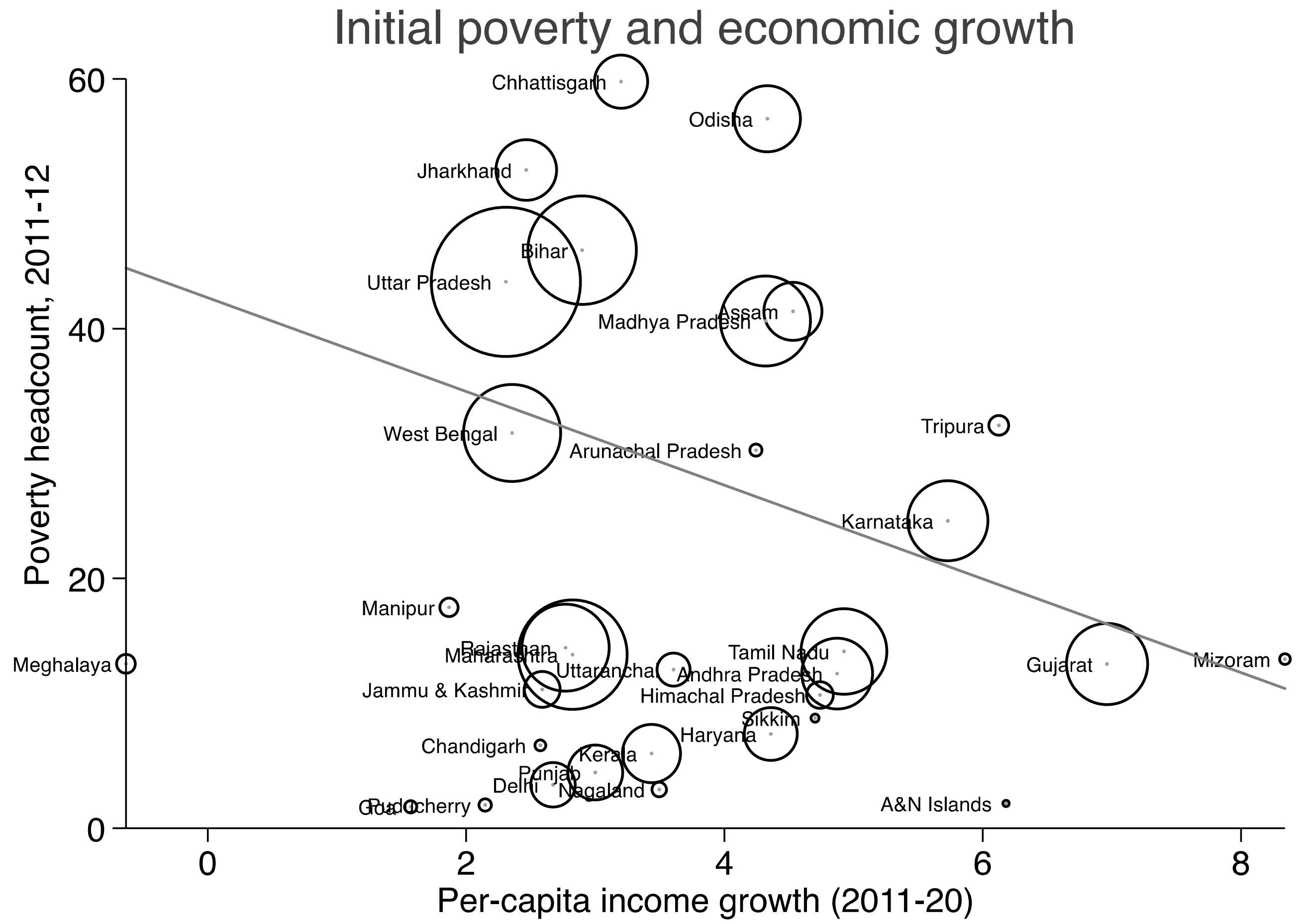
We now turn to a within India perspective on poverty

The residents of India's poorest 2 states were typically in poverty in 2011-12



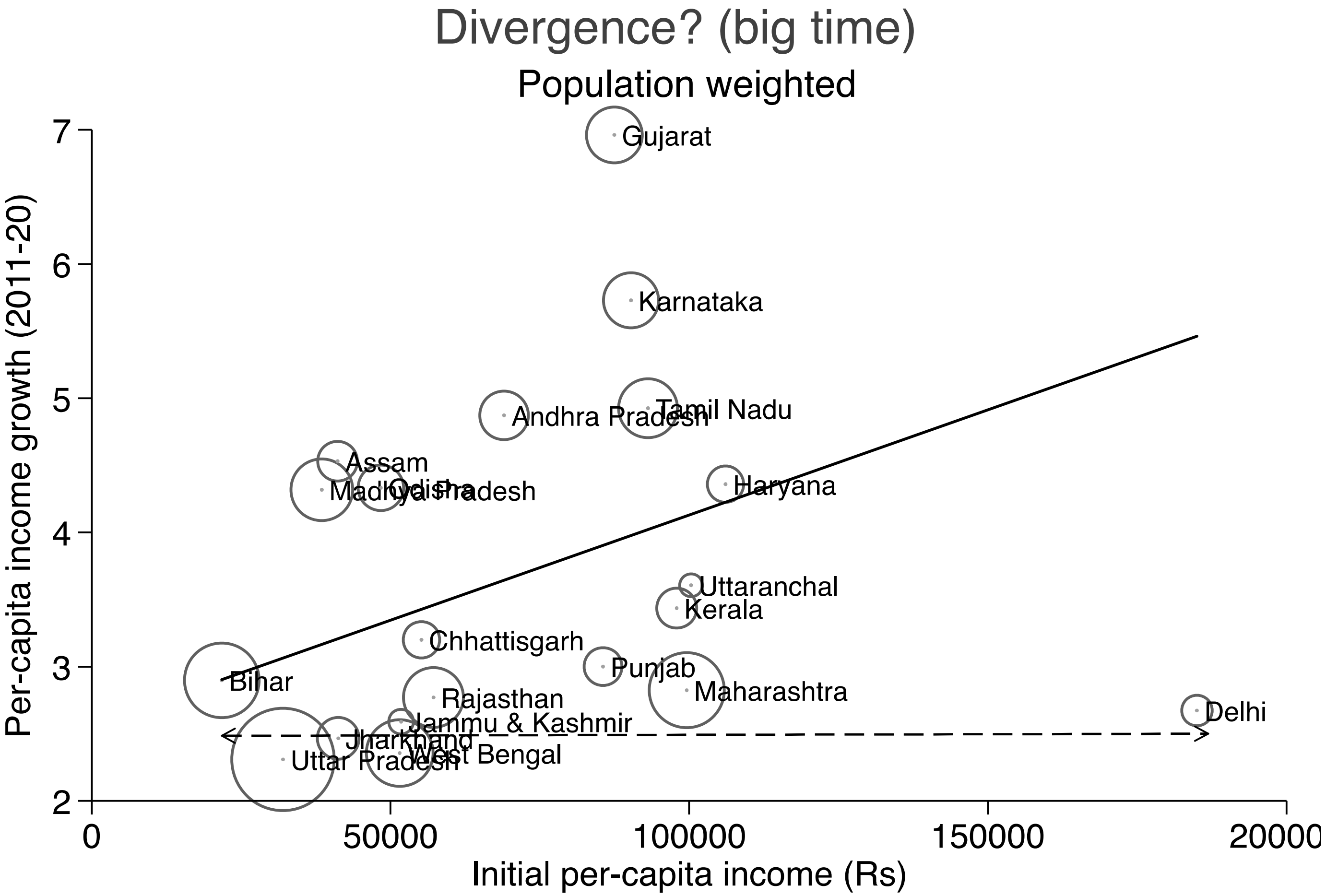
- In 2011-12, almost the entirety of urban Delhi was out of extreme poverty.
- Meanwhile, half of rural UP & Bihar were in poverty.
- It is better to be poor in urban Delhi than rich in rural Bihar.
- The richest decile in rural UP & Bihar are closer to poverty than their equivalent decile in urban Delhi
- Gujarat is an example of a relatively rich state but with around 20% of its rural population in poverty
- Eliminating poverty in India essentially requires shifting this curve for states like UP and Bihar to the right
- That is, the poorest states should experience the most growth (convergence)

Growth in the poorest states has been low



- We find a negative relationship between poverty in 2011-12 and economic growth (per-capita) over the 2011-20 period
- The states with the highest poverty headcounts are also the most populous, but their growth rates lag the richest states
- In fact, only a few states experience India's much cherished 5-6% per-capita growth rates

The growth dynamic *within* India is divergence



Only states with >10mn population, trend weighted by population

- Between Indian states, economic growth is positively related to initial per-capita income
- The vast majority of Indians live in states which experienced < 3% per-capita income growth
- Bihar-Delhi p.c. income
  12% in 2011-12
  12% in 2020-21
- UP, WB, J&K, Jharkhand are basically at “Hindu rate of growth”
- The gap between the richest and poorest states of India is equal to the gap between HIC and LIC

Finally, I will present new estimates of poverty that we calculated using cross-survey matching and projection from consumption and employment surveys

The problem of extending poverty headcount estimates

- India’s last consumption survey (used to measure poverty) was in 2011-12. (a new survey is in the field)
- The NSO Consumer Expenditure Survey is a comprehensive and nationally representative survey which uses NSO’s stratification parameters to construct detailed household consumption estimates.
- The alternative (CMIE CPHS) is a new private sector survey which fills the gap, but researchers (see Dreze-Somanchi 2021) have argued that its sampling approach biases it towards the rich.
  “.. CPHS under-represents women and young children, over- represents well-educated households and under-represents the poor…” (Somanchi, 2021)

PLFS as an alternative?

- Since 2017/18, the NSO has been publishing a Periodic Labour Force Survey (PLFS) to gauge the labour market.
- This is a nationally representative survey focused on the labour market but samples households and details every household member whether working, underage, or retired.
- It also has a measure of consumption but without adequate detail (interestingly, poverty headcounts by this measure are over 23-24% in 2017/18).
- We draw on this dataset due to its representativeness.
- However, we construct a new measure of consumption, separate from the numbers listed on PLFS
- Our main strategy: the poor work (do not have capital income). Hence wages will give us a picture of **growth and distribution** of living standards.

Overcoming data limitations using nationally representative surveys

SURVEY	Details	2011-12	2017-18	2018-19
Consumer Expenditure Survey (NSO)	*Nationally representative?*	Yes	Yes	NA
	Detailed Consumption Profile?	Yes	Yes	NA
	Status	Published	Redacted	NA
Employment Survey (NSO)	*Nationally representative?*	Yes	NA	NA
	Detailed Consumption Profile?	Yes	NA	NA
	Status	Published	NA	NA
CMIE CPHS (private)	*Nationally representative?*	NA	No	No
	Detailed Consumption Profile?	NA	Yes	Yes
	Status	NA	Published	Published
PLFS (NSO)	*Nationally representative?*	NA	Yes	Yes
	Detailed Consumption Profile?	NA	No	No
	Status	NA	Published	Published

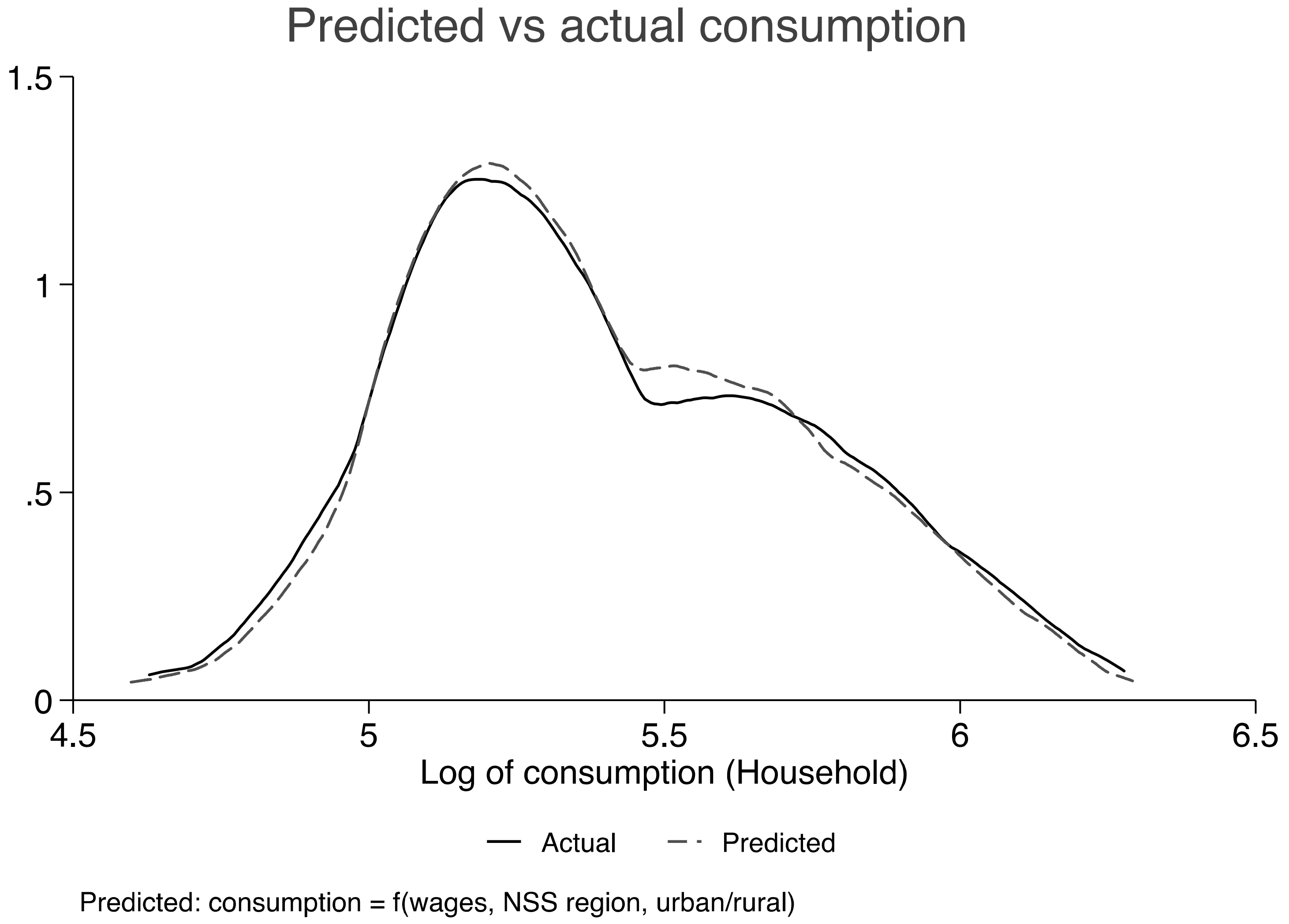
Imputation and estimation strategy

- 2011-12 has two concurrent nationally representative datasets - NSO **CES** AND **EUS** (shelved for PLFS)
- Match across both datasets to estimate wage-consumption profiles
- We fill the gap left by 2017-18 Consumption Survey redaction using the fact that PLFS datasets are nationally representative of Indian households
- Compared to Bhalla et al, we capture both **growth** in living standards (wages) without NAS imputations (Minhas-Deaton), as well as **distribution** across and within states/sectors.
- Compared to World Bank, we **do not use private CMIE data**, thus bypassing Dreze-Somanchi critique of national representation.

Empirical strategy I: deriving wage-consumption profiles

- For 2011-12, we have 2 nationally representative surveys
  - NSO Consumption Expenditure
  - NSO Employment Unemployment (*no wage info on self-employed*)
- We use socio-economic profile of each household
- We estimate wages of self-employed using Mincer Equations with location (**State Region-Sector-Industry**) fixed effects (Young, 1995)
- We match location-based household averages across both surveys
- <u>Estimate:</u>
  Household consumption = f(Household wages) with location dummies to capture regional variation.

Our model captures bi-modal consumption distribution (uniform recall period) in 2011-12



Empirical strategy II: projecting wage-consumption profiles from 2011 to 2017-19

- We use PLFS coverage of Indian households to estimate household wages for 2017/18 and 2018/19 (more years in process)
- For each household i, we estimate a total household wage w_i
- Predict consumption of household i using 2011-12 wage-consumption profile for **state-region-sector** combination.
- Use household size to estimate per-capita consumption expenditure
- Estimate individuals below 1.90 PPP using PPP conversion factor for private consumption (from World Bank)

Headcount poverty in India according to multiple estimates					
	Bhalla et al	**World Bank**	**WB/Sinha Roy et al**	**Our estimates**	**Mint (Bhattacharya et al)**
Poverty line	*1.90 PPP*	*1.90 PPP*	*1.90 PPP*	*1.90 PPP*	*Tendulkar Line*
Source	NAS growth	NSSO CES	CMIE CPHS	NSSO CES-EUS-PLFS	'Leaked' NSSO report
2011-12	21.8	22.5			21.9
2012-13	20.1				
2013-14	17.7				
2014-15	14.6				
2015-16	12		18.7		
2016-17	8.9		18.1		
2017-18	7.1		13.4	$\boxed{\textbf{19.6}}$	22.8
2018-19	4.9		11.1	$\boxed{\textbf{16.8}}$	
2019-20	3.4		10.0	Ongoing	
2020-21	6.1			Ongoing	

Summing Up

- One has to keep in mind that extreme poverty line is very conservative and so even if 1 out of 5 Indians live in extreme poverty, that does not mean others are doing well

- Growth is undoubtedly important, if nothing for its instrumental value in terms of raising living standards of all but being an “average” measure, it is at a best an incomplete or partial measure, at worst a misleading one

Summing Up

- The fact that growth has not translated in significant decline in poverty or structural transformation over the last decade is a matter of concern not just for considerations of equity but the sustainability of the growth path.

- There are times and contexts where the equity-efficiency trade-off is a real one, but then there are others where there may not be

- Challenge to economists and policy makers is to abandon the growth discourse which implicitly assumes an average or representative agent, and think in terms of growth of individuals in different income and wealth classes