

# States of growth 2.0

The scorecard, and the workout on how each state got to where it has

January 2019



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# Executive summary

Our previous report in January 2018 focussed on gross domestic product (GDP) growth, inflation and fiscal health of states between fiscals 2013 and 2017.

In *States of growth 2.0*, we focus on how macroeconomic performance evolved in fiscal 2018, and offer insights on expenditure patterns, quality of spending, and fiscal sustainability.

States are also benchmarked against national trends in key metrics, which have yielded interesting contrasts.

Defying the national trend of slowdown in GDP growth in fiscal 2018, 12 out of 17 non-special states<sup>1</sup> saw faster growth in fiscal 2018 compared with the previous five years.

But this growth hasn't been equitable. Low-income states have not sustained high growth long enough to meaningfully bridge the per capita income gap with the high-income states. In fact, the chasm has widened.

Growth has also not quite been beneficial for job creation for the majority of states. Eleven of 17 states recorded lower than all-India growth in 'employment-intensive' sectors (namely manufacturing, construction and trade, hotels transport and communication services).

As for inflation, it fell across all states in fiscal 2018, compared with five years ago. However, significant inter-state differences persist with the highest consumer inflation in Kerala at 6% and the lowest in Odisha at 2.2%.

But on the fiscal front, most veered off the Fiscal Responsibility and Budget Management Act (FRBM) line.

With little fiscal legroom for the Centre, states are now the new engines of government spending (over 65% in total government spending).

Rajasthan, Jharkhand and Uttar Pradesh topped the tally in proportion of capex in state spending in the past three years.

But most states are not spending as they ought to, in areas such as health, irrigation, and education.

Finally, while the FRBM Act had helped states recover their fiscal health considerably, recent trends show they are slipping. Debt ratios (debt/GDP) have risen in many states – with the assimilation of Ujwal Discom Assurance Yojana (UDAY), farm loan waivers, and Pay Commission hikes.

In fact, Punjab, Rajasthan and Kerala had debt ratios of over 30%, while Chhattisgarh, Maharashtra and Karnataka had kept it relatively low.

For most states, an increase in the primary deficit (which captures the current fiscal stance of the government) was the major cause for rise in the debt ratio.

Therefore, states must focus on improving their primary account balance, which would require relentless efforts to shore up tax revenue. Many states have come up short on this count even as devolutions from the Centre have risen.

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<sup>1</sup>States under the non-special category given by Reserve Bank of India (except Goa) have been considered in this report

# 1. State macros

## Reading the vital signs

The three macroeconomic yardsticks – growth, inflation, and fiscal deficit – form the basic grid of our analysis of states.

We first take stock of states' performance in fiscal 2018, vis-à-vis the average of the previous five years, on each of these measures.

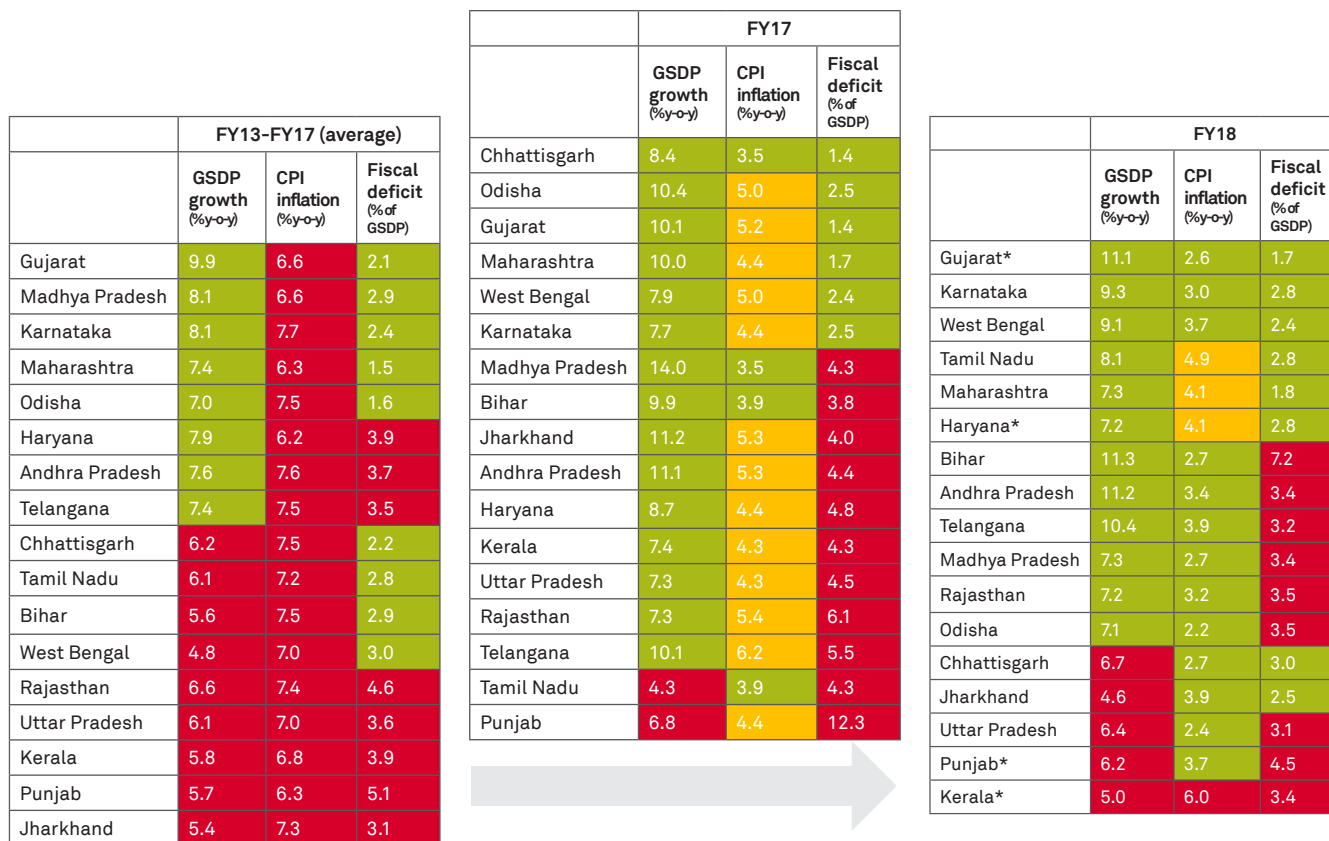
If we juxtapose the rankings on growth, inflation, and fiscal deficit, we find that:

- On all counts, Gujarat and Karnataka remained among the top three performing states in fiscal 2018
- Madhya Pradesh, which was among the top three earlier, slid in fiscal 2018, owing to slowdown in GSDP growth and slippage on fiscal deficit
- West Bengal gained a foothold into the top three with an all-round turnaround – GSDP grew 9.1% on-year in fiscal 2018 compared with 4.8% earlier, even as inflation dropped sharply to sub-4% from 7%; and fiscal deficit to 2.4% from 3%
- Kerala and Punjab stayed stuck in the bottom three

**Table 1.1 - How states' macros changed in FY18 compared with the previous 5 years**

**Trading places**

Standings in FY18 vs the previous five fiscals



**a. GSDP growth:**

- GSDP growth > All India GDP growth for the given period (6.9% for FY13-FY17, 7.1% for FY17, and 6.7% for FY18)
- GSDP growth <= All India GDP growth

**b. CPI inflation:**

- Inflation <= 4%
- 4% < Inflation < 6%
- Inflation >= 6%

**c. Fiscal deficit:**

- Fiscal deficit <= 3% of GSDP
- Fiscal deficit > 3% of GSDP

Note: \*GSDP growth is CRISIL's estimate where data was unavailable for FY18; States are ordered starting from the ones classified green under all three parameters to the ones ranking red in all. FY18 fiscal deficit numbers are revised estimates  
Source: Central Statistics Office (CSO), Reserve Bank of India (RBI), CEIC, CRISIL

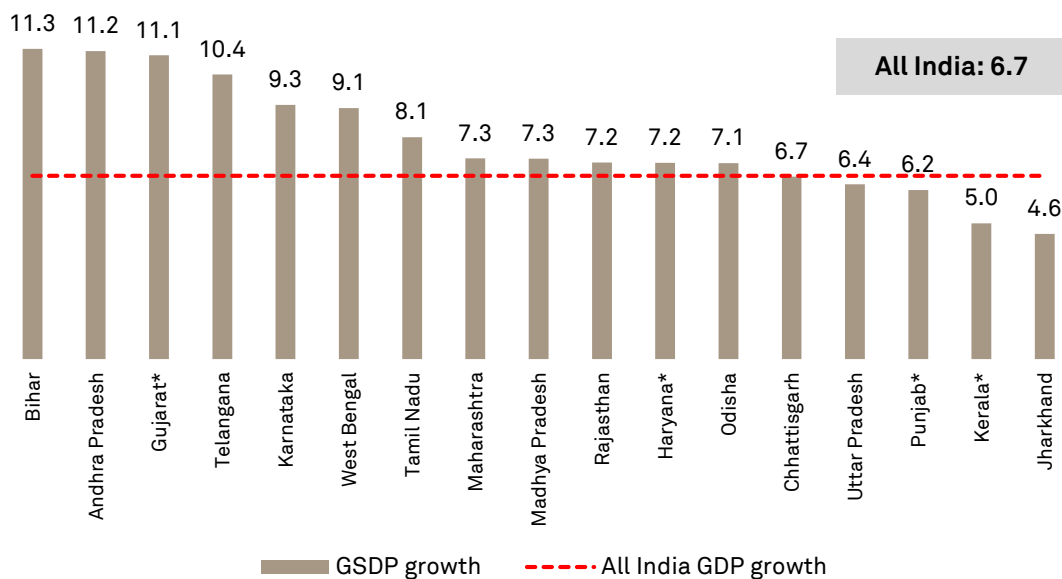


## Growth: The sum of moving parts

In fiscal 2018, Bihar, Andhra Pradesh, and Gujarat were top-rankers in terms of GSDP growth among the 17 non-special states<sup>2</sup> considered in our analysis. Jharkhand, Kerala, and Punjab were at the bottom.

**Chart 1.1 - GSDP growth across states in FY18**

**Bihar, Andhra Pradesh and Gujarat led in fiscal 2018**



Note: \*GSDP growth is CRISIL's estimate where data was unavailable for FY18 (namely Gujarat, Haryana, Kerala, and Punjab)  
Source: CSO, CEIC, CRISIL

How does this picture compare with the past five years?

Between fiscals 2013 and 2017, Gujarat, Madhya Pradesh and Karnataka were the top growing states, on average. All three managed to maintain GSDP growth higher than the all-India GDP growth in fiscal 2018.

West Bengal, Jharkhand and Bihar had ranked at the bottom in the past five years. Among these, Bihar and West Bengal saw growth rise much above all-India growth in fiscal 2018, while Jharkhand remained at the bottom.

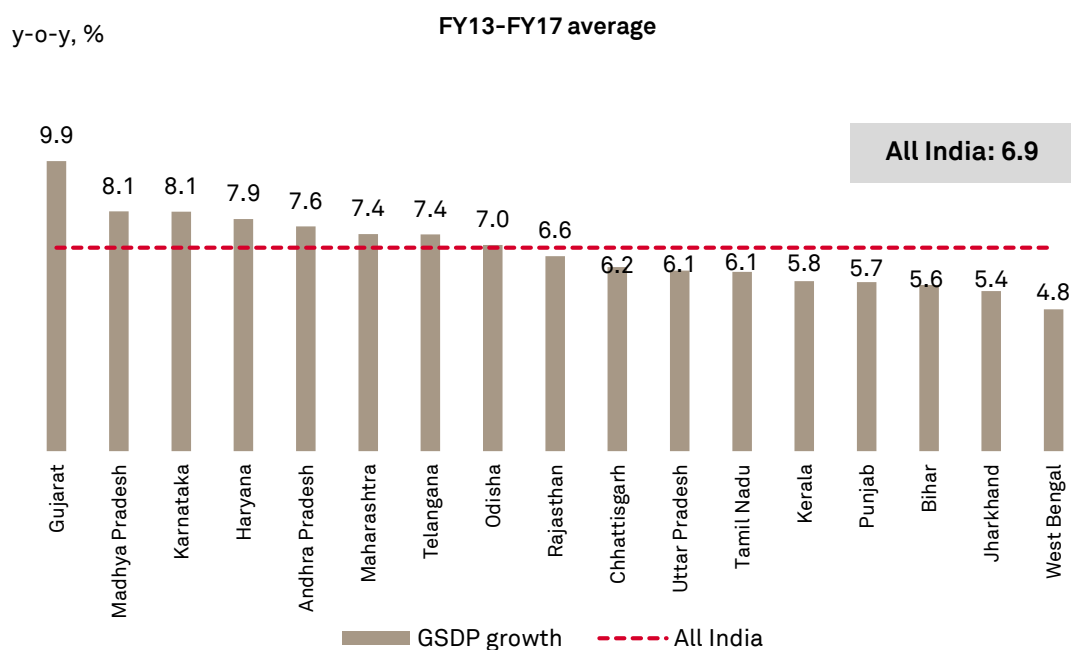
Which sectors spurred growth in the fastest-growing states? In Gujarat, manufacturing was the main driver, in Karnataka, real estate, ownership of dwellings and professional services, while in Madhya Pradesh, agriculture and allied activities drove growth on average. Among the laggards, West Bengal was dragged down by public administration, Jharkhand by electricity and other utilities, and Bihar by construction activities.

<sup>2</sup>As classified by the RBI

Twelve out of 17 states saw faster growth in fiscal 2018 compared with the previous 5 years. This is despite the fact that all-India GDP growth was lower in fiscal 2018 compared with the previous 5 years.

**Chart 1.2 - GSDP growth between FY13 and FY17**

**Leaders and laggards of the past five years**



Source: CSO, CEIC, CRISIL

**Was growth more equitable?**

Not really.

For equitability to be established, income levels of low income<sup>3</sup> states must move or “converge” towards that of high-income states. And that would happen with faster GSDP growth in the former for a sustained period. But the evidence shows to the contrary.

To see the progress on convergence, we have divided the past decade into two time periods: fiscals 2008-2013, and fiscals 2013-2018. For each of these periods, we have plotted per capita income in the starting year on horizontal axis, and average growth in per capita income in the following five years on the vertical axis for the 17 states (see graphs below).

A downward sloping trendline on this plot indicates convergence. It implies states that started with lower per capita income in the first year are showing higher growth in the following five years. An upward sloping trendline, on the other hand, indicates divergence.

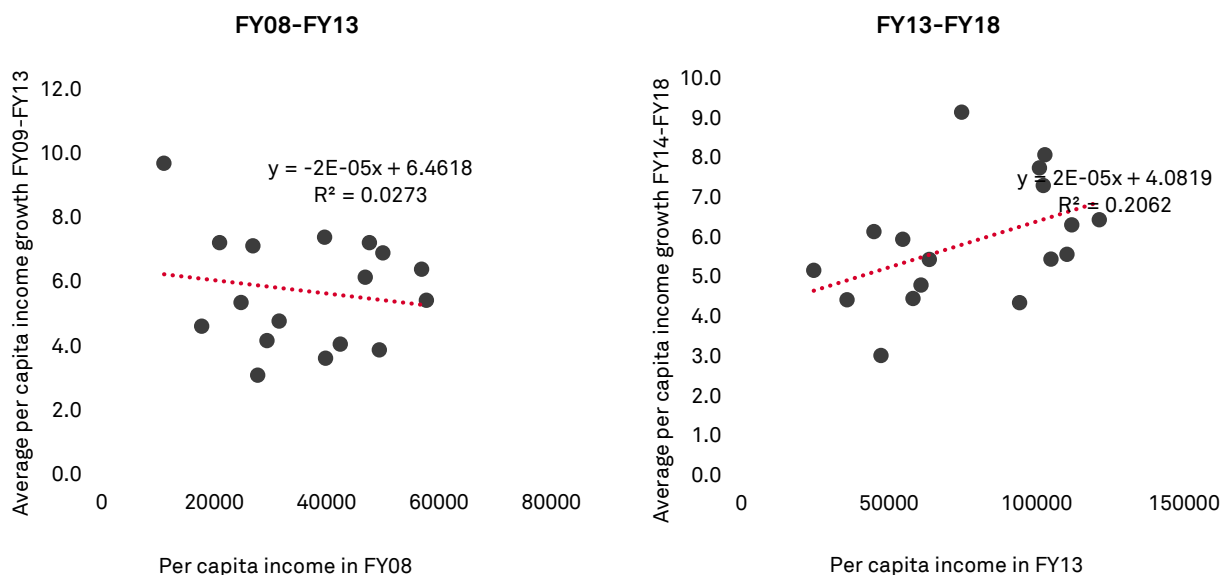
The graph displays a weak convergence between fiscals 2008 and 2013, and thereafter, a weak divergence<sup>4</sup>. Which is to say, while the gap between the low-income and high-income states narrowed slightly before fiscal 2013, it has been widening since then.

<sup>3</sup>Low income refers to state's per capita income lower than all-India average, and vice-versa for high-income states

<sup>4</sup>Statistically speaking, the relationship in the second period is slightly more robust than the first period. (as indicated by a higher R<sup>2</sup>)

**Chart 1.3 - Progress on income convergence at state level**

**Convergence still a distant goal**



*Note: Per capita income refers to per capita Net State Domestic Product at state-level, and per capita Net National Product at national level. Per capita income level (on horizontal axis) is at current prices and growth (on vertical axis) is at constant prices. Data for the chart on the left is on 2004-05 base, and chart on the right on 2011-12 base. For states where FY18 data was not available average growth in second chart is between FY13 and FY17.  
Source: CSO, CEIC, CRISIL*

**How individual states fared on convergence**

Consider the two graphs below that pit the per capita income of the states against that of the nation and its growth, in 2 time buckets.

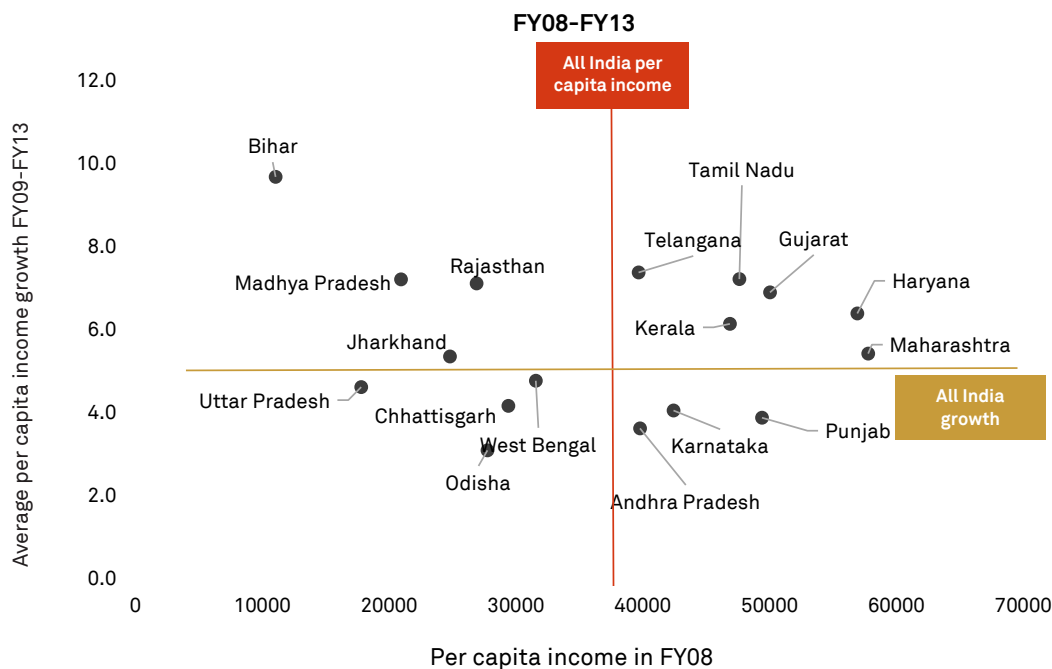
In fiscal 2008, 8 of 17 states had per capita income lower than the national average (states on the left of the red vertical line). Of these, only 4 grew faster than the all-India rate in the following 5 years.

This means that only half of the low-income states started catching up with faster growth. These states were Bihar, Madhya Pradesh, Rajasthan, and Jharkhand. Uttar Pradesh, Chhattisgarh, West Bengal, and Odisha continued to lag.

However, among the 9 high-income states which had higher per capita income than national average in fiscal 2008, 6 recorded faster growth in the following five years. These were Tamil Nadu, Telangana, Gujarat, Kerala and Haryana and Maharashtra.

**Chart 1.4 - Where each state stood on the path of convergence FY08-FY13**

**Four low-income states outperformed all-India growth in the decade's first half...**



*Note: Per capita income refers to per capita Net State Domestic Product at state-level, and per capita Net National Product at national level. Per capita income level (on horizontal axis) is at current prices and growth (on vertical axis) is at constant prices. Data is on 2004-05 base. Source: CSO, CRISIL*

None of the low-income states in fiscal 2008 transitioned to becoming high-income states by 2013. They remained on the left of the red line for both the periods.

Now for the next five years.

Of 8 low-income states in fiscal 2013, only 2 (Madhya Pradesh and Odisha) recorded marginally faster growth than the all-India rate in the following five years.

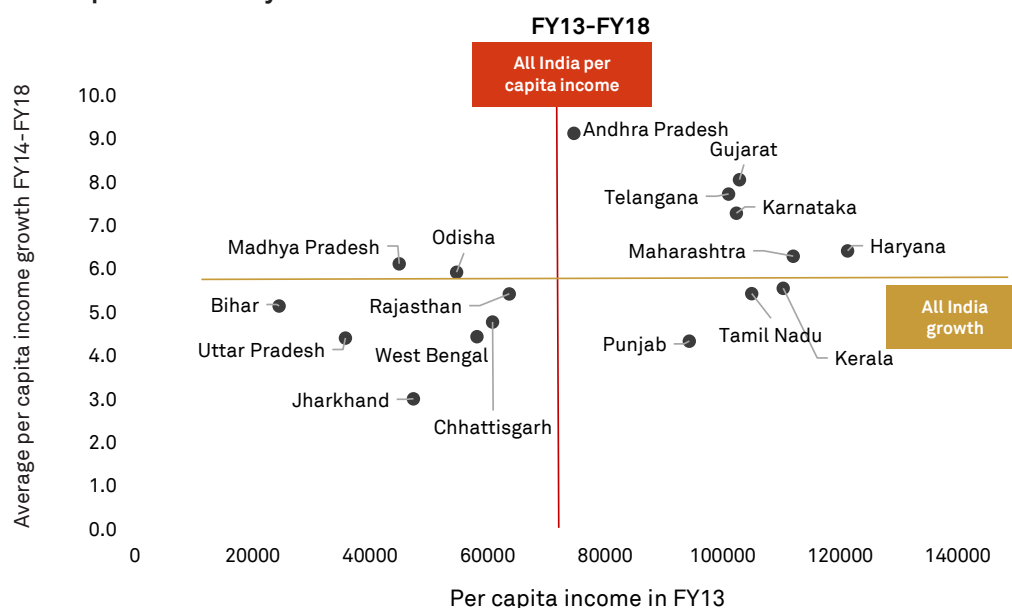
Bihar, Rajasthan and Jharkhand slipped from faster growth between fiscals 2009 and 2013 to slower growth than all-India growth between fiscals 2014 and 2018 on average.

In contrast, 6 out of 9 high-income states recorded faster growth.

In sum, these charts testify that the gap between high-income and low-income states widened further between fiscals 2013 and 2018. Growth in low-income states slipped, even as that in high-income states continued to stay robust.

**Chart 1.5 - Where each state stood on the path of convergence FY13-FY18**

...compared with only two in the second



Note: Data is on 2011-12 base  
Source: CSO, CEIC, CRISIL

This is also evident in the table below, which gives the difference in each state’s per capita income with national average. Firstly, states with lower per capita income than national level (indicated in red) in FY03 continued to have lower income in the following years. The converse has held true for high-income states. In other words, states in red remained red, and states in green remained green. Secondly, low-income states went further below the all-India level, and high-income states rose further above the all-India level in subsequent years (as shown by the increasing magnitude of the gap from FY03 to FY18 for all states). This clearly shows a widening gap between the high-income and low-income states.

**Table 1.2 - State-wise difference with national per capita income**

State	Difference with national per capita income (Rs)			
	FY03	FY08	FY13	FY18
Andhra Pradesh	549	3955	3704	29219
Bihar	-11955	-24774	-46496	-73975
Chhattisgarh	-5883	-6440	-10134	-20800
Gujarat*	3798	14191	31843	52657
Haryana*	11548	21092	50286	76304
Jharkhand	-7050	-11036	-23623	-49081
Karnataka	736	6594	31336	68953
Kerala*	4599	11040	39331	59605
Madhya Pradesh	-6582	-14890	-26052	-32928
Maharashtra	7130	21935	40997	67761
Odisha	-7197	-8090	-16280	-31844
Punjab*	10424	13555	23335	25020
Rajasthan	-5757	-8943	-7325	-12284
Tamil Nadu	2945	11781	33960	54099
Telangana	NA	3827	30024	68199
Uttar Pradesh	-8237	-18040	-35171	-57496
West Bengal	-108	-4258	-12788	-17273

● State’s per capita income less than all-India      ● State’s per capita income more than all-India

Note: \*data for FY17; Data is at current prices; data for fiscal 2003 is on 1999-00 base, fiscal 2008 on 2004-05 base, and fiscals 2013 and 2018 on 2011-12 base.  
Source: CSO, RBI, CEIC, CRISIL

## Did growth create jobs?

To get a sense of how successful states have been in generating employment, we analyse their growth in sectors that generate the most employment – or the “employment-intensive” sectors.

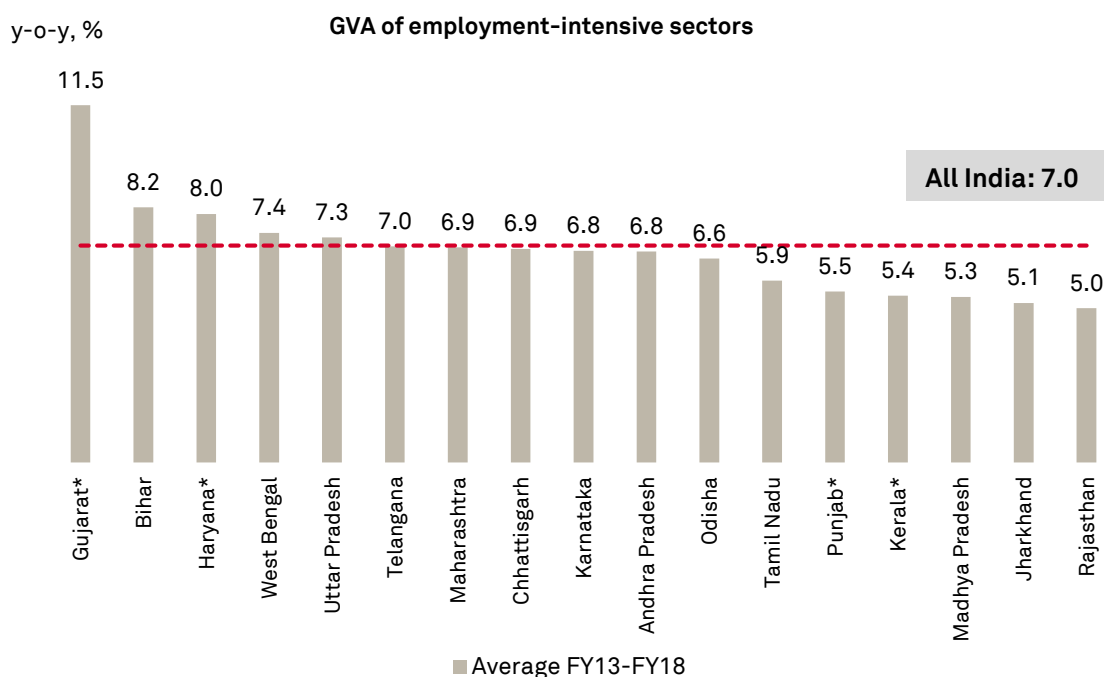
Construction, manufacturing, and trade, hotels, transport and communication services have the highest employment-intensity, as per CRISIL’s estimates<sup>5</sup>. In the chart below, we have aggregated the gross value-added (GVA) of these three sectors for each state, and compared the average growth seen between fiscals 2013 and 2018.

Gujarat, Bihar, and Haryana topped GVA growth in these sectors, on average, suggesting that growth could have been more employment generating relative to other states.

Rajasthan, Jharkhand and Madhya Pradesh recorded the lowest growth.

**Chart 1.6 - State-wise growth in employment-intensive sectors**

**Gujarat, Bihar, and Haryana lead in employment-generating sectors**



Note: \*average is till fiscal 2017, due to unavailability of fiscal 2018 data.  
Source: CSO, CEIC, CRISIL

<sup>5</sup>Employment intensity is defined as number of workers required to produce Rs 1 million of real output. CRISIL has estimated employment intensity of construction to be 12, manufacturing 7, and trade, hotels, transport and communication services 5. Among other sectors, public administration and other services has employment intensity 3, financial, real estate and professional services 1, and electricity and other utilities 1. Agriculture has been excluded from the comparison. Employment intensities are computed using the ‘Employment and Unemployment Situation in India, 2011-12’ by National Sample Survey Office.

Comparing the growth in employment-intensive sectors with overall GSDP growth, we find the growth in most states was not employment generating. Between fiscals 2013 and 2018, 8 states recorded higher GSDP growth than all-India. But only 2 – Gujarat and Haryana – recorded faster growth than the national average in employment-intensive sectors.

For Gujarat, at a sub-sectoral level, high growth was mainly driven by industries, which employ relatively less workers. GVA growth was mainly driven by manufacturing sector, within which petroleum products refining is the largest contributor. However, while petroleum products contributes almost half of total manufacturing value-add<sup>6</sup>, it employs only 1% of total workforce<sup>7</sup>. Textiles, which had the largest employment share (~19%), contributed only 6% in manufacturing value-add in the state.

Haryana’s growth was relatively more employment-intensive. Similar to Gujarat, high growth was driven by manufacturing. However, within manufacturing, the largest contributor was motor vehicles (~29% of value-add), which also employed the largest proportion of workforce (~20%).

Among the 10 states which had low GSDP growth, only 3 recorded higher GVA growth in employment-intensive sectors compared with the national average.

**Table 1.3 - Comparing overall GSDP growth with growth in employment-intensive sectors**

**Only two fast-growing states saw employment-intensive growth**

FY13-FY18 average	GVA growth in employment-intensive sectors		
	Low	High	
Overall GSDP growth of state	Low	Chhattisgarh	Bihar
		Jharkhand	Uttar Pradesh
		Kerala	West Bengal
		Punjab	
		Rajasthan	
		Tamil Nadu	
	High	Andhra Pradesh	Gujarat
		Karnataka	Haryana
		Madhya Pradesh	
		Maharashtra	
		Odisha	
		Telangana	

Note: Low growth is defined as lower than all-India average growth during the period, and vice-versa.  
Source: CSO, CEIC, CRISIL

<sup>6</sup>Given by share of the industry in total net value added by manufacturing industries

<sup>7</sup>Given by share of the industry in total persons employed in the state

## Inflation: The balancing act

In fiscal 2018, inflation was the highest in Kerala, Tamil Nadu, and Haryana.

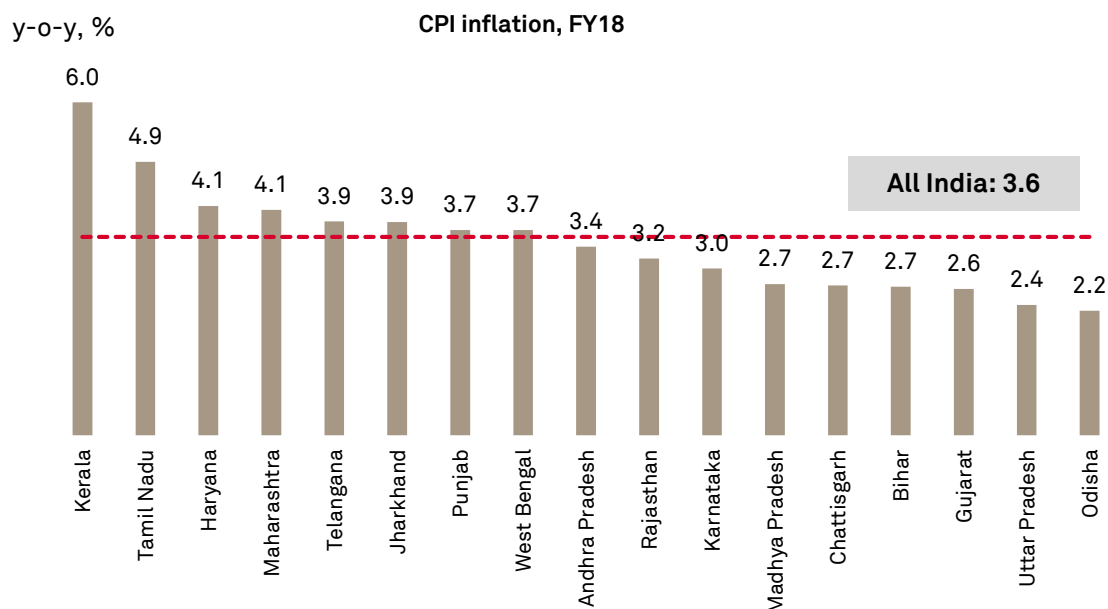
It was the lowest in Odisha, Uttar Pradesh, and Gujarat.

Indeed, Kerala and Tamil Nadu aside, inflation was benign (below 4.5%) in all states last fiscal.

Inflation was high in Kerala because of rigidity in food and beverages and urban housing. In Tamil Nadu, it was high fuel and light inflation.

**Chart 1.7 - Inflation across states in FY18**

**Inflation under control, barring in Kerala and Tamil Nadu**



Source: CSO, CEIC, CRISIL



Significantly, inflation has also fallen in all states in fiscal 2018 compared with fiscal 2013.

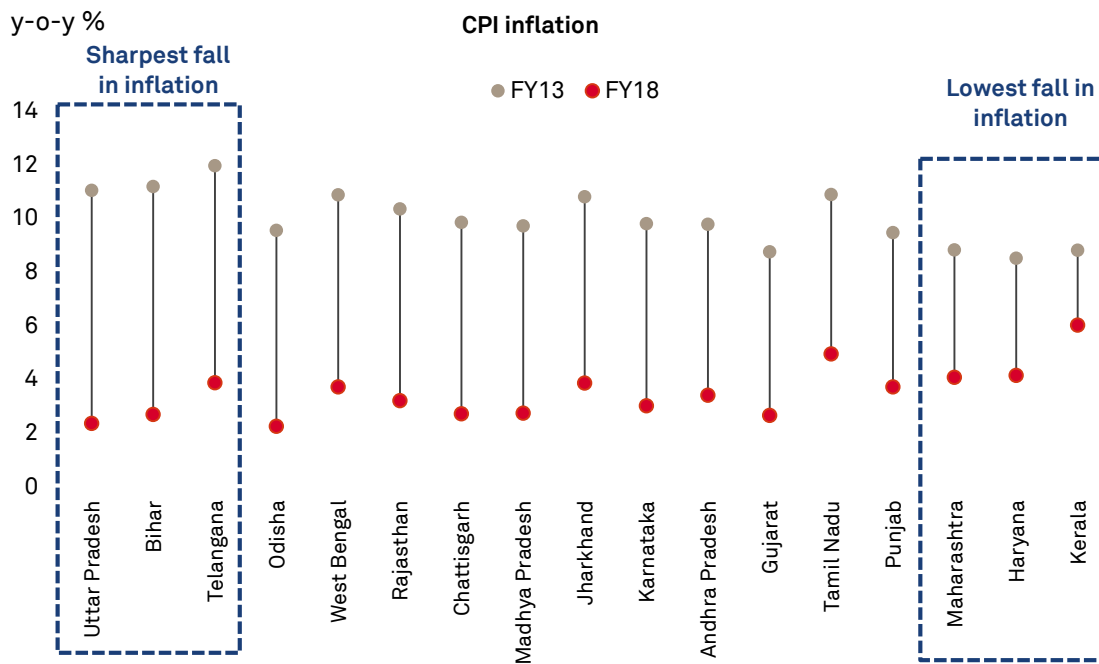
Uttar Pradesh, Bihar and Telangana saw the sharpest fall; Kerala, Haryana, and Maharashtra, the least.

The decline came despite GSDP growth rising in most of the states. Except for five states<sup>8</sup>, GSDP growth in fiscal 2018 was higher than five years ago, for all.

This is strongly suggestive of an improving growth-inflation mix across states.

**Chart 1.8 - Inflation in FY18 vs FY13**

**And they all fall down**



Source: CSO, CEIC, CRISIL

However, as noted in a recent RBI paper<sup>9</sup>, while average inflation has come down across states, volatility in inflation has risen. That, in turn, has been caused by volatility in food inflation.

<sup>8</sup>Namely Madhya Pradesh, Haryana, Jharkhand, Kerala and Maharashtra  
<sup>9</sup>Reserve Bank of India (November 2018). Regional inflation dynamics in India. RBI November Monthly Bulletin

## Fiscal deficit: Burning at both ends

Overall, the fiscal situation has been deteriorating for all states since fiscal 2013.

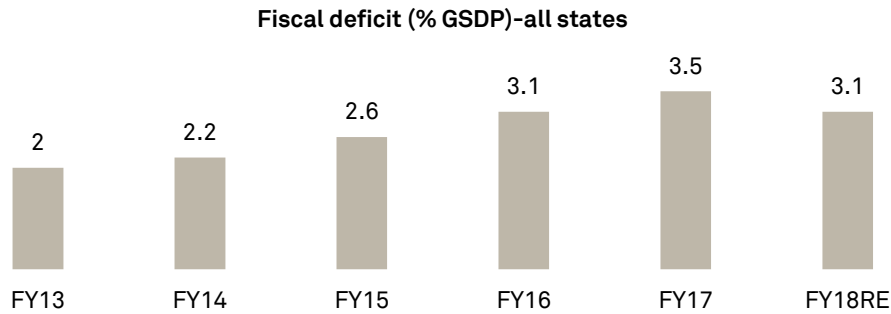
The combined fiscal deficit of states crossed the 3% of GSDP threshold (set under the FRBM Act), in both fiscals 2016 and 2017.

The main culprit was implementation of UDAY. With its discontinuation in fiscal 2018, the combined deficit narrowed to 3.1% of GSDP (revised estimates).

But that was still above the 3% FRBM limit, and also much higher than 2.7% of GSDP budgeted for the year.

**Chart 1.9 - States' combined fiscal deficit**

UDAY turns up the heat on fiscal consolidation by states

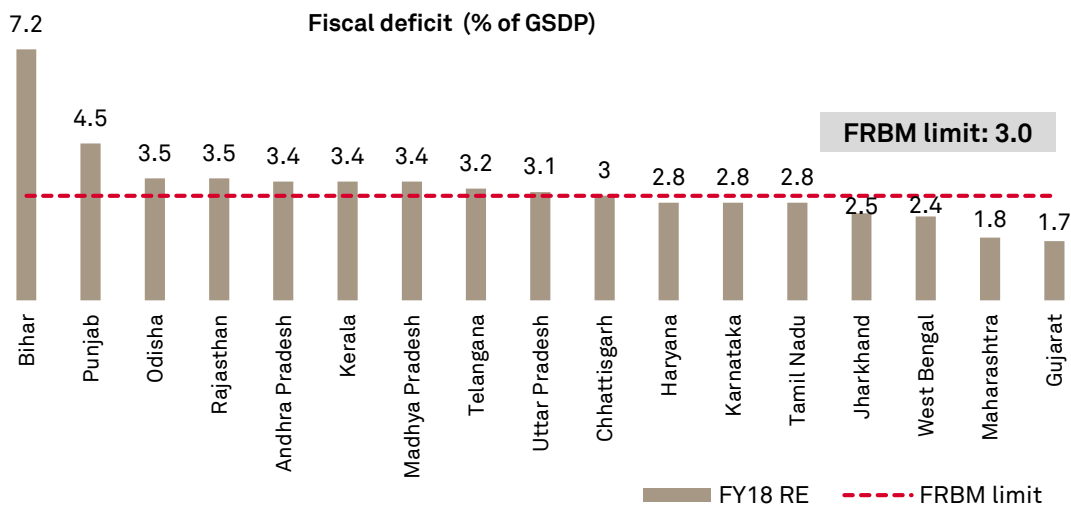


Source: RBI

10 of the 17 states overshot the FRBM limit in fiscal 2018. Fiscal deficit was the largest in Bihar, Punjab, and Odisha, and the smallest in Gujarat, Maharashtra and West Bengal.

**Chart 1.10 - State-wise fiscal deficit in FY18**

Off-limits: 10 of 17 states crossed the red line in FY18



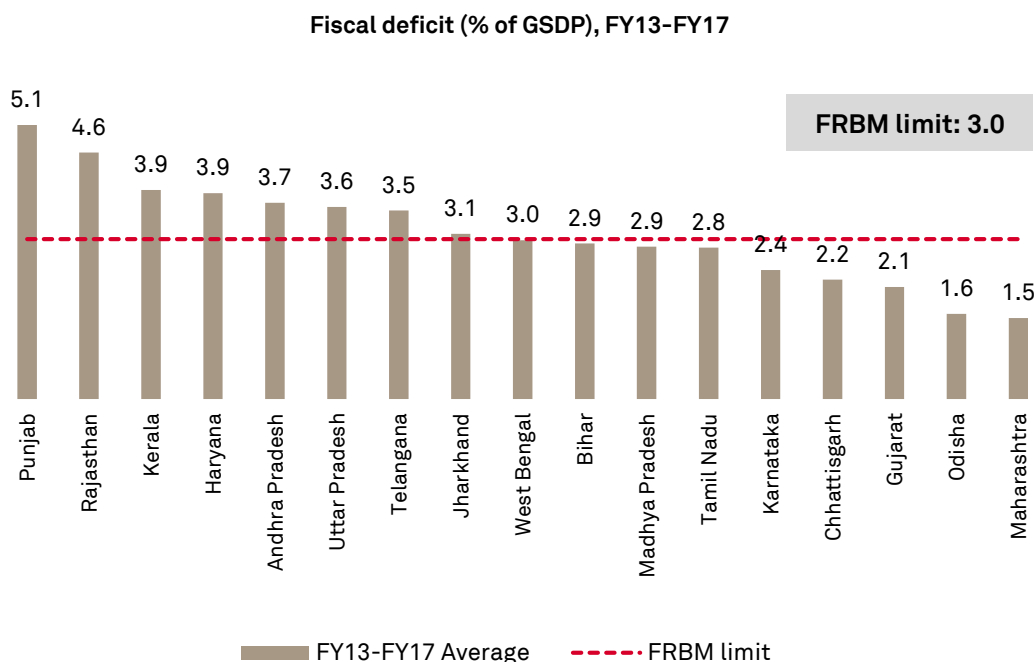
Source: RBI

### How does this compare with the past five years?

- 8 states overshoot fiscal deficit above the FRBM limit between fiscals 2013 and 2017. This rose to 10 in fiscal 2018
- 7 recorded higher fiscal deficit in fiscal 2018 compared with the past five years, with the sharpest increase in Bihar, Odisha and Chhattisgarh
- Rajasthan, Haryana and Punjab recorded the sharpest drop

Chart 1.11 - State-wise fiscal deficit between FY13 and FY17

States were more disciplined in the previous five years



Source: RBI

### Is fiscal stimulus leading growth in the top states?

Yes.

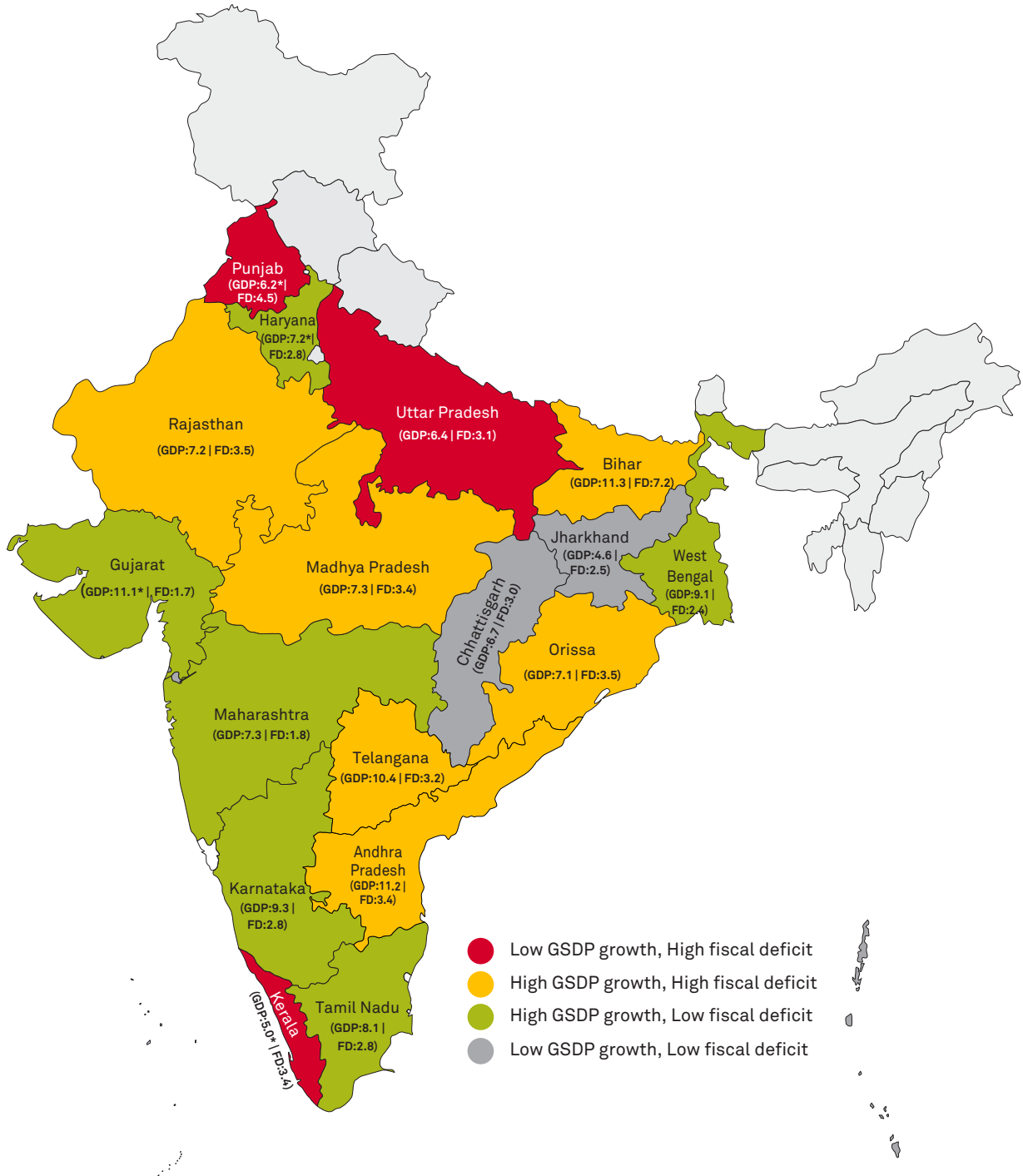
Interestingly, the states which had the highest GSDP growth in fiscal 2018 – Bihar and Andhra Pradesh – also had fiscal deficit of over 3% of GSDP.

This suggests higher fiscal spends may have driven the growth of these states.

However, the converse is not true, i.e, low growing states are also experiencing fiscal stress. Among the three slowest growing states, Punjab and Kerala have overshoot the FRBM target.

Chart 1.12 - Growth-fiscal dynamics in FY18

Spenders grew faster



Note: Low/high GSDP growth means lower/higher growth than national average (6.7%); Low/high fiscal deficit means lower/higher fiscal deficit than FRBM target (3% of GSDP); Numbers in bracket are GSDP growth rates and fiscal deficit (as a percentage of GDP), respectively; \*CRISIL estimates  
Source: CSO, RBI, CEIC, CRISIL

## Relying on central transfers isn't enough, states need to grow their own kitty<sup>10</sup>

Both higher expenditure and lower revenue have widened states' fiscal deficits.

In fiscal 2018, combined fiscal deficit of states slipped by 35 basis points (bps). Revenue receipts were 27 bps lower than the budgeted target, while revenue expenditure was 13 bps over.

States revenues are falling short despite rising revenue transfers from the central government.

Post 14th Finance Commission, central transfers to states increased from 32% to 42% of the divisible pool of taxes.

As a result, almost half of the states' total revenue now comes from central transfers, compared with 40% earlier.

Further, the nature of transfers has changed. A larger proportion is now untied (57% vis-à-vis 51% earlier). This gives greater spending autonomy to states in spending.

But while central transfers have been rising, states' own tax revenues have moderated.

In fiscal 2018, central transfers of shareable taxes was 9 bps greater than the target (as % of GDP), but states' own tax revenues were 33 bps lower.

This pins down states' own tax revenues as the primary reason for the shortfall in revenue receipts.

State revenues fell owing to decline in sales tax receipts. However, the stabilisation of Goods and Services Tax must help improve the states' revenues, going forward.

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<sup>10</sup>This is excerpted from Sural, Sudip (December 2018). Centre devolves, states don't evolve: Focus on growing their own revenues is key to improving state finances. Published in Times of India.

## 2. Expenditure: Spending for the buildout

### How much and where

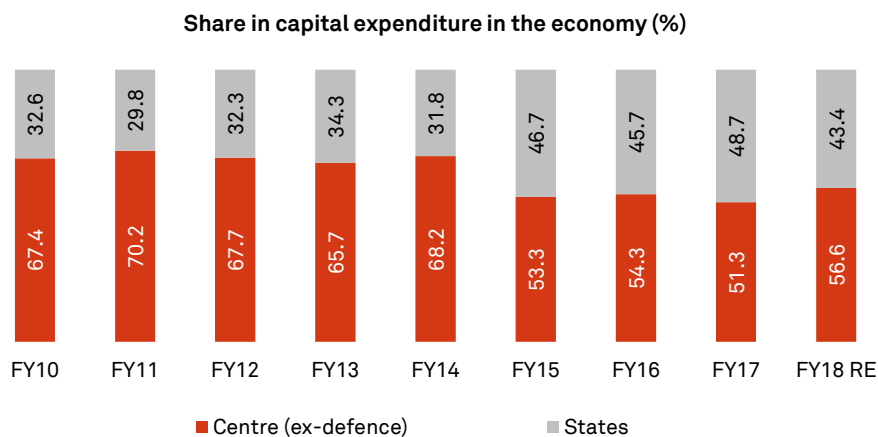
In recent years, states have taken over the baton from the Centre in spending, especially capex. That underscores their increasing role in investment spends.

This has become all the more relevant after the 14<sup>th</sup> Finance Commission increased allocation of funds to states post fiscal 2015 and gave leeway to prioritise spending as per need.

With this, states not only started getting a greater share in the divisible pool of taxes, but also more untied funds. For perspective, about 45% of the capex in the economy is been incurred by states, up from about 30% prior to fiscal 2015.

**Chart 2.1 - Share of state and centre's capital expenditure in total expenditure FY10 to FY18**

Centre's role in capex is losing steam



Source: Union budget documents, RBI, CEIC, CRISIL

### States loading up on capex

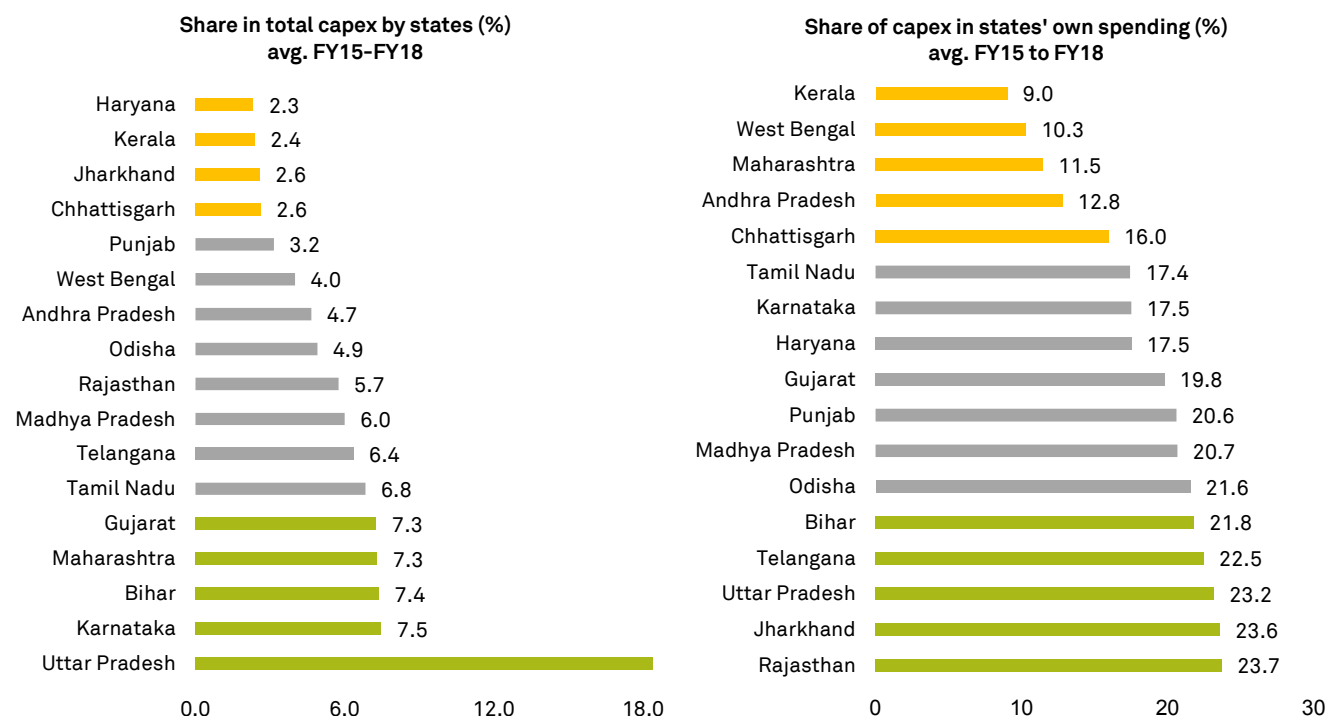
We have considered capex of the 17 non-special category states, which together make up roughly 90% capex of all states combined.

Capex at the state level is defined as the sum of capital outlay, and loans and advances. Since 75% of the discom debt was taken up by state governments in fiscals 2016 and 2017 under UDAY, it is prudent to remove this part from state capex to get a more meaningful comparison.

**Chart 2.2 - State-wise share in total capital expenditure and share of capital expenditure in state's own spending FY15-FY18 average**

**Building muscle**

Contribution of different states in total capital expenditure



Source: RBI, CEIC, CRISIL

The states marked in green are the five biggest capex contributors. Together, they account for 48% of the combined capex. The states in orange pooled just about 13% share.

However, these figures are skewed by the fact that the quantum of capex will be higher for larger states.

So, we consider each state's capex share in their own total spends. That done, Rajasthan climbs up several notches to garner the first place. Maharashtra, in contrast, slips to the bottom five. Rajasthan, Jharkhand and Uttar Pradesh had the largest capex shares in own total spends.

**Drawing priorities**

Roads, health, education, and irrigation are four priority spending areas for any state.

Are states spending in the right areas? We try to answer this question by first identifying the level of development of each state in terms of a given metric and then checking if the spending priority is aligned with that.

The ranking of the level of development of each state for a given metric has been drawn from publicly available information or rankings. The spending priority of each state has been computed on the basis of the proportion of state spending allocated to that particular metric, which then is used to rank the states. As per the scale used, 1 indicates the highest rank and 17 the lowest.

The scatter plots that follow juxtapose the latest available rankings on each of these metrics from independent sources (X-axis) with our rankings based on the states' spending in each sector as a percentage of its total spend (Y-axis).

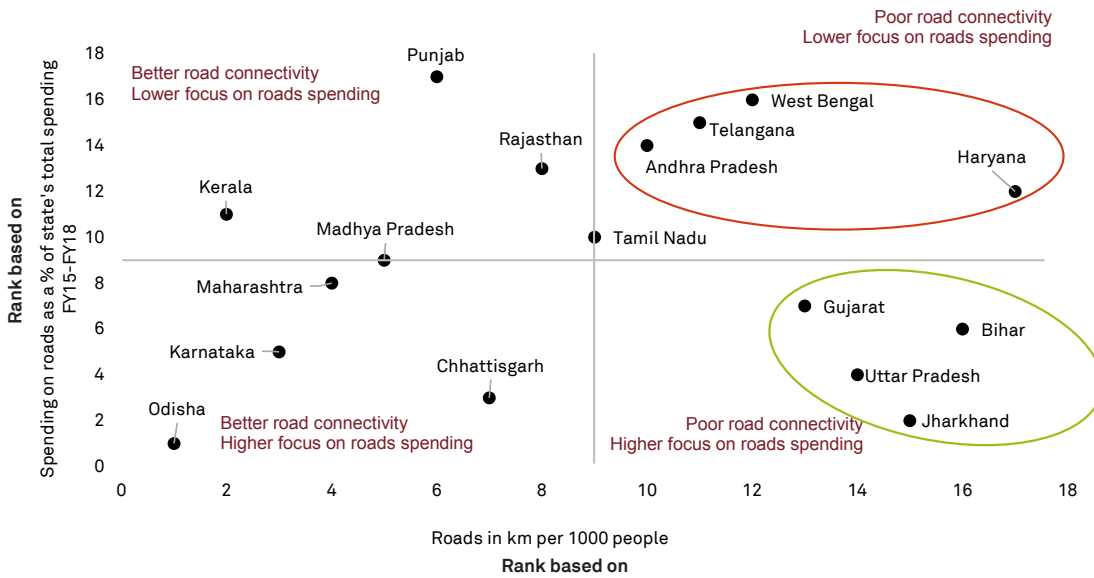
**Chart 2.3 - State-wise rank on roads spending Vs rank on access to roads**

**Two states**

Where must states spend? Where are they spending?



**Roads and bridges**



**Chart 2.4 - State-wise rank on health spending Vs rank on health index**



**Health**

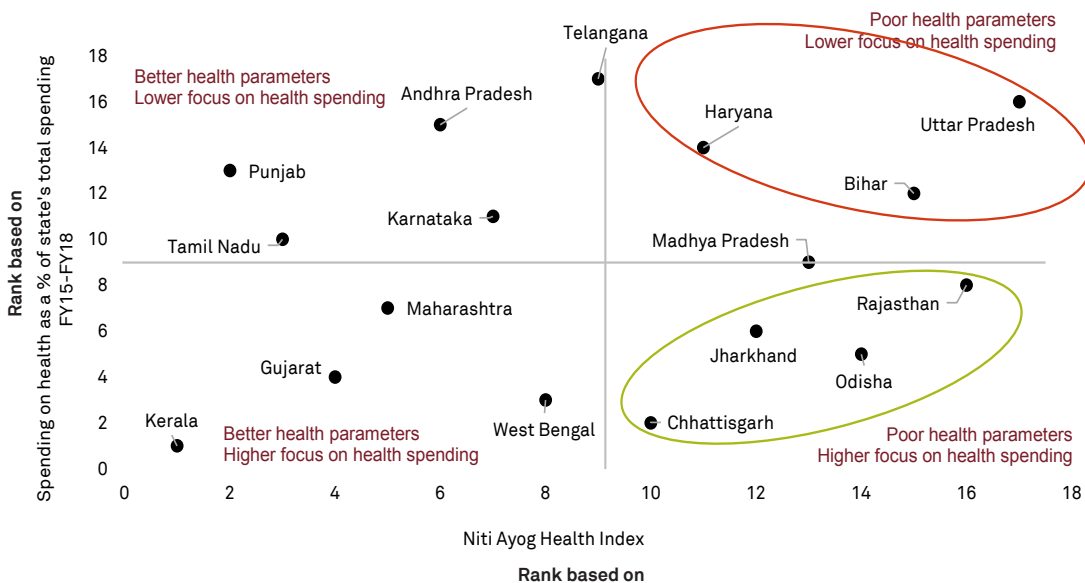




Chart 2.5 - State-wise rank on education spending Vs rank on gross enrolment in school

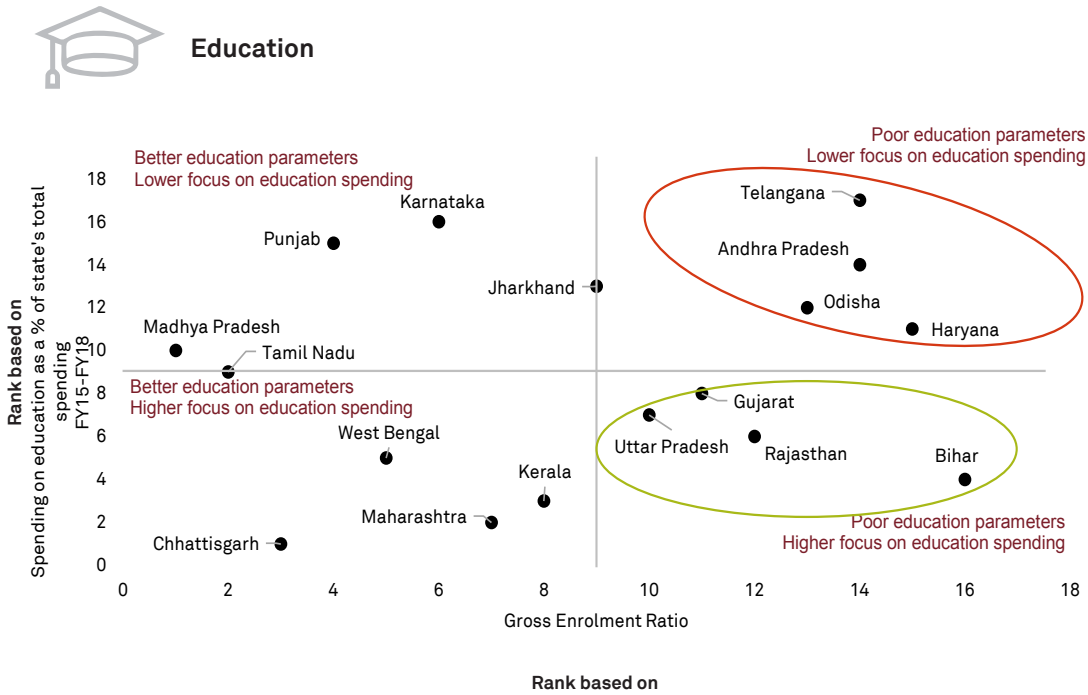
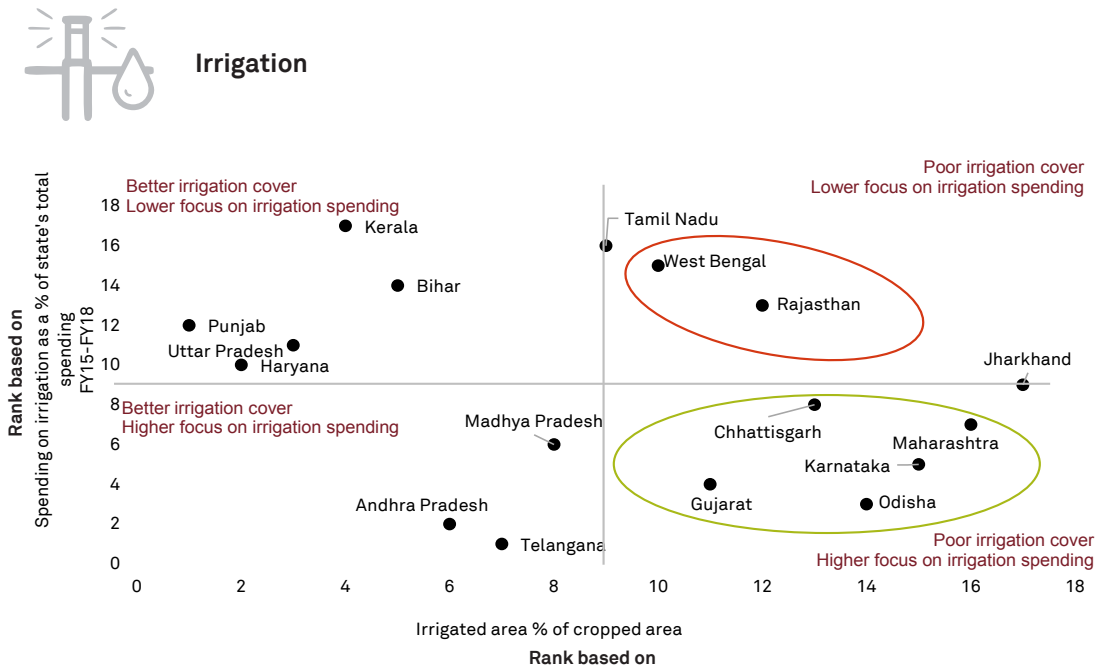


Chart 2.6 -State-wise rank on irrigation spending Vs rank on irrigation access



Note: Due to unavailability of data for Telangana, it is ranked the same as Andhra Pradesh for education rankings

\*Measured based on state-wise road density per 1,000 population for 2015-16. It excludes roads constructed under Jawahar Rozgar Yojana

\*\*Health index constructed by Niti Aayog for 2015-16

^Based on gross enrolment ratio for 2011-12

^^Irrigation data for respective states for 2013-14 used to rank states.

Spending on roads refers to spending on 'roads and bridges', health refers to 'medical and public health', education refers to 'education, arts and culture', and irrigation refers to 'major and medium irrigation and flood control'

Source: 'Basic Road Statistics of India 2015-16' by Ministry of Road, Transport and Highways, 'Healthy states, Progressive India' by Ministry of Health and Family Welfare, The World Bank and Niti Ayog, 'Statistics of School Education 2011-12' by Ministry of Human Resource Development and 'Agriculture Statistics at a Glance 2016' by Ministry of Agriculture, Budget documents, RBI, CEIC, CRISIL

The table below summarises the outcome of the foregoing detailed analysis. It identifies the top three states in each sector of spending, as a percentage of total spend.

**Table 2.1 - Parameter-wise top three spender states**

**The priority list: Leaders in their own right**

Top 3 spenders on:	#1	#2	#3
Roads and bridges	Odisha	Jharkhand	Chhattisgarh
Health	Kerala	Chhattisgarh	West Bengal
Education	Chhattisgarh	Maharashtra	Kerala
Irrigation	Telangana	Andhra Pradesh	Odisha
Housing	Madhya Pradesh	Chhattisgarh	Bihar
Social security and welfare	West Bengal	Andhra Pradesh	Haryana
Urban development	Gujarat	West Bengal	Haryana
Rural development	Jharkhand	Bihar	West Bengal

*Note: Top 3 spenders are on the basis of spending in the area as a percentage of state's total spending  
Source: State budget documents, RBI study of state budgets, CEIC, CRISIL*

The big picture suggests that the focus of some states is where it must lie.

But that cannot be said for all.

In nearly all major states, spending is concentrated on education, at ~16% of total spend, on average. Some states such as Bihar, Rajasthan and Uttar Pradesh are spending much more.

That works well for states that rank low on the education outcome.

However, states such as Chhattisgarh, Maharashtra, Kerala, and West Bengal, which rank relatively high on education outcomes, are also spending over 17-19% on education. These have a case for shifting focus to other sectors. Their economies might, in fact, benefit more if funds are oriented towards other areas such as irrigation or roads.

But states across the board seem to pay inadequate attention to other key areas such as health, irrigation, and housing. Housing attracts merely 1% of state spends, on average, irrigation ~4%, and urban development ~3%.

Similarly, of the states that spend more on roads, Odisha, Karnataka, Maharashtra and Chhattisgarh can now also focus on areas such as education, irrigation and health where they lag in terms of access.

**Table 2.2 – Parameter-wise spending rank for each state**

**What are states spending on**

Left to right shows rank in terms of spending. Higher rank (=1) indicates higher share in its own spending on that category compared to the rest

Rank	Roads and bridges	Health	Education	Irrigation	Housing	Social security and welfare	Urban development	Rural development
Andhra Pradesh	6	5	1	2	8	3	7	4
Bihar	3	5	1	8	6	4	7	2
Chhattisgarh	2	4	1	5	7	8	6	3
Gujarat	4	5	1	2	7	8	3	6
Haryana	6	4	1	7	8	2	3	5
Jharkhand	3	4	1	7	8	6	5	2
Karnataka	3	4	1	2	7	5	8	6
Kerala	4	2	1	6	8	3	7	5
Madhya Pradesh	5	4	1	3	8	7	6	2
Maharashtra	3	2	1	4	8	7	5	6
Orissa	2	5	1	4	8	6	7	3
Punjab	5	2	1	3	8	4	7	6
Rajasthan	4	3	1	7	8	6	5	2
Tamil Nadu	4	5	1	7	8	2	6	3
Telangana	6	5	2	1	8	3	7	4
Uttar Pradesh	2	5	1	6	7	4	8	3
West Bengal	6	4	1	7	8	3	5	2

Source: State budget documents, RBI's study of state budgets, CEIC, CRISIL

## 3. Debt sustainability: Spotting the Achilles heel

States' debt ratios are on slippery ground, yet again.

The debt ratio measures a state's outstanding debt against its income, or GSDP.

It gauges the ability of a state to repay its debt, and hence, the state's overall economic health. A lower ratio is seen as more favourable.

Studying how debt ratios move over time helps us understand how sustainable the debt is.

A rather intuitive mathematical equation helps us picture this. Let's say, the 'debt dynamics' formula can be denoted as:

$$\Delta D = p + (i-g) D$$

Where D = debt/GDP ratio (or simply, the debt ratio),  $\Delta D$  = change in debt ratio, p = primary balance, g = nominal GDP growth and i = nominal interest rate

Interest rate here denotes the average interest cost on outstanding debt and not the current state development loans rate.

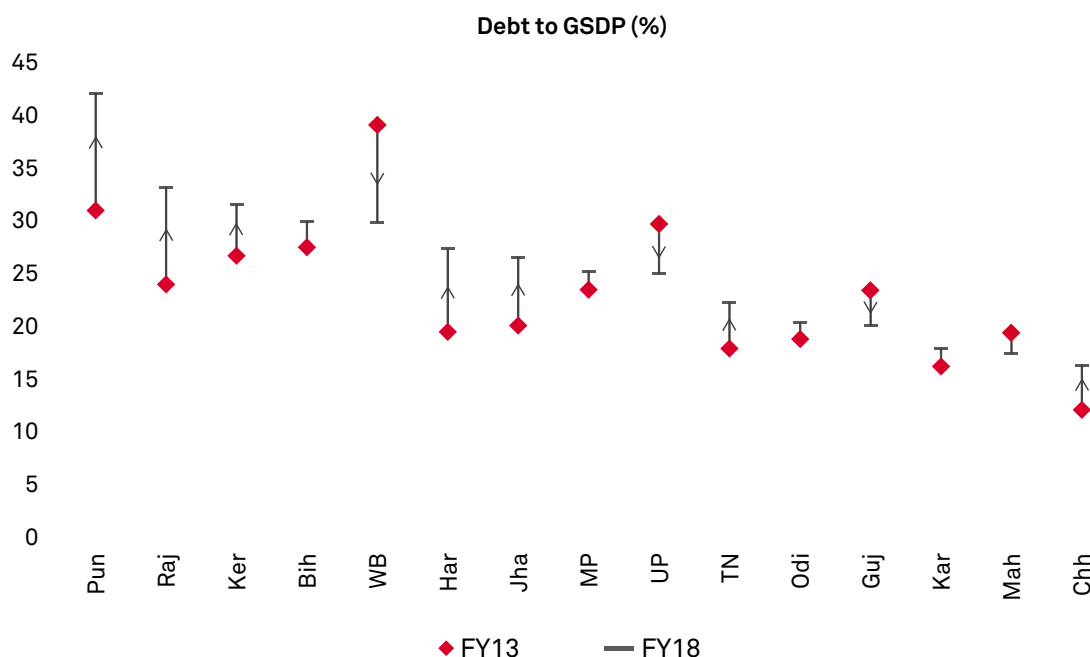
Holding primary balance zero, the equation means that the debt ratio rises over time if nominal interest rate is higher than nominal growth. If primary balance is deficit, then it becomes an additional force driving the debt ratio up.

Conversely, nominal interest rate lower than nominal GDP growth accompanied by a primary surplus would drive the debt ratio down.

## How has the debt position changed for states<sup>11</sup>?

Chart 3.1 - Change in debt ratio of states from FY13 to FY18

Most states are biting more than they can chew



Note: The states are ordered from highest to lowest debt ratio as of end-fiscal 2018, vis-à-vis their positions in end-fiscal 2013  
Source: RBI, CRISIL

For most, debt ratios deteriorated between fiscals 2013 and 2018 (see graph).

We classify states in the following manner:

- **Very high debt ratio states:** Debt ratio (debt/GSDP) above 30%
- **Moderate to high debt ratio states:** Debt ratio between 20% and 30%<sup>12</sup>
- **Low debt ratio states:** Debt ratio below 20%

Punjab, Rajasthan, and Kerala land in the ‘very high debt ratio states’ bracket.

Chhattisgarh, Maharashtra, and Karnataka emerge as the ‘low debt ratio states’.

The remaining 10 sit in the ‘moderate to high debt ratio states’ category.

<sup>11</sup>For our analysis, we compare the non-special category states as defined by the RBI. We exclude Andhra Pradesh and Telangana, as their bifurcated debt ratios are unavailable prior to fiscal 2016.

<sup>12</sup>Since debt ratio of 25% is used as a threshold by the 14th Finance Commission to provide relaxation of FRBM limit up to 3.25% for revenue surplus states, we have used 25% plus/minus 5% as the range to classify moderate to high debt ratio states

**Table 3.1 – Classification of states based on debt ratios**

How did the the debt position across the three categories change over the five-year period?

Debt ratio as of March 2018	Movement in debt ratio - FY13 to FY18	
	Increased	Decreased
<b>Very high debt ratio states (Debt/GSDP &gt; 30%)</b>	Punjab Rajasthan Kerala	
<b>Moderate to high debt ratio states (20% &lt; Debt/GSDP &lt;= 30%)</b>	Bihar Haryana Jharkhand Madhya Pradesh Tamil Nadu Odisha	West Bengal Uttar Pradesh <sup>13</sup> Gujarat
<b>Low debt ratio states (Debt/GSDP &lt;= 20%)</b>	Karnataka Chhattisgarh	Maharashtra

Source: RBI, CRISIL

Punjab, Rajasthan, and Kerala had not only the highest, but also deteriorating<sup>14</sup> debt ratios in this duration.

Maharashtra, on the other end, had a low as well as improving debt ratio.

On the whole, debt ratios of only four states – Gujarat, Maharashtra, Uttar Pradesh, and West Bengal – were better off in fiscal 2018 over 2013.

## Deconstructing the debt dynamics

### The profligates: Those with very high debt ratio

**Punjab** ran a debt ratio of over 30% for years. Post adoption of FRBM in October 2003, it gradually reduced its debt ratio from ~47% in fiscal 2004 to ~30% in fiscal 2015. But UDAY (fiscal 2016 and 2017) and a one-time cash credit limit (CCL)<sup>15</sup> loan (fiscal 2017) led to a rise in primary deficit to 1.9% in fiscal 2016 and 9.6% in fiscals 2017, from ~0.5% in fiscal 2015. The result, debt ratio worsened to 42.1% in fiscal 2018.

<sup>13</sup>While debt stock for UP at the end of fiscal 2017 decreased as per the RBI data, according to the Controller and auditor general report, it increased. Because of this discrepancy, we are unable to explain the trend in debt position for UP

<sup>14</sup>Please refer to table at the end of the chapter for detailed data on debt/GDP, primary deficit, interest cost, GSDP growth for different states

<sup>15</sup>Loan worth Rs 29,919.96 crores (~7.0% of GSDP) raised to settle the food grain procurement account, as per state's budget

Like Punjab, **Rajasthan** also ran a debt ratio of ~47% in fiscal 2005 (pre-FRBM). Over the years, it managed to reduce it to ~24%, by running a primary account surplus. However, post fiscal 2013, it started running a primary deficit and its revenue account balance turned from surplus to deficit. UDAY further tipped the ratio over 30%.

**Kerala's** debt ratio has been on the boil since fiscal 2013, reversing the trend of sustained reduction since FRBM adoption in 2003. But unlike its counterparts, the reason is not a rise in primary deficit, but a slowdown in growth. Primary deficit narrowed from 2.2% in fiscal 2013 to 1.4% in fiscal 2018, while growth dropped from 13.3% to 11.3%. Debt ratio worsened from 26.7% to 31.6%.

## The middle class: Those with moderate to high debt ratio

### Debt ratio widened in these states

**Bihar, Haryana, Jharkhand and Tamil Nadu** were left with higher debt ratios, owing to an increase in primary deficit, largely on account of UDAY. For Haryana and Tamil Nadu, another unfavourable factor was their revenue account. Bihar and Jharkhand ran a revenue account surplus, while Haryana and Tamil Nadu ran a deficit.

**Madhya Pradesh's** debt ratio was on a declining trend until it took over the discom debts under UDAY. The state's primary deficit worsened from 1.1% of GSDP in fiscal 2013 to 1.7% in fiscal 2018, as a result. However, the impact of UDAY on debt position has not been severe compared with other states, as debt takeover is phased over a four-year period until fiscal 2020.

**Odisha's** debt ratio increased from 18.8% in fiscal 2013 to 20.4% in fiscal 2018, as its primary balance turned from surplus to deficit. Increase in the borrowings of the state to finance the sharp rise in capital expenditure (18.8% on-year) in fiscals 2018, pushed up its debt ratio.

### Debt ratio narrowed in these states

**West Bengal and Gujarat** were able to rein in their primary deficit and improve debt ratio. Unlike most other states, West Bengal did not participate in the UDAY. On the other hand, despite participating in UDAY, Gujarat did not incur any debt obligation.

## The enduring joggers: Those with low debt ratios

While Maharashtra further lowered its debt ratio, Karnataka and Chhattisgarh saw it rise.

Though **Maharashtra** has the highest debt among states in absolute terms, it is the lowest as a proportion of GSDP, or income (which matters more for sustainability). This should not be surprising, as Maharashtra has the largest GSDP among all states and has grown steadily. A low and stable primary deficit (less than 0.5% of GSDP) also helped. In addition, Maharashtra spread the UDAY bond issuances over five years unlike two years (fiscals 2016 and 2017) by most states.

**Karnataka's** debt ratio increased modestly from fiscal 2013 to fiscal 2018, owing to a pick-up in primary deficit from 1.5% in fiscal 2013 to 1.7% in fiscal 2018. However, despite that, its debt ratio remained range-bound at 16-18%. Early adoption of FRBM (in September 2002) and running a surplus revenue account helped the state maintain its debt ratio.

While **Chhattisgarh** runs one of the lowest debt ratios, it was climbing steadily even before the state took over the discom debt under UDAY. This caused its primary deficit to increase from 0.9% in fiscal 2013 to 2% in fiscal 2018.

## The upshot

For most states, primary account deficit, rather than the differential in nominal interest rate and GSDP growth (or,  $i-g$ ), is driving the debt ratio.

While most states continue to run primary deficits, interest rates for all states are lower than their respective GSDP growth.

This suggests that most states witnessing a runaway debt ratio must focus on improving their primary balances.

Post implementation of the 14<sup>th</sup> Finance Commission recommendations, the share of central transfers (also called current transfers) in GSDP for states has risen.

On the other side, most states have seen a decline in the share of own tax revenue in GSDP.

Therefore, states must focus particularly on shoring up own tax revenue in order to improve their primary balances.

**Table 3.2 - State- wise debt and deficit indicators**

### Summary of debt and deficit position of states

S No	States	Debt to GSDP (%)		Primary deficit to GSDP (%)		Average interest cost (%)	Nominal GSDP (%)
		FY13	FY18	FY13	FY18	Average FY13-FY18	Average FY13-FY18
1	Bihar	27.5	30.0	0.7	5.2	6.5	12.0
2	Chhattisgarh	12.1	16.3	0.9	2.0	6.1	10.8
3	Gujarat*	23.4	20.1	0.7	0.2	7.5	13.6
4	Haryana*	19.5	27.4	1.6	0.9	7.8	12.8
5	Jharkhand	20.1	26.6	0.7	0.9	6.9	9.4
6	Karnataka	16.2	17.9	1.5	1.7	6.3	13.7
7	Kerala*	26.7	31.6	2.2	1.4	7.0	11.3
8	Madhya Pradesh*	23.5	25.2	1.1	1.7	6.8	14.7
9	Maharashtra	19.4	17.4	-0.4	0.5	7.6	11.8
10	Odisha	18.8	20.4	-1.1	2.3	5.9	10.4
11	Punjab*	31.0	42.1	0.9	1.2	7.9	10.0
12	Rajasthan	24.0	33.2	0.0	1.1	7.3	11.6
13	Tamil Nadu	17.9	22.3	0.8	1.0	7.9	11.3
14	Uttar Pradesh	29.7	25.0	0.3	0.8	7.3	11.3
15	West Bengal	39.1	29.9	0.3	0.2	8.0	11.9

Note: \*GSDP data from respective state budget documents; FY18 values are revised estimates  
 Source: RBI, CSO, CEIC, State budget documents, CRISIL



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