The Debt Sustainability of West Bengal
An Indicator-based Analysis

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This paper uses the indicator-based approach to assess subnational debt and the fiscal sustainability of West Bengal for the period 2000–01 to 2017–18. The period has been categorised into four phases based on debt sustainability. It is studied here how the state has moved from an "unsustainable" debt burden in the first phase (2000–01 to 2003–04) to more sustainable debt levels by the fourth phase (2010–11 to 2017–18), largely driven by the Fiscal Responsibility and Budget Management Act.

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Different studies have used different approaches to assess debt sustainability. The four common approaches are: (i) the unit root approach (Trehan and Walsh 1991; Uctum and Wickens 2000), (ii) the co-integration approach (Hakkio and Rush 1991; Jha and Sharma 2004), (iii) Bohn's model-based approach (Bohn 1998, 2005; Abiad and Ostry 2005; Greiner and Fincke 2009), and (iv) the indicator-based approach (uses Domar's debt sustainability condition). The first three approaches analyse different empirical conditions to assess debt sustainability, whereas the "indicator-based approach" is an extension of the Domar condition,[1] which analyses various macro-fiscal indicators (reflecting growth, liquidity, credit worthiness, fiscal burden, fiscal space, etc).

Traditionally, debt sustainability is assessed in terms of macro-fiscal indicators that broadly capture the ability of a state government to service its interest payments and repay its debt using current and regular sources of revenue. Alternatively, debt and debt service indicators are monitored to assess the relationship of existing debt to different types of expenditures, or as ratios to various fiscal balances, so as to gauge the sustainability of both the debt and fiscal situation (Rajaraman et al 2005; Maurya 2014; Kaur et al 2017).

This paper presents an analytical framework for assessing the subnational debt and fiscal sustainability of West Bengal for the period between 2000–01 and 2017–18, based on the indicator approach. The paper is arranged as follows: first, we discuss the approach towards debt sustainability using an indicator-based assessment; next, we discuss in detail the debt sustainability of the Government of West Bengal and provide plausible explanations for the behaviour of the indicators during each of those four phases; and finally, we examine some reasons for the low tax to gross state domestic product (GSDP) ratio of the state and provide some concluding observations.

The Indicator-based Approach to Debt Sustainability

This indicator-based analysis is used to study the debt sustainability of West Bengal in the period between 2000–01 and 2017–18. The period is divided into four phases based on trends in debt sustainability indicators. The years in which indicators exhibited a consistent trend have been grouped into one phase. While the first three phases represent the years before the implementation of the Fiscal Responsibility and Budget Management Act (FRBM), 2003, the last phase represents the years after the implementation of the FRBM. The trends witnessed are provided in Table 1 (p 62).

The first phase (2000–01 to 2003–04) saw a significant deterioration in state finances along with a sharp rise in the state's debt service burden. The indicator-based assessment characterises the debt burden of the state during this phase as "unsustainable" due to high revenue deficits. This phase was followed by an improvement in the fiscal position of the state between 2004–05 and 2008–09. This improvement was partially driven by debt-restructuring initiatives undertaken by the central government. However, the debt could have been further reduced if the state government had enacted the FRBM Act, 2003.[3] Unlike the other non-special category (NSC) states, West Bengal failed to enact the FRBM between 2003 and 2007, and hence, it could not reap the benefits of the debt relief recommended by the previous finance commissions. During the next phase (2009–10), the state's finances were severely strained by the effects of the Fifth Pay Commission and the global macroeconomic slowdown. Once the effects of the global financial crisis receded and the new state government came to power, the state started taking corrective measures in the phase from 2010–11 to 2017–18 to restore its fiscal health (including implementing the much-awaited FRBM Act), resulting in an improved debt position. The debt burden of the state has reduced to sustainable levels since then.

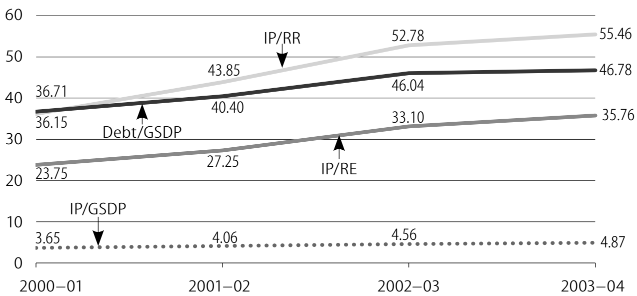
A detailed assessment of the debt sustainability of the state across each of the phases is provided in the following sections.

Phase I: Period of Unsustainable Debt Levels

During this phase, the state exhibited poor fiscal performance. The revenue receipts to GSDP (RR/GSDP) ratio declined from 10.10% in 2000–01 to 8.78% in 2003–04. While the own tax revenue (OTR) of the state grew at 14% and tax devolution at 8%, own non-tax revenue and grants declined by 21% and 16%, respectively, leading to an average annual growth in revenue receipts of only 4.50% during this period. The relevant data points have been taken from the "State Finances: A Study of Budgets" reports published by the Reserve Bank of India (RBI) and data from the Central Statistics Office (CSO), Government of India (GoI) across relevant years.

The compound annual growth rate (CAGR) in revenue receipts (RR) during this period was 4.60% as compared to 5.20% growth in revenue expenditures (RE), leading to a significant revenue deficit of 5.22% of the GSDP.

Figure 1: Unsustainable Debt Levels, 2000–04 (%)



Source: Authors' own calculation based on RBI, "State Finances: A Study of Budgets."

The debt to GSDP ratio of the state increased by a whopping 10 percentage points from 36.71% in 2000–01 to 46.78% in 2003–04 as against the average for NSC states—32% for 2000–04 (Figure 1). The average debt stock to GSDP ratio of the state during this period declined from 42.48% to 26.70% between 1995–96 and 1999–2000.

The debt stock of the state grew at the rate of 19% (CAGR) between 2000 and 2004 as against the GSDP growth rate of 10% during the same period. This significant increase in debt stock was due to the huge annual borrowings of the state on account of the high revenue deficit (5% of GSDP, average 2000–04). The debt to revenue receipts (debt/RR) ratio increased from 3.63% to 5.33% in the same period.

Interest payments (IP) over the same period grew at the rate of 21%, indicating the rising debt servicing burden of the state. Due to this, the IP to RR and IP to RE ratios increased from 36.15% and 23.75% in 2000–01 to 55.46% and 35.76% in 2003–04, respectively, which were the highest among all the states in India. This was primarily due to increasing interest payments, both on account of increasing debt and a high average interest rate of 12.15%.

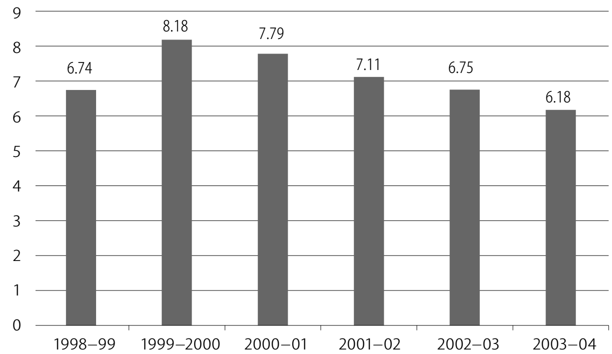
Low revenue along with high expenditure commitments led to an extremely high revenue deficit, and this in turn led to increased borrowings and the use of the same for financing the revenue account. In 2003–04, the gross fiscal deficit stood at 6.87% of the GSDP, whereas the revenue deficit stood at 4.90% of the GSDP. This was second highest among the NSC states after Uttar Pradesh (UP). Also, the capital outlay (CO) to GSDP ratio of the state during this period declined from 0.81% in 2000–01 to 0.40% in 2003–04. The average CO to GSDP ratio during this period was only 0.65%, while it stood at 1.8% for other NSC states.

Table 1: Fiscal Sustainability Indicators for West Bengal

Sl		Indicators	Symbolic Representation	Phase I 2000–01 to 2003–04	Phase II 2004–05 to 2008–09	Phase III 2009–10	Phase IV 2010–11 to 2017–18
(1)		(2)	(3)	(4)	(5)	(6)	(7)
1		Rate of growth of public debt (D) should be lower than rate of growth of nominal GSDP (G)	$D-G<0$	9.24	−2.13	−1.07	−2.34
2		Real rate of interest (r) should be lower than real output growth (g)	$r-g<0$	13.17	−6.97	−6.41	−2.62
3	(a)	Primary balance (PB) should be in surplus	PB/GSDP > 0	−0.03	0.00	−0.03	0.00
	(b)	Primary revenue balance (PRB) should be in surplus	PRB/GSDP > 0	−0.94	0.60	−2.07	0.71
4	(a)	Revenue receipts (RR) as a percentage of GSDP should increase over time	RR/GSDP ↑↑	9.19	10.12	9.26	12.04
	(b)	The public debt to revenue receipts ratio should decline over time[2]	D/RR ↓↓	4.66	4.60	4.54	3.24
5	(a)	Interest burden, defined by interest payments (IP) as a percentage of GSDP, should decline over time	IP/G ↓↓	4.28	4.07	3.34	2.97
	(b)	Interest payments (IP) as a percentage of revenue receipts (RR) should decline over time	IP/RR ↓↓	47.06	40.40	36.04	24.96

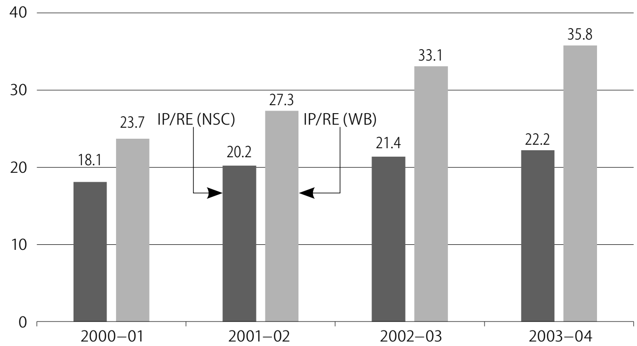
Source : Authors' calculation based on data from the Central Statistics Office and "State Finances: A Study of Budgets" reports, published by the Reserve Bank of India, over various years.

Figure 2: Salaries and Pension as Percentage of GSDP



Source: Authors' calculation based on West Bengal Budget Publication (2000–05).

Figure 3: Interest Payments to Revenue Expenditure (%)



Source: Authors' calculation based on RBI (various years), "State Finances: A Study of Budgets."

The poor fiscal performance of the state during this period resulted in unsustainable levels of debt for the state government.

Reasons for Deteriorating Fiscal Balances and the Rising Debt Burden of the State

Rise in salary and pension expenditure: Consequent to the awards of the Fifth Central Pay Commission, West Bengal implemented its Fourth Pay Commission award, which took effect from 1 June 1999. The implementation of the recommendations, and the state government's commitment to pay salaries, allowances, and other benefits to teachers and staff, resulted in a significant increase in the state's financial burden. The annual expenditure of the state government on salaries, pensions, and other retirement benefits increased twofold from ₹6,177 crore in 1997–98 to a staggering ₹12,239 crore in 2002–03 (Planning Commission 2010).[4] The data has been taken from West Bengal Budget Publication (various years). The pay revision affected the finances of the state adversely between 1998–99 and 2001–02, causing a deterioration in all the deficit indicators. The trend of salaries and pension as % of the gross domestic product has been given in Figure 2.

High interest payments: The interest payments during this period grew by around 21% (CAGR). This was due to the high effective interest rate of 12.15% (average 2000–04) on the borrowings of the state. The trend of interest payments/revenue expenditure (%) is given in Figure 3. In 1992–2000, the state accounted for a significant share of loans from the central government—more than 52% of central loans, excluding the National Small Saving Fund (NSSF)—leading to increased expenditure on debt servicing. The rate of interest on plan and non-plan loans extended to states by the central government averaged 11.60% during 2000–04 as against the interest rate of 8% (weighted average) on market loans (in 2004). This resulted in significantly high interest payments during this period.[5] Also, the share of NSSF loans in outstanding liabilities, which carried an interest rate of 12.50% in 2000–01, was much higher in West Bengal than in other states. The combined share of NSSF and central government loans averaged 60% of debt stock during this period. The interest rates on these were 9.00%–9.50%, higher than the rates on other loans. The relevant data points have been taken from RBI, "State Finances: A Study of Budgets," various years.

Low OTR to GSDP ratio: During the period, OTR accounted for 47% of the revenue receipts of the state. The OTR to GSDP ratio of the state was the lowest (4.27%) among NSC states during the period from 2000–01 to 2002–03. The dismal tax performance in West Bengal was reflected in most of the components of OTR. The low OTR–GSDP ratio of the state was primarily due to a small manufacturing industry and a small consumption tax base. During 2000–01 to 2003–04, manufacturing as a percentage of West Bengal's GSDP was extremely low (10%) compared to other states like Gujarat (29%), Andhra Pradesh (12%), Tamil Nadu (19%), and UP (13%). The share of the registered manufacturing sector to GSDP was abysmally low for West Bengal at 4.96%, whereas states like Gujarat and Tamil Nadu were at 21% and 12%, respectively. In addition, according to the 58th round National Sample Survey Office (NSSO) data (2002), the average monthly per capita expenditure of rural West Bengal was lower than the all-India average and that of some comparable states (Table 2).

Table 2: Average Monthly Per Capita Expenditure, 2002 (₹)

States	Average MPCE (Rural)	Average MPCE (Urban)
Andhra Pradesh	575	989
Gujarat	590	1,229
Tamil Nadu	542	1,072
West Bengal	493	1,066
All India	531	1,012

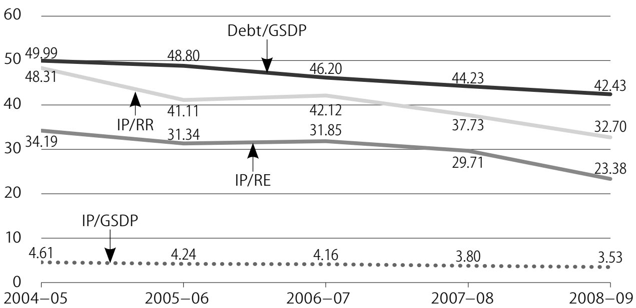
Source: NSSO 58th round, "Household Consumer Expenditure, 2002."

This period featured high, committed expenditure in terms of salaries, pensions, and interest payments, with little increase in revenue receipts. Thus, the state exhibited unsustainable debt levels during this phase.

Phase II: Period of Sustainable Debt Levels

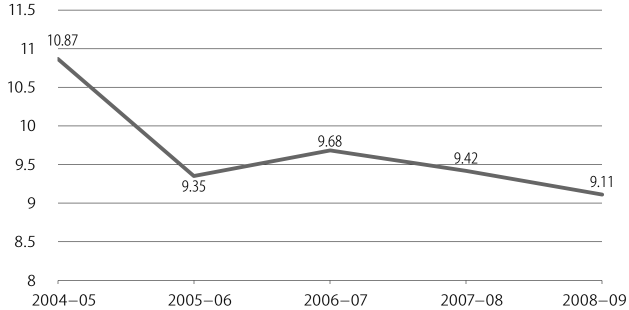
During this period, the revenue receipts to GSDP ratio increased from 9.55% in 2004–05 to 10.79% in 2008–09. The growth in revenue receipts and revenue expenditure during the period were relatively comparable at 16.70% and 16.40%, respectively. This led to a decline in the revenue deficit of the state from 5.22% of the GSDP in the previous phase to 3.50% of the GSDP. A lower dependence on borrowing resulted in a lower

Figure 4: Sustainable Debt Levels, 2005–09 (%)



Source: Authors' own calculation based on West Bengal Budget Publication (2006–11).

Figure 5: Effective Interest Rate, 2004–09 (%)



Source: Authors' calculations based on West Bengal Budget Publication (2006–10).

rate of growth of debt. The net borrowings to GSDP ratio of the state declined significantly from 6.80% in 2003–04 (last year of Phase I) to 3.90% in 2008–09, leading to reduced growth in debt stock at the rate of 11.60% (CAGR) as against GSDP growth of 13.20%.

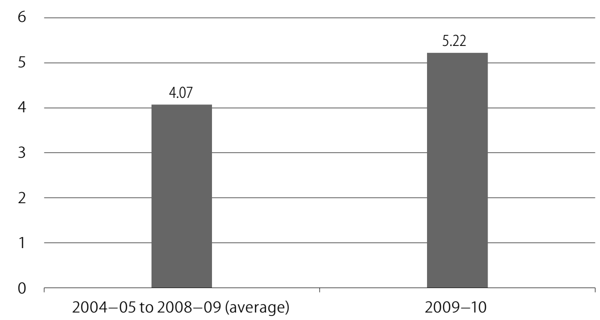
The overall debt position of the state government reversed during this phase as compared to the previous phase (2000–01 to 2003–04). The debt to GSDP ratio of the state declined from 49.99% in 2004–05 to 42.43% in 2008–09 (Figure 4). This data has been taken from West Bengal Budget Publication (various years) and CSO, GoI (various years).

The lower rate of growth in debt and increasing revenue receipts also resulted in a decline in the IP to RR ratio from 48.31% in 2004–05 to 32.70% in 2008–09. Similarly, the ratios of IP to RE and GSDP declined from 34.19% and 4.61%, to 23.38% and 3.53%, respectively. The effective interest rate during 2004–05 to 2008–09 (average) was 9.69%, which was lower than interest rates during the previous phase.

Reasons for Sustainable Levels of Debt during Phase II

Decreasing growth in interest payments: The growth in interest payments declined to 5.60% (average) from 21% in the previous phase (2000–04). The decline in the growth in interest payments was on account of lower effective interest rates. The trend of effective interest rate from 2004 to 09 is given in Figure 5. The effective interest rate during this period was around 9.60%. This was due to the declining share of high-interest central loans in the state's borrowings and the increasing share of low-interest market loans. The calculations are based on West Bengal Budget Publication (various years).

Figure 6: Salary Expenditure to GSDP (%)



Source: Authors' calculations based on West Bengal Budget Publication (2006–12).

Implementation of the Debt Swapping Scheme: The decline in the share of central loans during this period was primarily on account of the implementation of the Debt Swapping Scheme (DSS) by the GoI from 2002–03 to 2004–05. The DSS enabled states to prepay high-cost loans contracted from the central government through low-cost market borrowings and proceeds from small savings.[6] Among the NSC states, West Bengal had the highest proportion of high-cost debt in its total debt (23.2%) as of end-March 2002 as presented in Table 3. This is followed by Gujarat (20%), Maharashtra (19.7%), and Haryana (17.8%). Among the special category (SC) states, Himachal Pradesh had the highest share of high-cost debt to total debt (20.2%), followed by Arunachal Pradesh (18.6%) (RBI 2013).

Over the scheme period (2002–03 to 2004–05), interest savings on account of lower interest payments helped reduce the pressure on the state's revenue account and, thereby, on its overall borrowing requirements.

Revenue deficit grants from the centre: During 2005–06 and 2006–07, the revenue receipts of the state increased on account of higher grants from the central government. The grant amount increased on account of the non-plan revenue deficit (NPRD) grants extended by the central government as per the Twelfth Finance Commission recommendations. The state received NPRD grants of ₹2,438.90 crore and ₹605.82 crore in 2005–06 and 2006–07, respectively. This significantly contributed to reducing the revenue deficit of the state.

Although the CO to GSDP ratio declined marginally from 0.88% in 2004–05 to 0.72% in 2005–06, the fiscal deficit to GSDP ratio of the state drastically reduced from 5.11% in 2004–05 to 4.17% in 2005–06, declining to under 5% for the first time after 1997–98.

Phase III: 2009–10 (Period of Unsustainable Debt Levels)

This phase saw a severe strain on state finances. There was a decline in the RR to GSDP ratio from 10.79% in 2008–09 to 9.26% in 2009–10, while the growth in revenue expenditure was almost the same at 15% of GSDP. This led to the revenue deficit of the state increasing to 5.40% of GSDP, compared to the 3.50% in the previous phase. Meanwhile, the ratio of debt to RR increased from 3.93% in 2008–09 to 4.54% in 2009–10. Revenue deficit and gross fiscal deficit to GSDP also increased from 4.30% and 3.97% in 2008–09 to 5.40% and 6.26% in 2009–10, respectively. Despite the increase in debt undertaken, the CO to GSDP ratio declined from 1.08% in 2008–09 to 0.75% in 2009–10, owing to increased commitments in the revenue account.

Reasons for the Strain on the State's Finances during This Phase

Increased salary expenditure: The Fifth Pay Commission of West Bengal was set up in 2008 to review the recommendations of the Sixth Central Pay Commission. In line with the Fifth Pay Commission's recommendations, wages and pensions were increased in the state in 2009–10, following which the revenue expenditure of the state rose significantly.

The salary expenditure to GSDP ratio of the state during 2004–05 to 2008–09 was 4.07%, which increased to 5.22% in 2009–10 (Figure 6). Also, salary growth increased significantly from 7.89% (average 2004–05 to 2008–09) to 58.92% in 2009–10 due to the implementation of the recommendations of the Fifth Pay Commission. The calculations are based on West Bengal Budget Publication (various years).

Negligible growth in revenue receipts: The revenue receipts of the state grew by only 0.05% between 2009–10 and 2008–09, while OTR increased by 17.20%. The negligible growth in revenue receipts was primarily on account of lower central transfers and a sudden increase in own non-tax revenue in 2008–09. The lower central transfers to the state were primarily due to the economic slowdown resulting from the global financial crisis and the accompanying slowdown in revenue growth for the centre. The tax revenue of the centre grew by only 3% between 2009–10 and 2008–09 due to reduced union excise and custom duties collection. Indirect tax collections of the centre declined by a whopping 10% in the same period. In 2009–10, the tax devolution increased by 2.80%, while grants decreased by 4.20%.

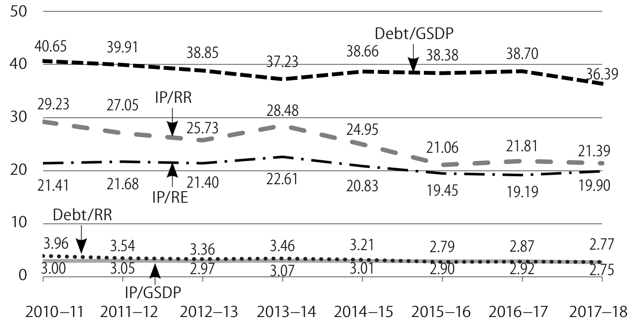
The year 2009–10 proved to be a difficult time in terms of state finances for West Bengal. The national economic slowdown due to the global financial crisis led to lower revenue collection, while there was a considerable increase in expenditure due to the Fifth Pay Commission in 2009–10. In a single year, the annual borrowing of the state increased by 84%, while no significant increase in capital expenditure was seen.

Table 3: Debt Amount of West Bengal as Adjusted under the Debt Swapping Scheme (₹ crore)

Outstanding High-cost Loans as on 31 March 2002	Outstanding High-cost Loans/Outstanding Debt as at End-March 2002 (%)	2002–03 Debt Swapped			2003–04 Debt Swapped			2004–05 Debt Swapped			Total Debt Swapped till March 2005
		AOMB	SSL	Total	AOMB	SSL	Total	AOMB	SSL	Total	
15,413	23.20	0	0	0	3,365	2,142	5,507	2,335	1,333	3,669	9,176

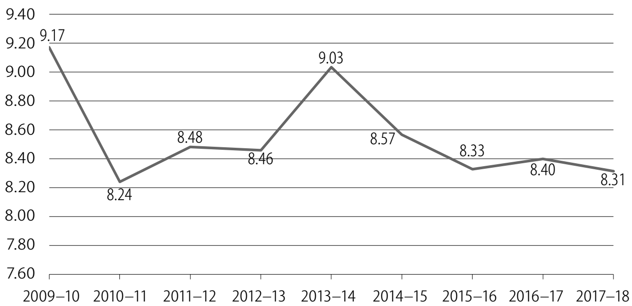
AOMB–additional open market borrowings; SSL–small savings.
Source: RBI (2013).

Figure 7: Sustainable Debt Levels, 2010–18 (%)



Source: Authors' calculations based on West Bengal Budget Publication (2011–20).

Figure 8: Effective Interest Rate (%)



Source: Authors' calculations based on West Bengal Budget Publication (2011–20).

The shock to revenue and expenditure led to a period of unsustainable debt.

Phase IV: 2010–11 to 2017–18 (Period of Sustainable Debt Levels)

The final phase (2010–18) saw a significant improvement in the fiscal situation of the state. All the indicators of debt sustainability showed improvements during this phase.

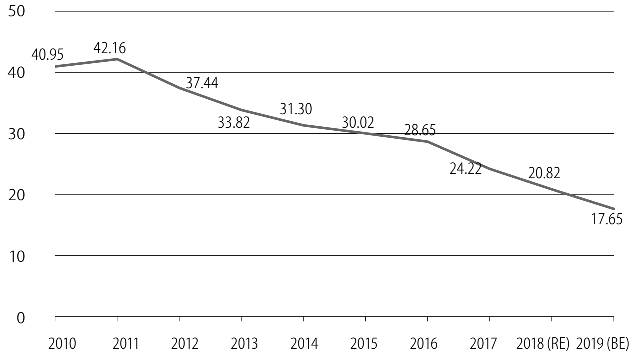
The revenue receipts of the state grew at (CAGR) 15.80% between 2010–11 and 2017–18, while the revenue expenditure grew by only 11.80%. The average revenue deficit over the period was only 2.30% of the GSDP, lessening the need for the state to finance the revenue account through borrowings. The debt to GSDP ratio of the state declined by approximately 4 percentage points from 40.65% in 2010–11 to 36.39% in 2017–18. At the same time, the debt to RR ratio declined from 3.96% in 2010–11 to 2.77% in 2017–18 due to the state's efforts to augment tax revenues to control borrowings (Figure 7). The data has been taken from West Bengal Budget Publication (2011–20).

The growth in interest payments during this period was only 10.65%. The IP to RR ratio declined from 29.23% in 2010–11 to 21.39% in 2017–18. However, the ratio of IP to RE declined from 21.41% to 19.90% during the same period due to a reduced effective interest rate of 8.48%. The ratio of IP to GSDP declined from 3% in 2010–11 to 2.75% in 2017–18 (Figure 7).

Reasons for Improvement in the Debt Sustainability Indicators of the State

Declining effective interest rates: As can be seen in Figure 8, the effective interest rate of the state declined from 9.17% in 2009–10 to 8.31% in 2017–18. The data has been taken from West Bengal Budget Publication (various years). The decline in the effective interest rate resulted in a decreasing growth in interest payments. The reasons for the decline in the effective interest rate have been highlighted below.

Figure 9: Share of Special Securities Issued to NSSF of GoI in Outstanding Liabilities (%)



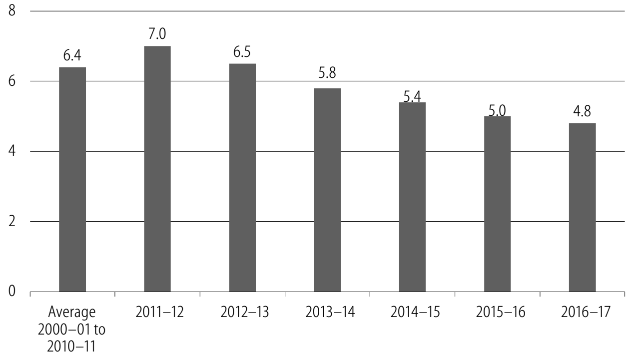
Source: Authors' calculations based on West Bengal Budget Publication (2011–20).

The benefits of the Debt Consolidation and Relief Facility and disintermediation of plan loans: The Thirteenth Finance Commission (2010–15) allowed consolidation of NSSF loans contracted till 2006–07 at 9% interest, in place of the previous rates of 10.50% or 9.50%, and recommended waiver of central government loans administered by ministries other than the Ministry of Finance. It also extended the Debt Consolidation and Relief Facility (DCRF) to central loans and recommended an interest reset to 7.50% for West Bengal and Sikkim, subject to the enactment of the FRBM Act, 2003. As of 31 March 2008, ₹224 crore that had been given to the Government of West Bengal for centrally-sponsored schemes (CSS)/central plan schemes by various ministries (not by the Ministry of Finance), was written off as outstanding.

The disintermediation of plan loans post-FRBM implementation assisted in reducing the state's dependence on central loans. The share of interest payments in internal debt repayments increased from 34.50% in 2000–01 to 88.30% in 2017–18. The share of interest payments on market loans in total interest payments increased from 12.82% in 2000–01 to 59.81% in 2017–18 (RE). In comparison, the share of interest payments on high-cost borrowing, that is, loans from the centre, decreased significantly, thus leading to lower interest payments to the centre. The calculations are based on West Bengal Budget Publication (various years).

NSSF loans: Prior to 2011–12, NSSF was the dominant source from which the state government borrowed, despite it being a high-cost loan. NSSF loans comprised about 43% of the outstanding debt stock of West Bengal. This was mainly because of ease of availability. As can be seen in Figure 9, from 2011–12 onwards, there has been a significant decline in the state's NSSF borrowings, and the loans were discontinued from 2016–17 onwards as per the recommendations of the Fourteenth Finance Commission (2015–20). At present, outstanding loans from the NSSF still constitute about 17.65% of the total outstanding debt

Figure 10: Pension, Wages and Salaries to Gross State Domestic Product (%)



Source: Authors' calculations based on West Bengal Budget Publication (1999–2019).

stock of the state, which is the highest among the NSC states. West Bengal continues to pay a higher interest rate of 9.50% on the outstanding NSSF loans, whereas the interest rate on market loans is only 7.60% (2018–19 weighted average).

Reduction in the share of the committed liabilities of the state: From 2012–13, there have been steady improvements in the ratio of committed expenditures (wages, salaries, and pensions) to the GSDP of West Bengal. During 2001–02 through 2010–11, West Bengal's position in terms of this metric was in the bottom five. Since 2012–13, there appears to be a steady decline in the share of pensions and wages to GSDP (Figure 10). The calculations are based on West Bengal Budget Publication (various years).

Post-devolution revenue deficit grants: The state was awarded revenue deficit grants by the Fourteenth Finance Commission, amounting to ₹8,449 crore and ₹3,311 crore in 2015–16 and 2016–17, respectively, to improve its fiscal balance. This significantly reduced the deficits of the state.

Improved tax to GSDP ratio: An improvement in the tax to GSDP ratio of the state from 4.37% (average 2000–01 to 2009–10) to 5.23% (average 2010–11 to 2017–18) also contributed to higher revenue receipts. Value added tax (VAT) collection and consequently tax revenue has improved after April 2011, immediately after the new government came in power. Some of the primary reasons for the increase in the state's OTR are:

(i) The Directorate of Commercial Taxes achieved multiple reforms like universal computerisation, a comprehensive anti-evasion strategy, enablement of e-application for profession tax enrolment and/or registration and Government Receipt Portal System (GRIPS) implementation. During the period, VAT collection increased from ₹8,515.44 crore in 2010–11 to ₹18,315.15 crore in 2017–18, clocking a 115% increase.

(ii) The Directorate of Registration and Stamp Duty introduced e-Nathikaran in all registration offices. Manual records were digitised and uploaded to the website to facilitate the easy search and verification of registration records. The system was integrated with e-Bhuchitra, the centralised land record system of the land and land reforms department. This was done to have a seamless integration and simultaneous mutation after registering and updating the record of rights. These reforms and initiatives resulted in the doubling of revenue from ₹2,265.21 crore in 2010–11 to ₹4,852.47 crore in 2017–18.

(iii) Similarly, the collections of the excise directorate increased almost five times from ₹1,783.34 crore in 2010–11 to ₹8,700.01 crore in 2017–18 (RE). This growth can be attributed to various process reforms and the introduction of an e-governance initiative (e-Abgari) under which several processes have been digitised, resulting in increased transparency and efficiency. West Bengal has also introduced QR code-based holographic security labels to authenticate imported liquor, leading to the elimination of spurious liquor and avoidance of excise duty. Rationalising the licensing process and setting up the West Bengal State Beverages Corporation were the other reforms that led to higher collections.

Reasons for the Low OTR to GSDP Ratio of West Bengal

One of the major characteristics of the state's fiscal health is its low OTR to GSDP during the entire period. Despite significant efforts to raise tax collection in 2017–18, the OTR to GSDP ratio of the state was 5.13%; this is lower than the NSC average of 6.50% that same year (RE).

The low OTR to GSDP ratio is one of the key reasons for the state's huge debt burden. For the period 2000–01 to 2009–10, despite having a mid-level per capita income and a satisfactory growth of income, the average OTR–GSDP ratio for West Bengal remained below 5%, compared to the nearly 7% average for NSC states. Some of the reasons for the low tax to GSDP ratio have been discussed below.

Low share of the easy to tax sector in GSDP: In the case of West Bengal, the manufacturing sector contributed only 10.28% to GSDP in 2000–01 compared to 20.08% in Tamil Nadu, 14.44% in Punjab, 13.63% in Karnataka, and 12.80% in UP as shown in Table 4. In 2016–17, all the similar category states, except Andhra Pradesh, had much stronger manufacturing sector contributions than West Bengal. The data has been taken from RBI, "State Finances: A Study of Budgets," various years. Although the share of manufacturing in West Bengal's GSDP increased to 11.48% in 2016–17, it was still below the shares achieved by similar category states. States with higher industrial and manufacturing shares in its GSDP collected higher VAT during the period (Table 4).

Table 4: Manufacturing Sector's Share in GSDP (%)

State	2000–01	2016–17
Karnataka	13.63	13.75
Punjab	14.44	13.04
Tamil Nadu	20.08	19.01
Uttar Pradesh	12.80	12.40
Andhra Pradesh	11.38	10.65
West Bengal	10.28	11.48

Andhra Pradesh and Telangana have been considered together for 2016–17.
Source: RBI, "State Finances: A Study of Budgets, 2000–01 and 2018–19."

Higher share of the informal sector in GSDP: Over the years, West Bengal has seen a rapid informalisation of economic activities. The share of industry, particularly registered manufacturing, in the state's GSDP has shrunk drastically.

Within the manufacturing sector, the share of organised/registered manufacturing was only 36.76% in West Bengal compared to 53.79% in Andhra Pradesh in 2016–17 (Table 5).

In the case of West Bengal, the organised manufacturing sector contributed only 4.22% to GSDP in 2016–17 as compared to 8.41% in the case of Karnataka, 11.25% in Tamil Nadu, and 8.08% in UP (Table 6).

The share of industry in the GSDP was the lowest in West Bengal (18.52%) among the comparable states in 2000–01, indicating poor industrial performance. In 2016–17, the share of industry in the GSDP of West Bengal improved considerably, but it still remained low when compared to similar states (Table 7).

Table 5: Share of the Registered Manufacturing Sector in the Total Manufacturing Sector (%)

	(Registered + Unregistered)	
State	2000–01	2016–17
Karnataka	69.12	61.21
Punjab	48.78	52.22
Tamil Nadu	68.76	59.19
Uttar Pradesh	53.36	65.19
Andhra Pradesh	67.26	53.79*
West Bengal	48.17	36.76

Notes and source: Same as in Table 4.

Table 6: Share of Registered M anufacturing Sector in GSDP (%)

State	2000–01	2016–17
Karnataka	9.42	8.41
Punjab	7.04	6.81
Tamil Nadu	13.81	11.25
Uttar Pradesh	6.83	8.08
Andhra Pradesh	7.65	5.73
West Bengal	4.95	4.22

Notes and source: Same as in Table 4.

Table 7: West Bengal's Share in Industry (%)

State	2000–01	2016–17
Karnataka	22.99	21.06
Punjab	22.99	22.19
Tamil Nadu	30.60	31.39
Uttar Pradesh	22.24	25.09
Andhra Pradesh	22.75	20.85
West Bengal	18.52	20.72

Notes and source: Same as in Table 4.

Low monthly expenditure on taxes and cesses: The consumption patterns of states play a crucial role in determining tax collection. Indirect taxes are a major component of revenue. They are more related to consumption than income.

In terms of a broad division between food and non-food expenditure, the expenditure on food as a percentage of the total expenditure is higher in West Bengal than the national average. As per the 68th NSSO report (July 2011–June 2012), in West Bengal, the share of expenditure on food, which is mostly non-taxable or falls under the low-tax slab, is 44.24% in rural areas and 58.24% in urban areas, as against the all-India figures of 42.62% and 52.90%. In addition, the monthly per capita expenditure (MMRP) on non-food items is ₹538.93 and ₹1,444.84 in rural and urban West Bengal, respectively, as against ₹673.47 and ₹1,508.78 in rural and urban India. This wide gap in expenditure on non-food items leads to the lower collection of indirect taxes.

West Bengal is the state where households spend the least on taxes and cesses among the NSC states. The average monthly per capita expenditure on taxes and cesses in urban areas in West Bengal is ₹9.67, which is much below the national average (₹21.54) and the average for NSC states (₹17.69). In rural areas, the figures are ₹0.88, ₹3.53, and ₹6.13 for West Bengal, India, and NSC states, respectively. West Bengal's figure is fourth lowest among NSC states (Table 8, p 69).

Low tax rates on cereals and pulses and other commodities: Consumption of cereals and pulses are exempted from tax in West Bengal (Dwibedi et al 2016). This has serious implications

Table 8: Share of Food in Total Expenditure and Monthly Per Capita Expenditure on Taxes and Cesses, 2011–12

NSC States/India	Share of Food in Monthly Per Capita Consumer Expenditure (%)		Monthly Per Capita Expenditure on Taxes, Cess, etc	
	Urban	Rural	Urban	Rural
Andhra Pradesh	42.29	51.40	21.39	6.38
Bihar	50.52	59.25	1.66	0.01
Chhattisgarh	42.18	52.74	16.90	1.46
Goa	47.42	48.77	38.13	36.57
Gujarat	45.22	54.88	17.64	5.47
Haryana	39.16	52.08	17.44	2.36
Jharkhand	46.54	58.39	4.16	0.95
Karnataka	40.08	51.35	35.51	9.00
Kerala	36.97	42.99	18.73	8.31
Madhya Pradesh	42.20	52.90	14.12	1.63
Maharashtra	41.56	52.42	47.30	14.12
Odisha	45.43	57.16	9.85	0.70
Punjab	40.98	44.05	10.03	8.69
Rajasthan	44.77	50.48	11.83	2.71
Tamil Nadu	42.69	51.48	16.23	4.68
Uttar Pradesh	43.99	52.96	10.10	0.31
West Bengal	44.24	58.24	9.67	0.88
Average of NSC states	42.81	51.27	17.69	6.13
India	42.62	52.90	21.54	3.53

Source: NSSO 68th round, "Household Consumer Expenditure, July 2011–June 2012."

for tax revenue in West Bengal, which has a population of more than eight crore. Similarly, per capita consumption patterns for many taxable commodities in West Bengal vary significantly from those in similar category states, leading to the low collection of taxes. For example, the per capita consumption of electricity and the number of households using electricity as a source of lighting does reflect in the consumption of electrical appliances and electronic items in a state. Higher per capita electricity consumption directly increases the taxable capacity of these states, as electric goods are usually taxed at higher rates (13.50%/14.50%). This is also true for the consumption of alcohol (Dwibedi et al 2016).

Lower consumption of taxable commodities: When comparing West Bengal's tax efforts to that of other states, it is important to examine certain patterns of consumption and expenditure. For example, by comparing the VAT schedules of West Bengal and Andhra Pradesh, Dwibedi et al (2016) argue that 54.90% of the monthly per capita consumption is taxable in Andhra Pradesh, while the figure for West Bengal is 43.90%. Thus, in West Bengal, consumption of goods that are not taxable is higher, thus limiting the tax collection of the state.

Low consumption of alcohol: Marjit et al (2013) indicate that in Andhra Pradesh, an individual from a rural area on average spends 2.68% of his total consumption expenditure on alcohol and the corresponding figure for urban areas is 1.12%. For West Bengal, the corresponding figures are much lower at 0.64% and 0.26%. The lower consumption pattern significantly affects excise revenue collection. Although the state has undertaken a host of excise reforms leading to a fivefold increase in state excise collection during Phase IV, the collection is still low when compared to other states. In 2017–18, the state excise collection as a percentage of GSDP for West Bengal was 0.93%, which is lower than that of other states like Karnataka (1.32%), Punjab (1.07%), and UP (1.19%).

Low consumption of motor vehicles: In terms of registered motor vehicles per 1,000 km of road length and per 1,000 population, West Bengal is well below the national average and the NSC states' average, and is ranked both lowest and second lowest, respectively, among NSC states. Thus, the state loses out on the revenue from motor vehicle registrations, fines, and fuel. The revenue generated per registered motor vehicle in West Bengal is ₹2,554.02, which is much higher than the national average of ₹1,347.64 (Table 9). However, the low consumption of motor vehicles adversely impacts the indirect tax collected by the state.

Concluding Observations

The assessment of Phase IV reveals interesting trends. From 2000–01 to 2010–11, indicators of debt sustainability moved from unsustainable levels (from 2000 to 2004) to sustainable levels (between 2005 and 2009), partly on account of policy measures related to subnational borrowing and consolidation of debt introduced by the central government. Since 2010–11, the debt burden of the state has shown significant improvements due to the active measures undertaken by the state government to restore West Bengal's fiscal health. Due to the efforts of the new government, the debt has been classified as sustainable, based on the debt indicator assessment analysis from 2010–11 to 2017–18.

It is important to note that while the significant fiscal reform measures undertaken by the state have led to improvements in tax collections since 2011–12, the OTR to GSDP ratio continues to be low, because of the weak linkage between GSDP growth and growth in the state's tax revenues. This is primarily due to the fact that in the case of West Bengal, the presence of a large informal sector means that GSDP is not a good proxy for the tax base.

From 2020–21, the state is expected to have to deal with significant repayment pressure, meaning that it will have to manage its finances prudently and efficiently. Over the nine-year period, from 2020–21 to 2028–29, market loan repayments will grow at a CAGR of 21.10%, and the repayment obligations in 2021–22 will increase by close to twofold compared to 2017–18. The sustained lockdown on economic activities due to the outbreak of COVID-19 pandemic has resulted in a severe economic slowdown at both the national and subnational levels. This presents great challenges for subnational fiscal recovery. It will have to be calibrated carefully to maintain a balance between revenue expenditure and capital expenditure.

Table 9: Road Transport and Revenue Details: West Bengal and All-India, 2011–12

	Road Density (km per 1,000 sq km)	Road Density (km per 1,000 population)	Surfaced Road (As % of Total)	Registered Motor Vehicles per 1,000 km of Road Length	Registered Motor Vehicles per 1,000 Population	Revenue Realised per Registered Vehicle (₹)
West Bengal	3,554	3.49	41.82	12,241	43	2,554.02
India	1,480	4.03	55.46	32,781	132	1,347.64

Source: CSO, "Infrastructure Statistics, 2014."

NOTES

1 The debt or deficit will not be sustainable in the long run unless the growth rate of GDP exceeds the effective interest rate on public debt given zero primary deficit (Domar 1944).

2 Definition of public/outstanding debt – cumulative of net borrowings + liabilities in public fund = loans from the centre + internal liabilities + ways and means advances from GOI + small savings and state provident funds.

3 West Bengal was the only non-special category state that was not eligible for the Debt Consolidation and Relief Facility scheme until it enacted the State Fiscal Responsibility and Budget Management Act in 2010.

4 West Bengal Development Report, Planning Commission, Government of India, 2010.

5 Interest rates for GOI loans: 1 June 1998 to 31 March 2001—12.5%; 1 April 2001 to 31 March 2002—12%, 1 April 2002 to 31 March 2003—11.5%, 1 April 2003 to 31 March 2004—10.5%.

6 However, it needs to be noted that while the state could swap ₹9,176 crore of its high-cost debt, this scheme was debt neutral in its impact, as it involved swapping of one form of debt with another of an equal magnitude.

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