

West Bengal's Relative Economic Trajectory

A Long-run Perspective

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West Bengal's economy is often described as one in steep decline. Using state-level data from 1961 to 2024, this paper shows that this depends on how performance is measured: nominal per capita net state domestic product fell relative to the rest of India, but this disappears after accounting for state-specific inflation, with real per capita NSDP matching the national average. Agriculture strengthened from the 1980s, helping it grow faster than the country from the mid-1990s to mid-2000s, while manufacturing underperformed, only partly offset by faster services growth. This is reflected in consumption and poverty: real rural per capita consumption stayed above the national average and grew faster, while urban areas were comparable until the early 2010s, then fell behind. Overall poverty stayed below the national average since the early 1990s: the rural rate fell in step from a lower base, while the urban rate, also slightly below it until the early 2010s, has since risen above. These trends hold across all political regimes, pointing to structural rather than government-specific constraints.

Discussions around West Bengal's long-run economic trajectory are shaped by a dominant narrative of steep, prolonged decline since independence—a once-prosperous industrial and commercial hub now reduced to a stagnant provincial state.¹ The causes cited are many: unfavourable Union government policies such as the freight price equalisation policy that shifted industry's centre of gravity to the western states, misguided policies of successive state governments, lack of an entrepreneurial culture, and historical shocks such as the massive inflow of refugees due to partition and its aftermath.

The assessment of economic performance necessitates both a cross-state and an across-time comparison. India today is far richer, more urban, and more unequal across states than it was in 1961 and the regional disparities have become much more pronounced in the post-liberalisation period due to a rise in overall growth rates. A state can be growing—its growth rate can even be rising over time—and yet appears to be declining if other states are doing better. To put it in terms of a familiar analogy: in a race, an athlete can be running fast and even accelerating, yet fall behind if others run faster or come from behind and overtake her. What matters is relative performance, and that requires a benchmark. Hence, we need to compare West Bengal's growth rate in per capita income with that of the rest of India.

Careful measurement of per capita income is also necessary. We take per capita net state domestic product (NSDP) as a measure of per capita income in a state. Moreover, in assessing changes in NSDP per capita over time, we need to adjust for inflation by using a price deflator to convert nominal NSDP per capita to real NSDP per capita. This adjustment matters only if inflation rates differ across states: were aggregate inflation the same everywhere, nominal and real NSDP would grow in step and nominal comparisons would suffice. Two distinct forces can drive such a differential. The first is a within-sector channel: West Bengal's prices may have risen more slowly than other states' within the same sectors. The second is compositional: even if sector-by-sector inflation rates were identical across states, West Bengal's different pattern of structural transformation—a larger and rising weight on agriculture, the sector whose relative price fell economy-wide, and a smaller weight on manufacturing and services—would by itself lower its aggregate deflator relative to the rest of India. In the paper, we examine both channels, inflation and the structural composition of output, and they turn out to be complementary rather than competing.

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A central finding of this paper is that adjustment for cross-state differences in inflation rates matters greatly in assessing West Bengal's relative performance. Compared to the rest of India, West Bengal's nominal per capita NSDP grew more slowly, by 0.89 percentage points per year, over 1961–2024; adjusting for relative inflation, this gap shrinks to 0.08 points. A panel regression controlling for state and year effects gives the same picture more precisely: West Bengal's growth rate is lower by a statistically significant 0.79 percentage points in nominal terms, but the gap disappears and becomes insignificant in real terms. Hence, the dominant narrative of persistent decline in West Bengal compared to the rest of the country is invalid once one controls for changes in purchasing power differences.

In inflation-adjusted terms, per capita income in West Bengal, therefore, grew at approximately the same rate as the rest of India. This is the first main finding of the paper. Thereafter, we show that this, on par with average performance, conceals important differences with specific groups of states ordered by their relative performance. We compare West Bengal's trajectory against two other benchmarks: the states which have consistently been at the top of the list of states, which we call the high-ranked Indian (HI) states and the states which have consistently been at the bottom, which we call the low-ranked Indian (LI) states.² Among the major states in terms of population, both in terms of real and nominal per capita income rankings, Gujarat, Haryana, and Maharashtra have been consistently in the top five across a major part of the last seven decades and constitute the HI group, while Bihar, Uttar Pradesh (UP), and Madhya Pradesh (MP) have been consistently in the bottom five and form the LI group, with regard to NSDP per capita. For the interstate comparison, we conduct our analysis on 18 major states and the union territory of Delhi. The choice is driven purely by data availability reasons. Specifically, we pick those states or union territories for which we have continuous NSDP data from 1961 onwards. We use long time series of NSDP per capita and its sectoral composition, covering the period since the early 1960s.³

Compared to the HI group, West Bengal's real NSDP per capita grew more slowly by 0.72 percentage points annually over the 1961–24 period, which was statistically significant at the 1% level. This was reversed when we compare it to the LI group: West Bengal's growth rate was higher by 1.02 percentage points. Hence, the choice of comparison group matters a lot: compared to the HI states, West Bengal lagged behind, but it outstripped the trailing states. Its performance ended up squarely in the middle. Consequently, the relative rank of the state (using real NSDP per capita) remained almost the same in 2024 as in the early 1960s.

Breaking down the state domestic product into the performance of different sectors provides additional insights. Owing to the problems of comparing gross domestic product (GDP) data before and after 2014 due to changes in the national income accounting systems and the unavailability of continuous sub-sectoral data for all states before 1969, we limit the analysis of sectoral performance to the 1969–2014 period, even though for the aggregate per capita NSDP analysis, we are able to look

at a longer time horizon, namely 1961–2024. During this period, compared to the rest of India, West Bengal's growth rate of real output in the primary sector was higher by 0.97 percentage points. It was also higher in the tertiary sector by 0.3 percentage points. The secondary sector, by contrast, grew more slowly—by 0.76 percentage points—enough to drag down the growth rate of the non-agricultural sector relative to the rest of India. In other words, West Bengal's agricultural performance outstripped the rest of the country but fell behind with respect to structural transformation—the transition out of agriculture, which is typically an important part of the process of economic development.

These contrasting sectoral growth patterns offer a plausible explanation for why inflation in West Bengal diverged from the rest of India. Faster agricultural growth, combined with a weaker expansion of food demand from the non-agricultural economy—largely because of manufacturing's underperformance and only partly, and relatively late, offset by services—contributed to a relative fall in food prices and, in turn, to a lower rural cost of living. By contrast, the cost of living in urban areas remained roughly unchanged relative to other states despite the slower growth of industrial output. This is consistent with the wider literature on Indian inflation dynamics, which finds that agricultural prices respond more flexibly to demand and supply conditions than industrial prices (Balakrishnan and Parameswaran 2025; Ball et al 2016). We do not test this mechanism directly for West Bengal but provide suggestive evidence. Taken together, these price movements raised West Bengal's relative purchasing power and helped offset its relative decline in nominal NSDP per capita.

We subsequently find (using National Sample Survey [NSS] estimates) that these results for per capita output growth rates are mirrored in growth rates of per capita consumption between 1983 and 2024. Once we adjust for differences in inflation rates, per capita consumption grew faster in West Bengal compared to other Indian states in rural areas, slower in urban areas, and approximately the same rate when the two sectors are combined. Along with consumption, the poverty headcount ratio (HCR) has fallen in line with the rest of the country in rural West Bengal since 1994, whereas in urban areas it has fallen more slowly (especially over the past decade), resulting in a slightly lower rate of reduction for the two sectors combined.

This paper makes several contributions. The first is methodological. No consistent long-run series of real per capita NSDP by state exists in a readily accessible form: the Ministry of Statistics and Programme Implementation (MOSPI) publishes real state NSDP for different base years, which makes it impossible to read a consistent real series directly from the published data. We first construct real state-level NSDP by splicing across the base years. This implicitly applies a common deflator for all sectoral data, but for our sectoral analysis, we allow the inter-sectoral prices to differ: we splice across specific subsectors before aggregating. This procedure also implies that the choice of the base year matters for interstate comparisons. These issues are discussed in further detail in the Appendix (p 47). Because the state accounts value output at

basic (producer) prices, we deflate using the producer-price deflators implicit in those accounts rather than a consumer price index; we explain this choice later.

The importance of these data adjustments is highlighted by our second main contribution: the finding that real and nominal trends in West Bengal's relative growth throw up very different pictures. This has not been established in the existing literature, precisely because it requires a reliable real series to document. We argue that the nominal-real divergence that is central to our results is not just an accounting artefact—it reflects deep structural features of West Bengal's economy, specifically the interaction between agricultural productivity growth, deindustrialisation, and the resulting decline of agricultural prices relative to the national average and the shifting sectoral composition of output.

The goal of this paper has been to establish stylised facts, not to adjudicate between competing causal explanations. Settling the facts is a necessary first step to explaining the underlying mechanisms or reasons, a task we hope we and others will address in future research.

A small literature has examined Indian states' relative economic trajectories using interstate comparisons. Ahluwalia (2000) documented the sharp divergence in per capita state domestic product growth rates across major Indian states in the post-reform period, establishing the empirical benchmark against which subsequent assessments of individual states have been measured. Within this literature, Ghatak and Roy (2014) applied a difference-in-differences framework to evaluate state-level economic performance in India—comparing a state's growth trajectory relative to the rest of the country before and after a policy or regime change. This paper uses a similar methodological approach. An earlier sectoral assessment of West Bengal's economy by Banerjee et al (2002), which reviewed the state's industrial decline and agricultural success as of the early 2000s, provides a useful benchmark for the longer-run picture we document here. Kapur and Subramanian (2025), in their comprehensive account of Indian state-level development, characterise West Bengal as a case of “reversal of fortune,” documenting its per capita GDP falling from 127% of the national average in 1960 to 76% by 2020 and attributing this to ideology-driven governance failures. A similar picture emerges from Lahiri (2026), whose ranking of Indian states by per capita NSDP over 1980–81 to 2023–24 places West Bengal among the slowest growers. A recent contribution from the Economic Advisory Council to the Prime Minister (Sanyal and Arora 2024) documents the same pattern, reporting West Bengal's relative per capita income falling from 127.5% of the national average in 1960–61 to 83.7% in 2023–24. However, it measures relative performance in current prices and therefore captures the nominal decline with respect to the national average. Our analysis underlines that the evaluation of relative performance in productive capacity needs to account for relative price differences across states and not just the difference in the nominal value of output. We find that once state-specific inflation rates are taken into account, West Bengal's real per capita NSDP grew at approximately the same pace as

the rest of India over 1961–2024. The nominal underperformance is largely a price-level story driven by falling agricultural prices, rather than a story of real output decline. There is genuine underperformance: the gap with the best-performing states is real and persistent, and manufacturing underperformed over the full period, with the relative decline concentrated in the earlier decades. But conflating a price phenomenon with a real output story, as the existing literature has done, requires a consistent long-run real series to correct—and constructing that series is the methodological foundation of this paper.

The paper is organised as follows. The first few sections focus on comparisons of per capita output and growth between West Bengal and other states. We then discuss the main facts pertaining to comparisons of NSDP per capita, followed by the role of sectoral price deflators and relative prices between agriculture and other sectors. Changes in sectoral composition of output are analysed, followed by a comparative appraisal of trends in per capita consumption and poverty (HCRs).

West Bengal's Relative NSDP Performance: Evidence

In this section, we present West Bengal's relative performance in terms of NSDP per capita among various reference groups, such as all-India (sum of 19 major states and union territories), rest of India⁴ (all-India excluding West Bengal), the HI and LI states, and looking at different measures, such as rank, ratios, log-linear growth rates, and a regression approach that estimates West Bengal's differential annual growth rate relative to the reference group. In all these exercises, the distinction between nominal and real income is central to interpreting West Bengal's long-run economic trajectory.

Decadal ranks: Table 1 shows West Bengal's decadal average rank among the 19 major states and union territories for nominal and real NSDP per capita. We calculate, for each state, its average NSDP in a decade (nominal and real) and then rank them for each decade. Among the 19 major states and union territories, West Bengal's nominal decadal average rank was sixth in the 1960s and remained there through the 1970s and 1980s, then fell sharply to 11th in the 1990s and 2000s, and further to 13th by 2021–24. States such as Rajasthan, Karnataka, and Tamil Nadu, which were behind West Bengal in the 1960s, are now comfortably ahead. As can be seen from Table 1, West Bengal was ranked sixth in nominal NSDP per capita in the 1960s.⁵ Although West Bengal was among the top-ranked states from the early to mid-1960s, its rank declined from 1966 onwards in line with the decadal averages reported in Table 1. On the face of it, this looks like a story of dramatic decline.

Table 1: West Bengal's Decadal Average Rank among 19 Major States and Union Territories

Series	1961–70	1971–80	1981–90	1991–2000	2001–10	2011–20	2021–24
Nominal NSDP PC	6	6	6	11	11	12	13
Real NSDP PC	12	17	16	15	11	11	11

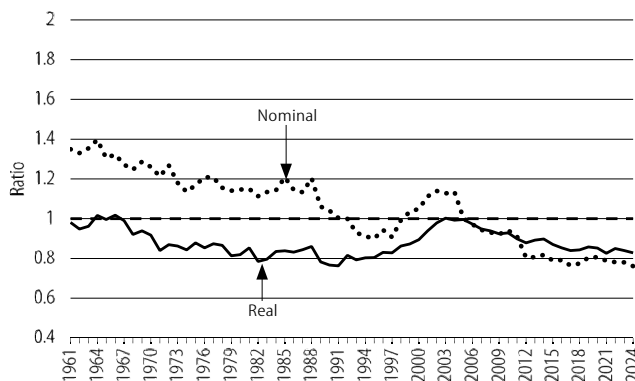
Ranks are among 19 major states and union territories. Real NSDP PC has base year 2004–05. Source: MoSPI/CSO national accounts.

But nominal income reflects both output and prices, and without adjusting for price levels, the picture can be seriously misleading. Upon recalculating rank based on real NSDP per capita, we obtain a strikingly different picture—it was ranked 12th among 19 major states and union territories in the 1960s, in contrast to its sixth-place nominal rank. Its high rank in the early period based on nominal income was nearly entirely eroded by a high price level. It substantially reframes the narrative: the state was not a prosperous economy in real terms that subsequently declined; it was already in the middle of the pack in the 1960s, and that relative position in real terms has barely moved since, fluctuating around 11th–12th throughout the post-2000s period and ending at 11th in 2021–24. The dramatic nominal decline simply has no counterpart in real terms.

Ranks are, however, not a robust way to track economic performance. A small change, or a failure to adjust for prices, can cause one state to overtake another. And if a state is losing ground slowly while others are moving up and down around it, its rank can stay constant even as its relative position worsens. A cleaner measure is the ratio of West Bengal's per capita NSDP to that of the rest of India and how it has moved over time.

Ratio charts: West Bengal's nominal per capita NSDP relative to the rest of India (Figure 1) starts well above 1 in the early 1960s (around 1.3–1.4), declines steadily to approximately 1 by the early 1990s, briefly recovers to just above 1 around 2000–03, and then falls to roughly 0.75–0.78 by 2023. The corresponding real ratio is strikingly flatter: it begins close to 1, dips to around 0.85–0.90 during the difficult 1977–95 period, recovers to just close to 1 in 2000–05, and settles at approximately 0.8 in recent years. Hence, there were three different phases: an early period of relative decline (until the early 1990s), followed by recovery and catch-up over the next decade, and then a subsequent decline since 2006.

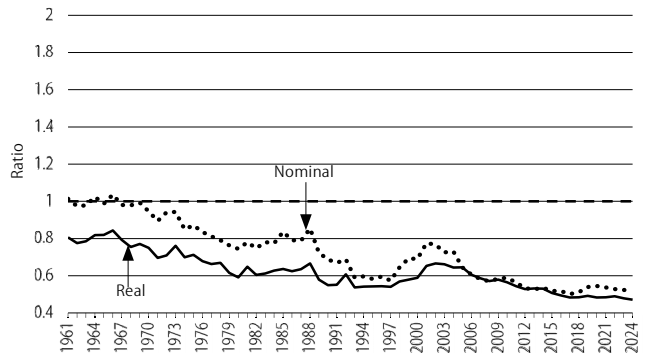
Figure 1: West Bengal/Rest of India NSDP Per Capita Ratio, Real and Current Prices



The dashed line marks parity (ratio = 1). Real NSDP PC has a base year of 2004–05. The rest of India is the sum of all states we are considering, excluding West Bengal. Source: MoSPI/CSO national accounts.

Against the HI group (Figure 2), both nominal and real ratios decline monotonically from around 1.0 for nominal and around 0.8 for real in the early 1960s to approximately 0.50 by the 2020s, confirming that the gap with these states is genuine in real terms and is not driven by differences in inflation rates.

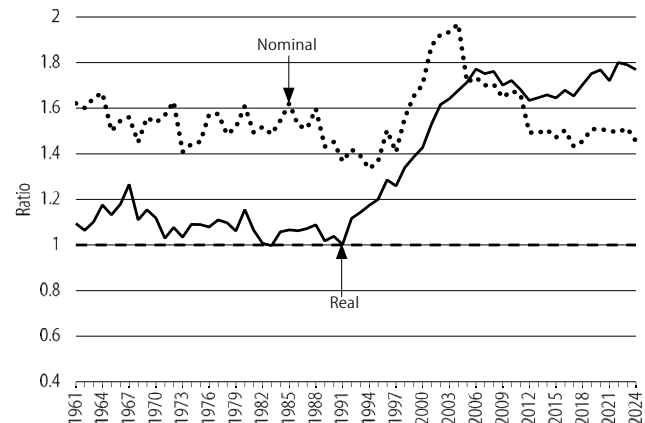
Figure 2: West Bengal/High-ranked States NSDP Per Capita Ratio, Current and Real Prices



Real NSDP PC has base year 2004–05. High-ranked states include Gujarat, Haryana, and Maharashtra.

Source: MoSPI/CSO national accounts.

Figure 3: West Bengal/Low-ranked States NSDP Per Capita Ratio, Current and Real Prices



Real NSDP PC has base year 2004–05. Low-ranked states are Bihar, Uttar Pradesh, and Madhya Pradesh.

Source: MoSPI/CSO national accounts.

Against the LI group (Figure 3), the nominal ratio is volatile and broadly flat (oscillating around 1.5 throughout), while the real ratio rises sharply from around 1.0 in the early 1990s to nearly 1.7–1.8 by 2005 and remains elevated at around 1.7 by 2023.

Growth rates: Table 2 (p 41) summarises the average annual log-linear growth rates of nominal and real NSDP per capita over the full period 1961–2024, and three different sub-periods: 1961–76, 1977–2011, and 2012–24 for West Bengal and four reference groups: all-India, HI states (Gujarat, Haryana, and Maharashtra), rest of India, and LI states (Bihar, UP, and MP). These periods cover the pre-Left Front period (1961–76) consisting of Congress governments and coalitional governments, the Left Front era (1977–2011), and the Trinamool Congress (TMC) government that was in power from 2011 to 2026.⁶ The key observation is that in nominal terms, West Bengal grew considerably more slowly than all-India and HI states over the full period, but in real terms, West Bengal's performance was closer to the all-India and rest of India averages over the full period, and above the all-India average during 1977–2011. West Bengal grew faster than LI states in both nominal and real terms, particularly in real terms. The gap between nominal and real growth rates for West Bengal (6.87 percentage points) is large, reflecting

the rapid fall in the state's relative price level documented in the appendix. Further, the experience of relative decline in nominal terms but not in real terms is robust to the choice of base year. Using an earlier year (say, 1971) as base rather than a later year simply shifts the intercept of the real NSDP trend, without changing the evolution of the relative gap between the nominal and the real series. This is shown in Appendix Figure A4 (p 49).

Table 2: Average Annual Log-linear Growth Rates of NSDP Per Capita (%)

Region	1961–2024	1961–76	1977–2011	2012–24
(a) Nominal data				
All India	10.86	8.00	11.48	8.80
HI states	11.19	8.18	11.80	8.49
Rest of India	10.93	8.12	11.53	8.81
West Bengal	10.04	7.03	10.91	8.48
LI states	10.02	7.62	10.38	8.48
(b) Real data				
All India	3.24	0.93	3.45	4.27
HI states	3.94	0.96	4.15	4.67
Rest of India	3.25	1.02	3.41	4.30
West Bengal	3.17	-0.18	3.94	3.74
LI states	2.18	0.20	2.09	2.90

Growth rates are coefficients from log-linear time trends estimated separately for each group. Real NSDP PC has a base year of 2004–05.

All-India is the sum of 19 major states and union territories we are considering and the rest of India is this sum, excluding West Bengal. High-ranked Indian (HI) states include Maharashtra, Gujarat, and Haryana. Low-ranked Indian (LI) states are Madhya Pradesh, Uttar Pradesh, and Bihar.

Source: MoSPI/CSO national accounts.

Regression evidence: In order to obtain more precise estimates of differences in growth rates, we now estimate a panel regression with state- and year-fixed effects, allowing West Bengal's trend growth rate to differ from the rest of the sample via an interaction between a linear time trend and a West Bengal indicator. The state-fixed effects absorb permanent level differences; the year-fixed effects absorb common national shocks; and the interaction coefficient estimates West Bengal's differential annual growth rate relative to the reference group.⁷ Observations are at the disaggregated state-year level and include 19 major states and union territories for which data are available. It thus compares growth rates in West Bengal with the average growth rate of other states (or subgroups), rather than the growth rate of their aggregate NSDP.

The results are reported in Table 3. West Bengal's nominal per capita NSDP grew 0.79 percentage points per year more slowly than the rest of India over 1961–2024. In real terms, however, the differential is positive, though only 0.07 percentage points and

is statistically indistinguishable from zero, implying that West Bengal grew at par with India in real terms over these 63 years.

The picture is quite different when we compare West Bengal with the HI states. As we saw in Figure 2, both nominal and real ratios against HI states decline monotonically. This confirms that the gap with Gujarat, Haryana, and Maharashtra is genuine in real terms and not merely resulting from differences in inflation. The regression estimates confirm this (Row 2 of Table 3). West Bengal grew 1.19 percentage points per year more slowly than the HI group in nominal terms over 1961–2024, and 0.72 percentage points more slowly even in real terms.

The picture that emerges from the comparison with the LI states is different. West Bengal outperformed Bihar, UP, and MP by 1.02 percentage points per year in real terms over the full period—a large and statistically significant advantage. In nominal terms, the gap is barely 0.17 percentage points, again reflecting the relative reduction in West Bengal's prices.

What have we learnt so far? West Bengal's growth performance relative to the all-India average deteriorated in terms of nominal output per capita, but not in real terms. Relative to LI, its real performance improved substantially. But in comparison with the HI states, the gap has widened continuously, especially since the mid-2000s. While cross-state trajectories have progressively diverged in recent decades, West Bengal has remained in the middle. The reason that its performance relative to the average of other states did not change is that the low-performing states have been falling behind West Bengal in exactly the same way that West Bengal has been falling behind the best.

The overall inference from these results is robust to the choice of base year used to deflate the NSDP series. However, the level of West Bengal's real ratio, compared to the rest of India, HI and LI groups, is sensitive to the base-year choice. This is what explains the divergence between the nominal and real performance of West Bengal compared to other states. In the next section, we discuss this using the comparison between West Bengal and the rest of India.

Price Puzzle: Why Nominal and Real NSDP Tell Different Stories

As we have seen, the nominal and real pictures tell very different stories about West Bengal's relative trajectory. To understand the relative price movement of the state, we turn to the implicit deflators used in the NSDP series.

During the 1960s, when West Bengal was an industrial leader, its rank in the nominal output per capita was high. But this rank appears to be only average, once we adjust for differences in prices. West Bengal was an expensive state in those days—its high price level eroded much of its nominal income advantage. Fast forward to today, and the situation has reversed. West Bengal's rank in the nominal output per capita is poor, but its rank in real terms is considerably better. The relative cost of living in the state have fallen over time. Appendix Table A2 shows how the relative price levels of West Bengal to the rest of India have fallen across the various five base years.

Table 3: Differential Trend Coefficients—Nominal and Real NSDP

Reference Group	log N	log y (per capita)	log Y	log p (per capita)	log Y_r
Rest of India	-0.00245*** (0.000669)	-0.00787*** (0.00109)	-0.0111*** (0.00110)	+0.000661 (0.00116)	-0.00176 (0.00128)
HI states	-0.00314*** (0.000219)	-0.0119*** (0.000495)	-0.0150*** (0.000606)	-0.00725*** (0.000591)	-0.0103*** (0.000560)
LI states	-0.00357*** (0.000176)	+0.00166** (0.000793)	-0.00352* (0.000799)	+0.0102*** (0.000600)	+0.00665*** (0.000579)

All regressions include state- and year-fixed effects. Real NSDP PC has a base year of 2004–05. Each regression has been estimated separately.

All-India is the sum of 19 major states and union territories we are considering and the rest of India is this sum, excluding West Bengal. High-ranked Indian (HI) states include Maharashtra, Gujarat, and Haryana.

Low-ranked Indian (LI) states are Madhya Pradesh, Uttar Pradesh, and Bihar.

N = 1,192 (rest of India); N = 252 (HI); N = 256 (LI). Period: 1961–2024. *p < 0.10, **p < 0.05, ***p < 0.01.

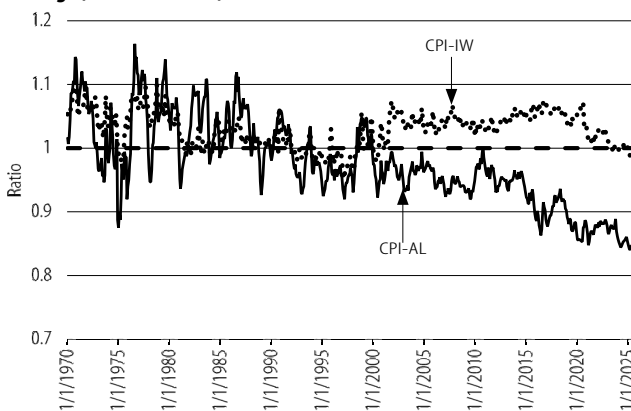
N = population, y = nominal per-capita NSDP, Y = nominal aggregate NSDP, p = real per-capita NSDP, Y_r = real aggregate NSDP; real series deflated to 2004–05 prices using the spliced MoSPI producer-price deflators.

This raises the question of why the relative cheapening occurred. One potential structural explanation is that the aggregate NSDP deflator is implicitly a weighted average of sub-sectoral deflators with base-year output share weights. Between 1961 and 2024, West Bengal's sectoral composition shifted from industry towards agriculture, while that of the rest of India shifted towards services and manufacturing. Hence, the relative price of agriculture and the relative price of industry in West Bengal to that of India would determine the relative ratio of nominal NSDP. If West Bengal's share of agriculture in its NSDP is growing over time compared to the rest of India and the relative price of agriculture falls, in general or in West Bengal, then the nominal NSDP in West Bengal could fall more than in India. To confirm this, we need to look more closely into the relative experiences of structural transformation and the relative evolution of sub-sectoral prices in West Bengal and the rest of India.

We examine the relative experiences of structural transformation in the next section. However, sub-sectoral output price data used for NSDP deflators are not publicly available. Hence, we turn to consumer price index (CPI) data on agriculture and industry, as a proxy.

The ratio of West Bengal's CPI for agricultural labourers to the corresponding all-India average is presented in Figure 4. We can see that it has been falling continuously since the early 1970s and now stands at around 0.85–0.87—a very substantial gap. The ratio of the CPI for industrial workers to the all-India average, presented in the same figure, by contrast shows no comparable secular trend; it has fluctuated around 1 without a clear direction. Aggregating across rural and urban areas, it follows that inflation rates were lower in West Bengal.

Figure 4: The Ratio of West Bengal's Consumer Price Index for Agricultural Labourers and Consumer Price Index for Industrial Workers to the All-India Average (Base: 1982=100)



The all-India measure is provided in the data and has not been constructed by us.
Source: Labour Bureau of India.

One could debate our choice of deflator. We use NSDP valued at basic prices—broadly, the prices received by producers, net of product taxes and subsidies, and distinct from both factor cost and market prices. To convert nominal NSDP to constant prices, we use the implicit deflators (arrived at by splicing across base years) in the MoSPI series (Central Statistics Office 2012). MoSPI adopts different methodologies to deflate nominal output across sectors. For agriculture, producers' prices compiled

by the State Directorates of Economics and Statistics are used and for registered manufacturing, wholesale price indices are used to construct the deflators. These implicit deflators are the closest available to producer prices, and they remain our preferred price data for two reasons. First, deflating NSDP with a consumer-facing index such as CPI would introduce a conceptual mismatch, since we are evaluating output produced in a state rather than the cost of a consumption basket. Second, CPI for agricultural labourers (CPI-AL) and CPI for industrial workers (CPI-IW) are broad indices that cannot be meaningfully used to deflate the various subsectors of NSDP; poverty-line deflators are less suitable still, since they reflect only a narrow subsistence food basket rather than the value of aggregate output. Reassuringly though, the MoSPI deflators track the independent CPI series for agriculture and industry closely (Appendix Figures A5–A6), confirming that our constructed real series is not an artefact of the deflation procedure.

Sectoral Composition

We now examine how each sector performed relative to the national average, as we did with NSDP per capita, first presenting the regression evidence and then discussing how this relates to the difference in inflation rates between West Bengal and the rest of India. In Table 4, we present the log-linear growth rates of real sectoral per capita NSDP over the period 1969–2014. In Table 5, we first present results (regression 1) from the same framework we followed for the results on NSDP, for the three

Table 4: Log-linear Growth Rates of Real Sectoral Per Capita NSDP, 1969–2014 (%)

Group	Primary	Secondary	Tertiary
All India	0.27	3.36	4.19
HI states	0.39	3.68	4.58
Rest of India	0.21	3.42	4.18
West Bengal	0.93	2.40	4.36
LI states	-0.16	2.98	3.05

All-India is the sum of 19 major states and union territories we are considering and the rest of India is this sum, excluding West Bengal. High-ranked Indian (HI) states include Maharashtra, Gujarat and Haryana. Low-ranked Indian (LI) states are Madhya Pradesh, Uttar Pradesh and Bihar.
Source: MoSPI sectoral data deflated to 2005 prices (bottom-up method).

Table 5: Sectoral Differential Trend Coefficients—West Bengal vs Rest of India, 1969–2014

	(1) log pA	(2) log pM	(3) log pS
Regression 1 (linear trend)			
WB × trend	+0.00973*** (0.00247)	-0.00761*** (0.00238)	+0.00307** (0.00151)
Regression 2 (by decade)			
WB × decade 2 × trend	+0.00102 (0.0134)	-0.00341 (0.0127)	+0.000972 (0.00811)
WB × decade 3 × trend	+0.00659 (0.0146)	+0.00443 (0.0139)	+0.00222 (0.00886)
WB × decade 4 × trend	+0.00824 (0.0154)	+0.0109 (0.0146)	+0.00771 (0.00930)
WB × decade 5 × trend	+0.00429 (0.0159)	+0.00962 (0.0151)	+0.00696 (0.00960)
WB × trend (decade 1)	-0.004 (0.009)	-0.021 (0.009)	-0.005 (0.004)

All regressions include state- and year-fixed effects. Base year for data is 2004–05. Regression 1 (1969–2014); Regression 2 decades (1: 1969–80; 2: 1981–90; 3: 1991–2000; 4: 2001–10; 5: 2011–14). Decade 1 is the omitted base category in Regression 2; reported values are the estimated West Bengal-vs-rest-of-India trend differential for that decade. Observations: Regression 1: N = 872, 869, 872; Regression 2: N = 853, 850, 853 for columns (1)–(3), respectively. The last two rows report the estimates of difference in trends between West Bengal and the rest of India in the first decade, 1969–80, and the corresponding standard errors in parentheses. **p<0.05, ***p<0.01.
Columns: p^A = real per-capita primary (agriculture) NSDP, p^M = secondary (manufacturing), p^S = tertiary (services); WB × trend is the WB-vs-RI differential annual trend.

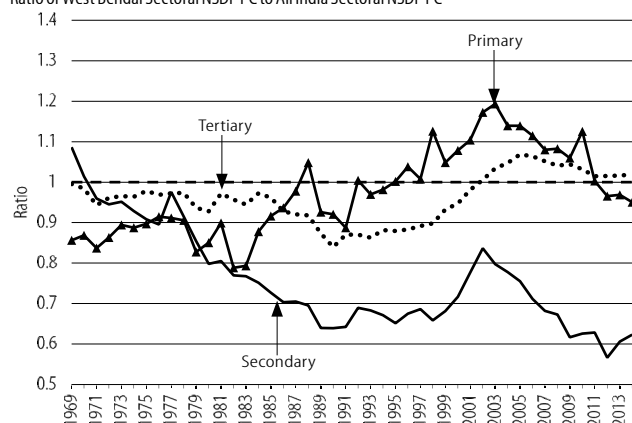
sectoral real per-capita NSDP series, ρ^k for $k \in \{A, M, S\}$ (primary/agriculture, secondary/manufacturing, tertiary/services). Regression 2 relaxes the single linear trend by interacting the West Bengal trend with decade indicators, allowing the differential to vary over time.⁸

Regression evidence: West Bengal's agricultural performance has been genuinely strong relative to the rest of India. As we can see from Table 4, real primary sector per capita NSDP grew at 0.93% per year over 1969–2014—more than double the all-India average of 0.27%, well above the HI states (0.39%), and far above the LI states, which actually experienced negative growth (-0.16%). The sectoral regression confirms this: West Bengal's primary sector differential trend relative to the rest of India is +0.97 percentage points per year and is highly significant (Table 5). The West Bengal to all-India primary ratio (Figure 5) rose from below 1 in the early 1970s to above 1 by around 1988, continuing to climb to a peak of roughly 1.15–1.20 around 2002–09. Against HI states (Maharashtra, Gujarat, and Haryana), the ratio also rises to near or above parity, which is remarkable given some of those states' agricultural strength. Cross-state regressions (not shown here owing to space limitations, but available on request) show that virtually every major state grew more slowly than West Bengal in primary sector per capita NSDP over 1969–2014.

In the secondary sector, the story is the reverse. West Bengal's real secondary sector per capita NSDP grew at only 2.40% per year over 1969–2014—below every reference group, including the LI states (2.98%). The sectoral regression yields a differential trend of -0.77 percentage points per year relative to the rest of India, as shown in Table 5. The West Bengal to all-India secondary ratio (Figure 5) started just above 1.0 in 1969 and fell steadily to around 0.55–0.60 by 2014. Against HI states, the picture is grimmer still: the ratio fell from approximately 0.60 in 1969 to below 0.3 by 2010–14. The cross-state regressions (not shown here) reveal that West Bengal's secondary sector growth rate was lower than that of every major Indian state, with the exception of Manipur, Assam, Jammu and Kashmir, and Odisha.

That said, Table 5 shows that much of the poor performance of the secondary sector was concentrated in the 1970s and

Figure 5: West Bengal/All-India Sectoral Ratio—Per Capita, Real, 1969–2014
Ratio of West Bengal Sectoral NSDP PC to All India Sectoral NSDP PC



The dashed line marks parity. All-India is the sum of 19 major states and union territories we are considering.

Source: MoSPI sectoral data deflated to 2005 prices.

1980s. While the coefficients are not statistically significant due to the limited number of observations and low degrees of freedom, the magnitude of the decadal coefficients is suggestive of changes in relative movements over time. For the three subsequent decades, the gap in growth rates narrowed by a small margin. However, in terms of levels, West Bengal remained far below the all-India average in manufacturing output per capita throughout.

The tertiary sector's higher average growth rate provided a partial counterweight to the secondary sector's underperformance, though—as Table 5 shows—this was too small and too concentrated in the final decades to compensate fully for the accumulated shortfall in manufacturing.⁹ West Bengal's real tertiary per capita NSDP grew at 4.36% per year over 1969–2014—above the all-India average of 4.19% though below the HI states (4.58%). The West Bengal to all-India tertiary ratio (Figure 5) tells a story of catch-up from a very low base: starting at around 0.95 of the national average in 1969, it dipped to around 0.83 in the late 1980s before recovering strongly to just above 1 by the early 2000s. The differential trend coefficient versus the rest of India is positive and significant (Table 5), reflecting this catch-up. Relative to HI states, however, services performance remained persistently below parity throughout.

One might ask whether these sectoral patterns are consistent with convergence predicted by neoclassical growth theory—laggards growing faster than leaders. Neoclassical convergence, however, preserves the rank ordering of states in levels. What we observe instead is a change in ranks: West Bengal's rank rose in agriculture and fell in manufacturing. Cross-state growth patterns in India show divergence rather than convergence, for example, between HI and LI states, with West Bengal's performance lying in-between.

Finally, our sectoral series measures growth of per capita output, not labour productivity. Faster growth of agricultural output per capita in West Bengal could reflect either rising productivity or faster growth of agricultural workforce owing to relative lack of growth in non-farm opportunities. Using sectoral workforce data from the census, it can be verified that these results reflect corresponding trends in sectoral productivity: West Bengal's agricultural output per worker crosses India's in the early 1990s and remains above it through the 2010s, while industrial output per worker remained persistently below India's.

Explaining the inflation difference: The contrasting performance of production in different sectors helps formulate a tentative explanation for observed differences in inflation rates between West Bengal and the rest of India.

Two forces drove down agricultural prices in West Bengal relative to other states. The first is supply-side: agricultural productivity grew faster in West Bengal than elsewhere during the period of land reforms and the diffusion of high-yielding varieties, expanding food supply and putting downward pressure on local prices. The second is demand-side: relative to other states, growth in West Bengal's non-agricultural sector—industry and services combined—generated a weaker pull on food demand over this period.¹⁰ This shortfall was driven overwhelmingly

by manufacturing's relative underperformance from the late 1970s onwards; services did not grow sufficiently fast relative to the rest of the country to make up for this deficit. Also, as agricultural incomes rose, rural households spent a progressively smaller fraction of their budgets on food—which may have generated additional downward pressure on food prices. That West Bengal's lower relative food prices persist rather than being arbitrated away by interstate trade reflects the limited tradability of many agricultural goods—transport costs, perishability, and interstate trade barriers for most of the period.¹¹

Industrial prices, by contrast, did not fall in West Bengal relative to other states, despite industrial stagnation there—a conclusion based on the CPI-IW, which tracks the MOSPI-derived industrial deflator closely (Appendix Figure A6, p 49). The result is an irony worth dwelling on. It is beyond the scope of this paper to get into the causes, but the very feature that made West Bengal look worse in real terms during its industrial prime—a high price level driven by industrial agglomeration—gradually became a real income advantage as industrial stagnation and agricultural growth together drove down the relative cost of living.

The one episode where real output improvement and the price mechanism reinforced each other was the decade from roughly 1995 to 2005—and it stands out as the single most favourable period in West Bengal's post-independence trajectory. On the output side, agricultural productivity gains from the Left Front's rural reforms were by then fully operational, and the state's agricultural sector was growing well above the national average. On the price side, national food prices were rising sharply—driven by rising urban incomes across India and supportive minimum support price policy—which amplified the value of West Bengal's above-average agricultural output. The result was a double tailwind: real output was growing faster than the national average, and the price mechanism was simultaneously making that real growth look better rather than worse in nominal terms. This is why, uniquely in the post-independence record, West Bengal briefly outperformed the national average in aggregate terms in 2000–03, as the ratio charts show. In the event study plots (not shown here), the real series rises clearly above zero relative to the pre-1977 baseline in this window while the nominal series lags, and the gap between the two widens persistently from the mid-2000s onwards as the agricultural tailwind fades.

Trends in Consumption and Poverty

So far, we focused on output per capita which does not fully capture income, since remittances are not captured in NSDP. In this section, we look at comparative trends in average household living standards and poverty rates, measured respectively by monthly per capita consumption expenditure (MPCE) and the HCR of poverty, using data from various rounds of NSS.

Average household consumption comparisons: The MPCE data spans various NSS rounds from 1983 until 2024. The last three rounds (2018, 2023, 2024) were based on a different reference period (modified mixed reference period) compared to previous rounds (mixed reference period). To ensure comparability, we

have adjusted the data for the last three rounds using recall ratios for the two different reference periods from the 2011–12 survey. MPCEs are reported by NSS for rural and urban areas separately; we use population weights obtained by linear interpolation until 2011 (and extrapolation beyond 2011) to construct combined estimates at the state level. Moreover, we adjust nominal consumption expenditures for differences in cost of living across states and over time in rural and urban areas using CPI-AL and CPI-IW indices respectively, which is appropriate since we are deflating consumption, unlike the output deflators discussed earlier.

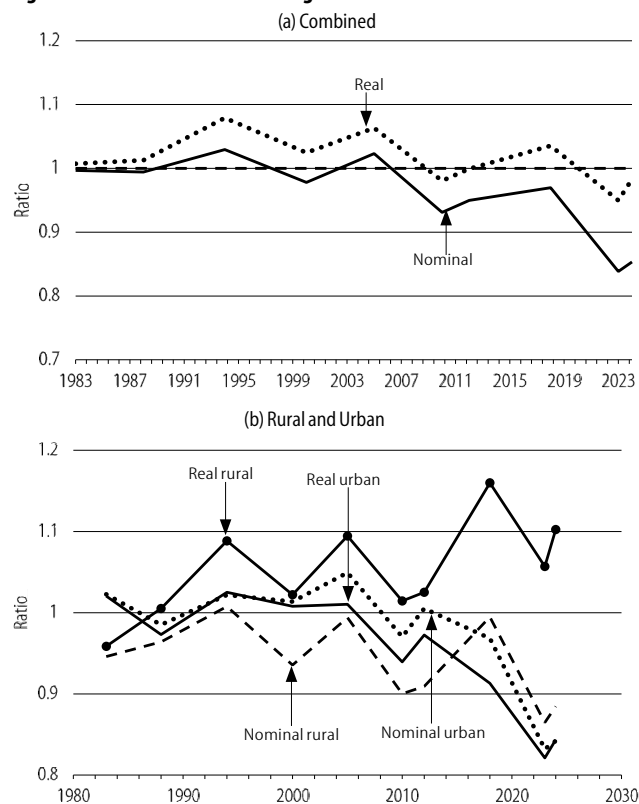
Not surprisingly, adjustments for different rates of inflation make considerable differences to trends in rural consumption. Table 6 shows that West Bengal's rank relative to other Indian states in rural MPCE remained stationary (around 15–16) in nominal terms but improved from 14 in 1983 to 6 in 2018 and 10 in 2024 in real terms. Its rank in urban MPCE deteriorated from a range of 7–8 to 13 over the 1983–2024 period, for both nominal and real measures. For rural and urban areas combined, West Bengal's rank in (nominal and real) MPCE remained stationary.

Table 6: West Bengal's MPCE Rank among 19 Major States and Union Territories

Year	1983	1988	1994	2000	2005	2010	2012	2018	2023	2024
Real rural	14	10	6	12	8	12	11	6	10	10
Nominal rural	16	13	12	14	14	16	14	12	15	15
Real urban	7	9	9	11	10	11	12	12	14	13
Nominal urban	8	9	8	11	9	10	10	10	13	13
Real combined	13	12	8	11	10	13	12	9	11	11
Nominal combined	13	12	11	12	12	14	13	11	12	12

Combined MPCE is the population-weighted average of rural and urban MPCE. Population figures are from census, extrapolated after 2011. Real MPCE has base year of 1982.

Figure 6: Ratio of MPCE—West Bengal vs All India



Real MPCE has base year of 1982. Combined MPCE is the population-weighted average of rural and urban MPCE. Population figures are from census, extrapolated after 2011. Source: NSS Consumption Expenditure Surveys.

Figure 6 shows a time-plot of ratios of West Bengal to all-India MPCE. Using real MPCE, the ratio increased in rural areas, decreased in urban areas, and was approximately stationary for the combined series. Inflation adjustments mattered for the rural and combined comparisons in particular. Hence, the ratio-based results resemble those using state rank as a measure of comparison.

Table 7 displays differences in MPCE annual growth rates between West Bengal and other states. The HI states vary for rural and urban areas. Both groups include Himachal Pradesh and Punjab. For rural consumption, the HI group includes Kerala, while for urban consumption, it includes Haryana. The LI group comprised Bihar, UP and MP. Compared to the rest of India, these estimates confirm that real MPCE growth in West Bengal was higher in rural areas, lower in urban areas and essentially the same for the two areas combined. These differences were not statistically significant. Compared to the HI states, West Bengal's growth was lower in both urban and rural areas; the shortfall in urban consumption growth was large (2.9%) and statistically significant. Finally compared to the LI states, real consumption grew at almost the same rate in West Bengal.

Table 7: Differential Trend Coefficients—MPCE

Reference Group	Nominal (Rural)	Real (Rural)	Nominal (Urban)	Real (Urban)	Nominal (Comb)	Real (Comb)
Rest of India	-0.008 (0.011)	0.015 (0.014)	-0.016 (0.016)	-0.021 (0.018)	-0.004 (0.026)	0.002 (0.014)
HI-rural	-0.029** (0.011)	-0.009 (0.016)			-0.025** (0.009)	-0.022* (0.013)
HI-urban			-0.020* (0.010)	-0.029** (0.011)	-0.026*** (0.009)	-0.021 (0.013)
LI	-0.000 (0.006)	0.005 (0.008)	-0.008 (0.008)	-0.002 (0.007)	0.001 (0.007)	-0.000 (0.007)

All regressions include state, and year-fixed effects. Real MPCE has base year 1982. N = 190 (rest of India rural); N = 180 (rest of India urban and combined rural/urban); N = 40 (HI-rural/HI-urban/LI). *p<0.10, **p<0.05, ***p<0.01.

In summary, the comparisons of average consumption (MPCE) echo those of average production (NSDP). Inflation adjustments matter, especially for rural areas. West Bengal achieved higher growth in real consumption compared to the rest of India in rural areas, and lower growth in urban areas; consequently, average consumption levels for the state as a whole grew at approximately the same rate as the rest of the country.

Poverty headcount ratio comparisons: Now we consider comparisons of trends in poverty measured by the HCR, using NSS estimates from seven consumption survey rounds spanning 1994 to 2024. These are adjusted for differences in state-specific poverty thresholds, which incorporate cost of living differences. The HCR estimates are arrived at from the NSS surveys and are collected from different sources. The numbers are reported separately for rural, urban, and both areas combined (except for 2018, for which only the combined estimate is available). The 2023 and 2024 estimates (based on the 2022–23 and the 2023–24 HCES, respectively) are adjusted for MRP–MMRP differences, as explained in the Appendix.

Table 8 shows that West Bengal's HCR rank worsened over 1994–2024, modestly in rural areas and much more sharply in urban areas. Up until 2012, the drop in both rural and urban

areas was uniform. After 2012, while the rural rank has been stable, the urban rank has deteriorated: only Bihar and UP are doing worse than West Bengal in 2023–24. The relatively stable performance in rural poverty has ensured that the combined poverty rank has not dropped by much since 2012.

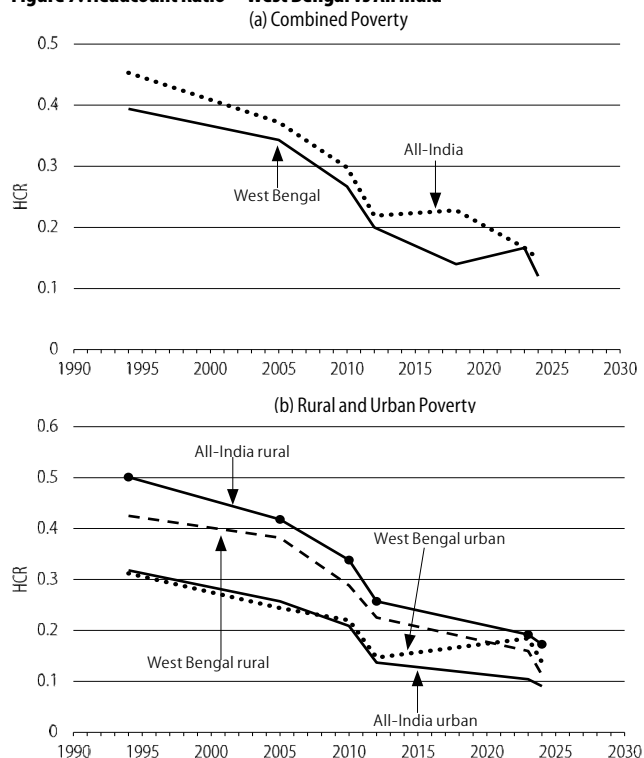
Table 8: West Bengal's HCR Rank among 19 Major States and Union Territories

Year	1994	2005	2010	2012	2018	2023	2024
Rural rank	8	12	12	11	NA	12	11
Urban rank	12	11	12	12	NA	16	17
Combined rank	9	11	13	12	10	13	13

A lower rank is better.

Tendulkar line based on mixed reference period.

Figure 7: Headcount Ratio—West Bengal vs All India



State-specific Tendulkar line, MRP methodology. Combined HCR is the population-weighted average of rural and urban HCR. Population figures are from census, extrapolated after 2011.

Figure 7 provides the corresponding time-plots of HCR rates in West Bengal and India. It shows that the level of poverty in West Bengal was lower than the rest of the country during the entire period between 1994 and 2024. While India witnessed a small rise in poverty between 2012 and 2018, West Bengal did not. However, poverty did rise in West Bengal between 2018 and 2023, converging with the all-India average, but again fell below it between 2023 and 2024. The 2023–24 numbers should be read with caution given the change in survey methodology (Appendix).

The combined poverty numbers hide the differential changes between rural and urban regions. While rural poverty fell in West Bengal in line with that of India even though it started out much lower, urban poverty went up between 2012 and 2023, even when it was falling for the country as a whole.

In summary, West Bengal performed relatively well in rural poverty reduction, while starting at a lower base level, but less so in urban poverty reduction compared to the rest of the country.

The poverty discussion would be incomplete without a caveat. Our analysis is restricted to 1993–94 onwards, since headcount estimates from earlier rounds are not comparable. Evidence from that earlier period, however, suggests the rural gains pre-date our window. Ghosh (1998) reports West Bengal's rural headcount ratio at roughly 25 percentage points above the national average in 1967–68 (80.6% against 55.8%), narrowing to about 21–22 points by 1983. These use a different poverty line and reference period from the Tendulkar-based series employed here, so the levels are not directly comparable with ours. The direction of change is nonetheless striking: a state that began well behind the national average in rural poverty had, by 1994, moved below it—implying that the favourable rural record we document started from the early 1980s. This timing coincides with the land tenancy and other rural reforms initiated after 1977, whose contribution to rural poverty reduction in the state has been extensively studied.

Concluding Observations

The various strands of evidence assembled in this paper point to a coherent overall picture. West Bengal's long-run economic trajectory is not a story of across-the-board decline. In real terms, aggregate per capita NSDP and MPCE have tracked close to the national average over the long run. This masked important compositional changes: West Bengal grew faster in rural areas and slower in urban areas. Its growth performance fell behind the top performing states, but it did better compared to the slowest growing states. With regard to poverty (HCR) reduction, West Bengal did relatively well in rural areas, starting from an already lower base, but less well in urban areas, leaving its overall reduction slightly behind the rest of the country. Its performance in urban poverty reduction has been comparatively deficient. Once inflation is accounted for, the three lenses agree: production (NSDP), consumption (MPCE), and poverty (HCR) each show West Bengal roughly matching the national average overall, with a consistent split—stronger performance in the rural/agricultural dimensions, weaker in the urban/industrial ones. The sectoral pattern (agricultural strength, manufacturing

weakness) is the production-side counterpart of the rural-strong, urban-weak pattern in consumption and poverty.

These results present a less grim assessment of West Bengal's relative performance compared to the popular narrative as well as Kapur and Subramanian (2025). This owes partly to our use of state- and sector-specific bottom-up price deflators, thereby yielding a novel perspective on the role of different rates of growth across rural and urban sectors and associated shifts in relative prices. West Bengal's agricultural output grew faster and food prices fell relative to the rest of the country, cushioning real living standards even as nominal output fell behind. The genuine and persistent underperformance of the state was concentrated in a single sector—manufacturing—and this has been the principal driver of the growing gap with the high-ranked states.

The sectoral pattern raises an important question. West Bengal's agricultural productivity gains from the 1980s through the 2000s were genuine and substantial. Why did they not translate into broader-based economic growth, the way agricultural success did for Punjab and Haryana in an earlier era? The answer lies in timing. Punjab and Haryana's agricultural boom came in the 1960s and 1970s, when agriculture still accounted for a large share of national output and when the broader economy had not yet undergone structural transformation. The growth impulses of that era ran through agriculture. West Bengal's agricultural rebound, by contrast, came in the 1980s and 1990s, when India's economy was already shifting decisively towards industry and services—a shift that accelerated sharply following liberalisation in 1991. The growth impulses were by then concentrated in manufacturing and services. A state that succeeded in agriculture but failed to industrialise was, therefore, boarding the agricultural bus just as the national economy was switching to a different vehicle. The rebound was real, but the vehicle had changed. The states that pulled ahead—Gujarat, Tamil Nadu, Maharashtra, and later Andhra Pradesh—combined rapid industrial growth with rapid services growth from the 1980s onward, catching and riding exactly the structural transformation wave that West Bengal appears to have missed.

NOTES

- 1 See Lahiri and Yi (2009) for a comparison between the growth trajectories of West Bengal and Maharashtra, two of the highest-ranked major states in terms of nominal per capita NSDP in the early 1960s, and Lahiri (2026) for a broader ranking of Indian states documenting West Bengal's steady relative decline in per capita NSDP over 1980–81 to 2023–24.
- 2 Throughout the paper, we will use these abbreviations to refer to high- and low-ranked Indian states for the relevant economic indicator, which will vary depending on the indicator.
- 3 More details are provided at the end of this section, and in the appendix.
- 4 The all-India and the rest of India aggregates make adjustments for data discrepancies in sub-sectoral NSDP of Kerala for the years 1986–93. Details are available on request.
- 5 From 1960–61 to 1965–66, West Bengal's nominal NSDP per capita ranked third in every year except 1962–63, when it slipped to fourth. Excluding Delhi, which remained the top-ranked territory throughout, and restricting attention to the major

states, only Maharashtra consistently ranked above West Bengal during the first half of the 1960s. Although West Bengal's rank declined from second-third to fourth-fifth during the latter half of the decade, it should be noted that states such as Punjab, Assam, Himachal Pradesh and Haryana are absent from the rankings in some of the early years because of missing data. Averaging over the decade helps mitigate these year-specific data issues to some extent.

- 6 Throughout the paper, we use the convention that a year is the ending part of the financial year; for example, 2012 means the financial year 2011–12.
- 7 Formally, we estimate the following linear differential-trend specification:

$$\log y_{st} = \alpha + \sum_s \beta_s D_s + \sum_t \beta_t D_t + \beta_1 (T_t \cdot D_{WB}) + \varepsilon_{st}$$

D_s and D_t are state and year dummies, T_t is a linear time trend, and D_{WB} is an indicator for West Bengal; the coefficients for the state and year effects are given by β_s and β_t . The coefficient of interest, β_1 , is the differential annual growth rate of West Bengal relative to the relevant reference group. Because the outcome is in logs, β_1 is read

directly as a percentage-point differential in annual growth. We estimate this separately with four outcomes: $\log N_{st}$ (population), $\log y_{st}$ (nominal per-capita NSDP), $\log \rho_{st}$ (real per-capita NSDP), and the implicit price level $\log p_{st}$.

- 8 Formally, we estimate

$$\log p_{st}^d = \alpha + \sum_s \beta_s D_s + \sum_t \beta_t D_t + \gamma_1 (T_t \cdot D_{WB}) + \sum_{d=2}^5 \gamma_d (T_t \cdot D_{WB} \cdot D^d) + \varepsilon_{st}$$

where D^d indicates decade d (decade 1, 1969–80, is the omitted base). The base-decade differential is γ_1 ; for later decades, the differential is $\gamma_1 + \gamma_d$, so the coefficients $\gamma_2, \dots, \gamma_5$ in Table 5 are increments relative to the first decade.

- 9 This is a matter of growth accounting: the aggregate non-agricultural growth differential is the NSDP-share-weighted sum of the secondary- and tertiary-sector differentials (Table 5). The secondary-sector differential was negative throughout, ranging from -0.010 to -0.024; the tertiary-sector differential was also negative in the first three decades and only modestly positive (+0.002 to +0.003) in the last two—

around four to five times smaller in magnitude than the secondary-sector shortfall in those decades. Even weighting the tertiary sector at roughly twice the NSDP share of the secondary sector, this modest late-period gain could not offset the secondary-sector deficit, so the weighted aggregate remained negative throughout.

- 10 It is to be noted that this is a claim about the differential relative to other states, not about an absolute decline in West Bengal's own non-agricultural demand.
- 11 Moreover, differences in procurement policy, minimum support price (MSP) implementation, and market structure—including the relative weakness of large-farmer lobbies in West Bengal compared to the major MSP-beneficiary states—may also have contributed to this persistence. We do not attempt to disentangle their relative roles here.
- 12 The corresponding composition for the secondary sector is manufacturing + construction + electricity, gas and water supply, and for tertiary is transport, storage communication (railways + other transport + communication) + trade hotels and restaurants + banks and insurance + real estate + public administration + other services.

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Appendix

This appendix provides details of the construction of variables and the choice of base year. Before we discuss that, one general point to note: by any year, we mean the year in which the period is ending. So, for example, if we have data for financial year 2004–05, we term this as 2005.

Variable Construction Details

Net state domestic product: MOSPI releases state-level data, disaggregated at the sectoral level, in different "series"—where each series corresponds to a particular base year and a decade-long time period. For our time period of 1960–61 to 2023–24, we use the following series: 1960–61 series (1960–61 to 1970–71), 1970–71 series (1970–71 to 1980–81), 1980–81 series (1980–81 to 1993–94), 1993–94 series (1993–94 to 2004–05), 2004–05 series (2004–05 to 2013–14), and the 2011–12 series (2011–12 to 2023–24). Each series gives two types of data: constant prices data, which gives us the real NSDP numbers (p), with the base year changing every series, and current prices data, which gives us the nominal NSDP numbers (y), which by definition does not have a base year.

To get a continuous series for nominal data from 1960–61 up to 2023–24, we combine data from different series to construct one long data set. However, the same cannot be done for real NSDP, since data across years correspond to different base years which are not comparable. To construct a uniformly deflated long data set for real NSDP, we exploit the fact that there exists at least one overlapping year across the series—for example, we have data for 2004–05 in both 1993–94 and 2004–05 prices. We then construct "deflators" in the following manner:

$$\text{Deflator}_{2005-1994} = \text{NSDP}_{2005} (2004-05 \text{ Prices}) / \text{NSDP}_{2005} (1993-04 \text{ Prices})$$

We then multiply this deflator with all the years' data for the 1993–94 series, to calculate NSDP in 2004–05 prices. We repeat this exercise for all series to get a long data set from 1960–61 to 2023–24, in 2004–05 prices. We specifically choose 2004–05 as our base year since this is the latest officially adopted base year before the NSDP-net state value added (NSVA) split in the sectoral data. The choice of base year is discussed further below.

We carry out exactly the same exercise for data at the sectoral level, to get a long series at the 2004–05 price level. However, we stop at 2013–14

since the 2011–12 series (data between 2011–12 and 2023–24) does not report sectoral NSDP, but instead reports sectoral NSVA (the two differ by taxes and subsidies)—hence we cannot extend our data beyond the data from the 2004–05 series.

To get data for the three main sectors we consider—primary, secondary and tertiary—we allow for sub-sectoral price deviations. For example, primary sector data is the sum of uniformly deflated agriculture, forestry and fishing, mining and quarrying and livestock data.¹²

We restrict attention to 18 states and one union territory for data availability reasons. The states and union territories we consider are: Andhra Pradesh (including Telangana), Assam, Bihar (including Jharkhand), Delhi, Gujarat, Himachal Pradesh, Haryana, Jammu and Kashmir, Karnataka, Kerala, Maharashtra, Manipur, MP (including Chhattisgarh), Odisha, Punjab, Rajasthan, Tamil Nadu, UP (including Uttarakhand) and West Bengal. Specifically, we pick the states and union territories for which we have continuous data from 1961 onwards. However, note that data for Punjab and Haryana is absent for the years 1962–65, and for Assam and Himachal Pradesh for the years 1961–68. To keep our analysis consistent across years, we combine the divided states with the original states. So, by Bihar, we mean Bihar and Jharkhand. By Jammu and Kashmir, we mean the erstwhile state of Jammu and Kashmir, which was dissolved in 1919 into the union territories of Ladakh and Jammu and Kashmir. Up until 2019, our Jammu and Kashmir measure includes Ladakh within it, but from 2020 onwards, it only refers to the current union territory Jammu and Kashmir.

We construct the all-India measure by combining data for all the states and union territories we are considering in our analysis, the rest of India measure by combining all states and union territories but West Bengal, the HI measure by combining Maharashtra, Gujarat and Haryana, and the LI measure by combining UP, Bihar and MP. Note that the last measure also includes present-day Uttarakhand, Jharkhand, and Chhattisgarh. The HI states are the ones that have been consistently in the top five for the past three decades, and similarly, LI states have been in the bottom for the past three decades. It should be noted that Delhi has consistently ranked number one in terms of per capita NSDP in both real and nominal terms. However, while Delhi is included in the overall set of 18 states plus one union territory for which we have continuous data over the entire period,

in the set of reference states that are high-ranked and low-ranked, we stick to the major states in terms of population and do not include Delhi. The reason is, technically, it is a union territory and not a state and more substantively, it does not have the economic profile of a typical state, for example, an agricultural sector.

To calculate per capita numbers, we use population figures from MoSPI. Note that all post-2011 population numbers are projections rather than enumerated counts; since West Bengal has below-average population growth, per capita figures for this period should be interpreted with appropriate caution.

Bottom-up deflation versus top-down deflation:

As explained earlier, MoSPI provides NSDP data disaggregated at the sub-sectoral level. Instead of applying a common state-wide deflator to the aggregated NSDP data, we allowed sub-sectoral price deviation and deflated the data at the sub-sectoral level (splice for each subsector) before aggregating them. In other words, we deflate before aggregating (bottom-up) as opposed to aggregating before deflation (top-down). We used the top-down series for our NSDP analysis, and used the bottom-up series for our sectoral analysis (ρ^A , ρ^M , ρ^S). The choice isn't trivial—the difference can be significant.

Figure A1 plots the deviation between the results of the two different methods: the difference is visible for the earlier years, but converges with time. Figure A2 plots the same for West Bengal.

Consumer price index: For our price data, we use the CPI-AL and CPI-IW published by the Labour Bureau. We consider data from 1970 to 2025. To create a consistent series, we used the link factors provided by the Labour Bureau to combine series with different base years.

CPI-AL data was already at the state level. However, CPI-IW data is only at the centre level, with multiple centres existing within a state. We took the weighted average of these centres to arrive at state-level numbers and then used the link factors to create a series with one base year, where the weights were provided by the Labour Bureau. The CPI-AL data has a base year of 1986–87 and the CPI-IW data has a base year of 1982.

Note that for the 1960s and 1970s, we did not have CPI-AL data for Haryana and Himachal Pradesh separately, so we used Punjab's numbers for those two decades. Similarly, we used Assam's numbers for the 1960s and 1970s to replace the missing Manipur numbers for these two decades. We also did not have CPI-AL data for Delhi, so we replaced it with the CPI-IW numbers. CPI-IW data for Himachal Pradesh was absent till 2005, so we replaced it with Punjab's numbers.

Consumption: We consider MPCE as our point of analysis for 18 states and one union territory (same as the ones in our NSDP analysis). We combine states to their pre-division forms through population-weighted averaging. We use the following NSS consumption expenditure surveys: 38th round (1983), 43rd round (1987–88), 50th round (1993–94), 55th round (1999–2000), 61st round (2004–05), 66th round (2009–10), 68th round (2011–12), 75th round (2017–18), and the two Household Consumption Expenditure Surveys (HCES)—HCES 1 (2022–23) and HCES 2 (2023–24). These surveys report nominal MPCE. We deflate them to real MPCE by using CPI-AL for rural MPCE and CPI-IW for urban MPCE. Since numbers across rounds were recorded in different recall periods, they

are not strictly comparable. We adjust for this difference by exploiting the fact that the 2011–12 survey recorded consumption in three reference periods: uniform reference period (URP), MRP and MMRP. We use state-specific ratios of MPCE across these three reference periods to convert every survey's MPCE numbers to MRP-equivalent numbers. Finally, we construct combined MPCE figures by weighting rural and urban MPCE by population. Population numbers are from the Census (1981–2011), and post-2011 numbers have been extrapolated. The all-India measure here is the same measure reported in surveys and represents the entire country and not just the states and union territories we have chosen.

Two notes of caution: the 1999–2000 survey simultaneously used multiple recall periods to collect information, which led to a well-documented contamination problem (Sen 2000; Deaton 2003; Sen and Himanshu 2004; Deaton and Kozel 2005) and hence these numbers are to be treated with caution. Second, the 2022–23 and 2023–24 HCES surveys also adopt a methodology different from the previous NSS surveys (Mehrotra and Kumar 2024; Himanshu et al 2025a, 2025b) and hence, these numbers are to be treated with caution as well.

Poverty: We consider the Tendulkar line-based poverty HCR based on the MRP reference period as our main variable for 18 major states and one union territory (same as the ones in our NSDP analysis). We combine states to their pre-division forms through population-weighted averaging. We use data for the following NSS rounds: 50th (1993–94), 61st (2004–05), 66th (2009–10), 68th (2011–12), 75th (2017–18) and the HCES 1 (2022–23) and HCES 2 (2023–24) surveys. Data for the 1993–94 and 2004–05 rounds are sourced from the Tendulkar Committee Report (Planning Commission 2009), for 2009–10 and 2011–12 from the Planning Commission (Planning Commission 2010, 2012). Data for 2017–18 is from Bhattacharya and Devulapalli (2019). Data for 2022–23 and 2023–24 is constructed from HCES 1 and 2 unit-level data, respectively. First, we update the Tendulkar MRP poverty lines using the CPI-AL (for rural) and CPI-IW (for urban) indices. To adjust for the MRP–MMRP difference, we calculate percentile level ratios between MPCE (MMRP) and MPCE (MRP) from the 2011–12 survey, separately for rural and urban areas, and then use these to convert the 2022–23 and 2023–24 numbers to MRP-equivalent forms. We assume that, for each consumption percentile, the ratio between a household's MRP and MMRP MPCE does not change between 2011–12 and 2022–23, 2023–24. The all-India measure here represents the entire country, and not just the 19 major states and union territories we selected for our NSDP analysis.

Reference groups: Appendix Table A1 defines the HI and LI reference groups, we have used for different measures. We have selected those states that have been consistently in the top/bottom five for the majority of the time period. Our all-India measure also changes definitions across measures: for NSDP, it is the sum total of the 19 states and union territories we are considering and hence does not include the excluded states. However, for consumption and poverty, the all-India measure is representative of the entire country and not just the states and union territories we consider. Finally, the rest of India measure (which is only considered in the NSDP analysis) is the sum total of all 19 states and union territories excluding West Bengal.

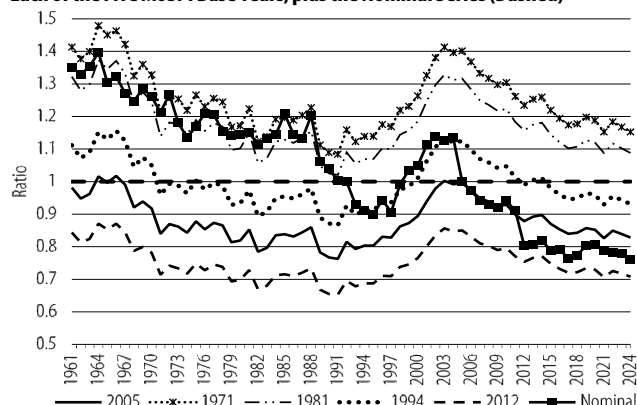
Table A1: HI and LI States

Abbreviation	HI	LI
NSDP	Maharashtra, Gujarat, Haryana	UP, Bihar, MP
MPCE Urban	Himachal Pradesh, Haryana, Punjab	Bihar, MP, UP
MPCE Rural	Himachal Pradesh, Kerala, Punjab	Bihar, MP, UP
MPCE Combined	Himachal Pradesh, Haryana, Punjab	Bihar, MP, UP

Choice of Base Year

Varying the base year: Observe that West Bengal's real NSDP rank and its real ratio to the rest of India (WB/RI) depend heavily on which base year is used to deflate the NSDP series—a fact reported in Table A2 and also visible in Figure A3. The factor driving this is the relative price ratio

Figure A3: Ratio of West Bengal to Rest of India Real NSDP Per Capita under Each of the Five MoSPI Base Years, plus the Nominal Series (Dashed)



The 1971-base series is the highest throughout; the 2012-base series is the lowest. All fixed-base series share the same broad time-path. The nominal series lies well below all real series in recent decades.

$p\text{-WB}/p\text{-RI}$ and how that matters depending on the base year. The level of the WB/RI real ratio equals the nominal ratio divided by the relative deflator, so a higher relative deflator under a newer base year produces a lower real ratio.

Formally, the WB/RI real NSDP per capita ratio under base year t_0 is given by the ratio of nominal NSDP per capita in the two regions, scaled by the ratio of relative price levels at the base year to relative price levels in the current year. Comparing the two base years t_0 and t_1 : the real ratio is higher under the newer base year t_1 if and only if West Bengal's output price level relative to the rest of India was higher in t_1 than in t_0 . Figure A3 plots the real NSDP ratio under all five base years. The series are stacked with the 1971-base highest and the 2012-base lowest, consistent with this relationship: West Bengal's relative output price level was higher in 1971 than in 2005 or 2012. This stacking is directly confirmed by Figure A4 (the ratio of West Bengal to the rest of India deflator under each base year), which shows the relative deflator increasing systematically from lower levels (and hence the relative output price ratio, which is the inverse of the relative deflator, declining) under the 1971 and 1981 bases to higher levels under the 2005 and 2012 bases.

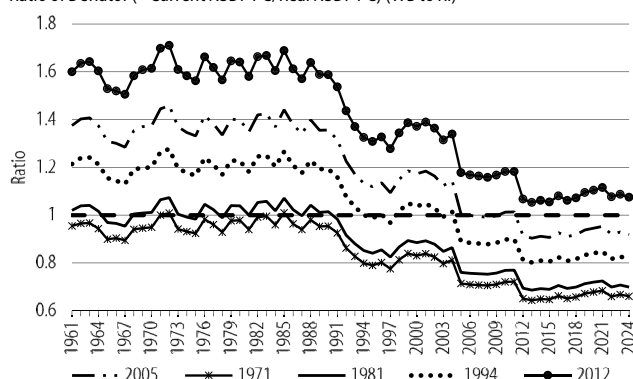
If each state produces one good with a scalar price, the real ratio under any base year equals the nominal ratio scaled by the ratio of base-year prices. The 1971-base real ratio is higher than the 2005-base real ratio simply because West Bengal's output price level relative to the rest of India was higher in 1971 than in 2005—a fact directly visible in the deflator ratio data (Figure A4). The ordering of the series in Figure A3 is an immediate consequence of the ordering of relative base-year price levels. There is also a potential structural explanation: MoSPI's aggregate deflator is implicitly a weighted average of sub-sectoral deflators with base-year output share weights, and because West Bengal's sectoral composition—shifting from industry towards agriculture while the rest of India shifted towards services and manufacturing—differs from the rest of India and changed over time, each successive base year revision assigns West Bengal a higher relative output price level by placing more weight on sectors where the state is closer to the national average. This structural composition story explains the mechanism but relies on sub-sectoral output price data not publicly available. The two explanations—single-good and multi-good structural—are complementary rather than contradictory.

Table A2: West Bengal/Rest of India (WB/RI) Real NSDP Per Capita Ratio, 2005

Base Year	WB/RI (1961)	WB/RI (2024)
1971 prices	1.41	1.15
1981 prices	1.32	1.09
1994 prices	1.11	0.931
2005 prices	0.982	0.828
2012 prices	0.844	0.708

Figure A4: Ratio of West Bengal to the Rest of India Implicit Price Deflator Under Each of the Five MoSPI Base Years

Ratio of Deflator (=Current NSDP PC/Real NSDP PC) (WB to RI)



The series are ordered inversely to the way the real NSDP ratio series is ordered in Figure A3: West Bengal's relative price level was the highest under the 1971 base and lowest under the 2012 base, declining systematically across successive revisions.

To understand this, consider Table A2. It shows the ratio of real NSDP of West Bengal to the rest of India in various base years. If we compare the ratio in 1971 base prices to the one in 1981 base prices, for a specific year's NSDP (say 1961), it shows us the relative price of West Bengal to India across these two base years. Observe that the ratio of West Bengal's real NSDP to that of rest of India depends heavily on which base year is used to deflate the NSDP series. For each subsequent base year, the relative price ratio of West Bengal to India falls. While the table only depicts the numbers using NSDP at the two end points, Figure A3 plots the yearly real NSDP ratio under all five base years, between 1961 and 2024. The 1971-base series lies uniformly above the 2012-base series because West Bengal's output price level relative to the rest of India was higher in 1971 than in every future base year.

We can see from Table A2 that the proportional decline from 1961 to 2024 is similar across base years and is a robust feature of the real data, while the level of the ratio (and hence the rank) is sensitive to the base-year choice. This means that the relative deflator of West Bengal to the rest of India (which is the inverse of the relative output price ratio), as depicted in Figure A4, is increasing systematically from 1971 to 2012 base years.

CPI and MoSPI Derived Implicit Deflators

CPI-AL and CPI-IW are used as an independent cross-check on the price movements implicit in the MoSPI-derived sectoral deflators, since sub-sectoral output price data are not otherwise publicly available. Figures A5 and A6 plot the MoSPI-derived implicit deflator for West Bengal against the corresponding CPI series, for agriculture and manufacturing respectively, over 1971–2014. In both cases, the two series track each other closely, indicating that the CPI series are capturing much the same underlying price movements as the MoSPI deflators, notwithstanding their different construction and coverage.

Figure A5: CPI-AL vs MoSPI Derived Implicit Deflator for Agriculture for West Bengal, 1971–2014

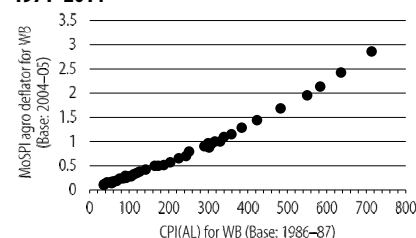


Figure A6: CPI-IW vs MoSPI Derived Implicit Deflator for Manufacturing for West Bengal, 1971–2014

