

STATE GOVERNMENT FINANCES

Downward revision in states' GSVA/GSDP estimates could lead to inadvertent fiscal breaches, highlighting need to improve GSVA/GSDP estimation

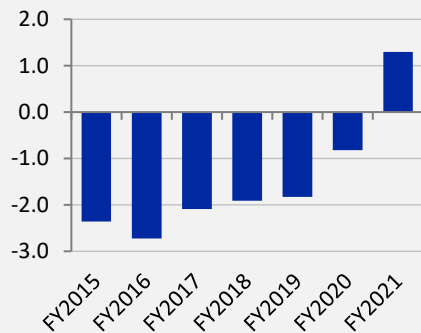
NOVEMBER 2022





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Exhibit: Variation between India's GVA and combined states'/UTs' GSVA (Rs. Trillion)



The aggregate Gross State Value Added (GSVA) of the 28 states and eight Union Territories (UTs) tends to be smaller than the Gross Value Added (GVA) of India, on account of sectors such as Defence and Railways that are difficult to apportion between the states. In absolute terms, the difference between India's GVA and aggregate GSVA narrowed by nearly a third between FY2016 and FY2020. However, the aggregate GSVA exceeded India's GVA by Rs. 1.3 trillion in FY2021, suggesting that revisions may be forthcoming, particularly for agriculture. State-wise data reveals a trend of final GSVA estimates typically being smaller than the initial estimates. This could lead to some states' fiscal deficit relative to Gross State Domestic Product (GSDP) inadvertently exceeding the limit set by the Finance Commission (FC), highlighting the need to improve the early GSVA estimates.

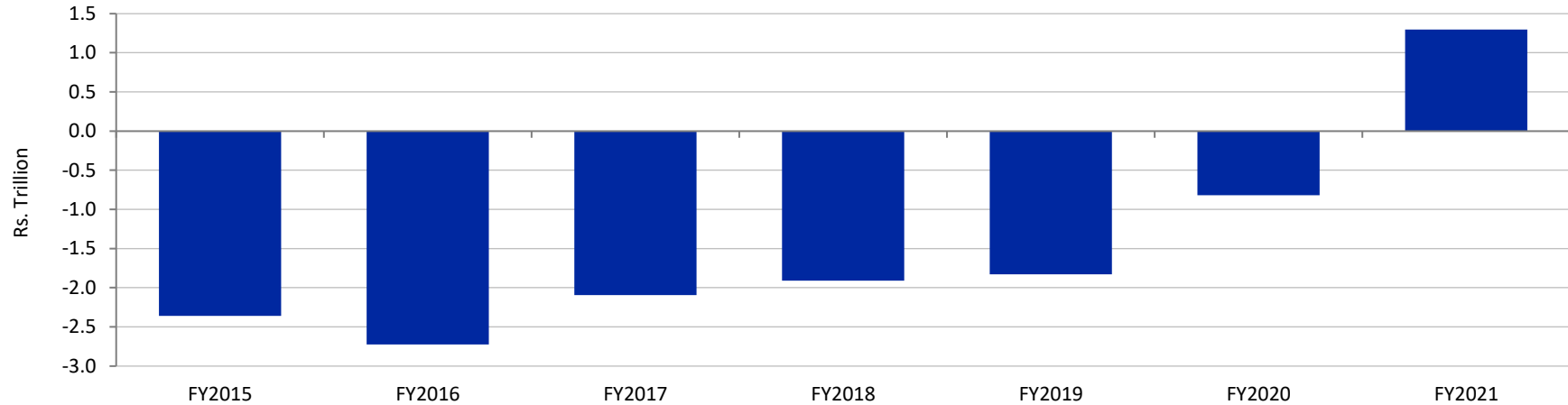
Narrower contraction in GSVA in FY2021 relative to India's GVA: In terms of YoY growth, the aggregate GSVA growth exceeded India's GVA expansion since FY2017. This gap widened sharply in the pandemic-affected FY2021, when the aggregate GSVA contraction of 3.2% was considerably narrower than the 4.8% YoY decline in India's GVA, suggesting revisions may be forthcoming. An analysis of a sub-set of 17 states reveals that the GSVA of Andhra Pradesh (AP), West Bengal (WB) and Tamil Nadu (TN) expanded in the range of 0.02-1.6% during the pandemic-hit FY2021, in contrast to the contraction indicated by the remaining 14 states.

GSVA data for FY2022 available for only 21 states by August 2022, with Maharashtra, Gujarat and WB yet to release the data: The GSVA data for FY2022 for 21 states/UTs was released in August 2022 (increased from 19 states/UTs released in March 2022), with data for Maharashtra, Gujarat and WB not being available as yet. Excluding the North-east states (NE) and hilly states, six states (AP, Bihar, Rajasthan, Madhya Pradesh or MP, Telangana and Haryana) recorded a higher growth in their GSVA in FY2022 than the 8.1% increase in India's GVA.

Downward revision in states' GSVA/GSDP estimates could lead to inadvertent breach of fiscal indicators: State-wise trends during FY2018-21 indicate that initial estimates of GSDP were consistently higher than the final estimate of a majority of the 32 states/UTs, for which data is available. Moreover, wide variations are seen for a few of the larger states, namely, Karnataka, Maharashtra, Tamil Nadu and Uttar Pradesh between the initial and the final/latest GSDP estimates during these years, while AP, Kerala, Odisha and Punjab recorded the least disparity. This could lead to some states' fiscal deficit relative to GSDP inadvertently exceeding the limit set by the FC, highlighting the need to improve the early GSVA/GSDP estimates.

Wedge between GVA and aggregate GSVA reversed in FY2021, suggesting that revisions may be forthcoming

Exhibit: Extent of variation of combined state/UT GSVA from India GVA (at constant prices; 2011-12 base)

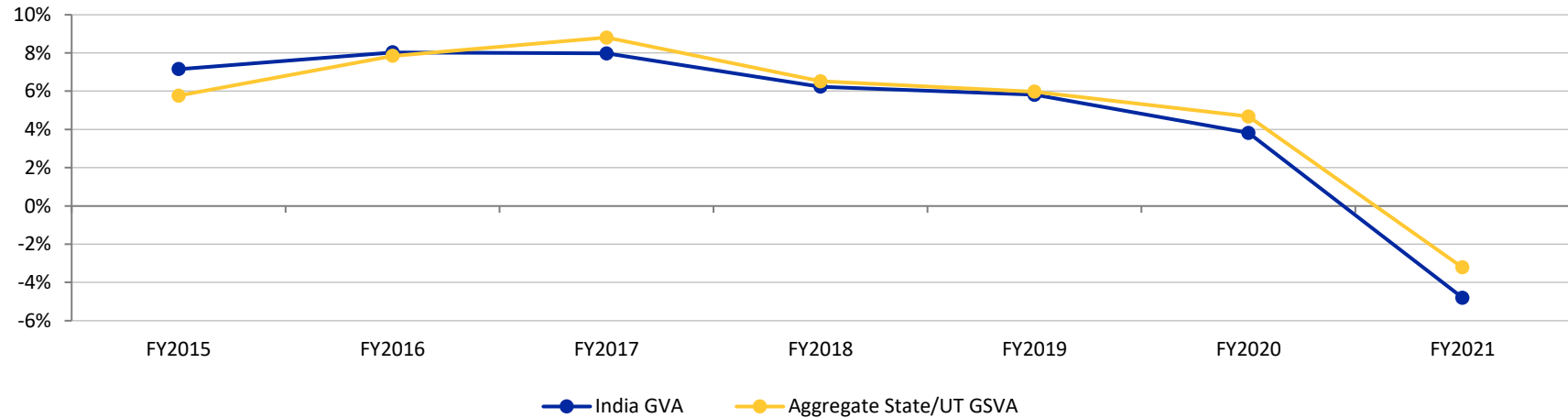


- In aggregate, the GSVA of all states and UTs* tends to be somewhat smaller than the GVA of India, on account of sectors such as Defence and Railways that are difficult to apportion between the states.
- In absolute terms, the difference between India GVA and aggregate state/UT GSVA ranged between Rs. 2.4-2.7 trillion during FY2015-16, which narrowed to Rs. 1.8-2.1 trillion during FY2017-19 and further halved to Rs. 0.8 trillion in FY2020.
- As per the latest available estimates for FY2021, the aggregate state/UT GSVA exceeded the India GVA by Rs. 1.3 trillion. In absolute terms, the aggregate GSVA of 32 states/UTs for agriculture and industry exceeded the national GVA for these sectors in FY2021, suggesting that revisions may be forthcoming.

*Note: *GSVA estimates are only available for 28 states and 5 UTs from the NSO, these estimates are not available for the remaining UTs; namely Daman and Diu and Dadra and Nagar Haveli, Ladakh and Lakshadweep). Combined states/UTs GSVA estimates excludes GSVA data for Andaman and Nicobar Islands as its estimates for FY2021 are not yet available. We understand that the state-level GSVA estimates are compiled by the Directorate of Economics and Statistics (DES) of each state and later examined by the NSO.*
Source: National Statistical Organisation (NSO); ICRA Research

Combined GSVA of all states contracted by 3.2% in FY2021; narrower than the 4.8% decline in India GVA

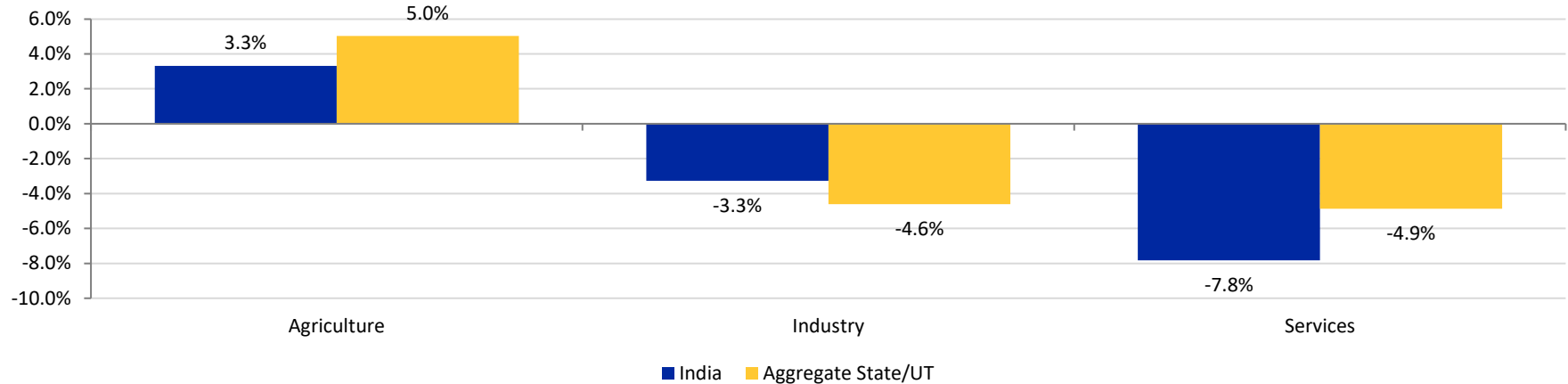
Exhibit: Trends in combined state/UT GSVA and India GVA (at constant prices; 2011-12 base)



- India's GVA growth exceeded the combined GSVA expansion of all states/UT in FY2015 and FY2016, this trend reversed during FY2017-21.
- The aggregate GSVA growth of all states was higher than the India GVA by 0.2% to 0.9% during FY2017-20; this gap widened to 1.6% in the pandemic-hit FY2021.

The states' combined agriculture and services sector growth in FY2021 outperformed the national average

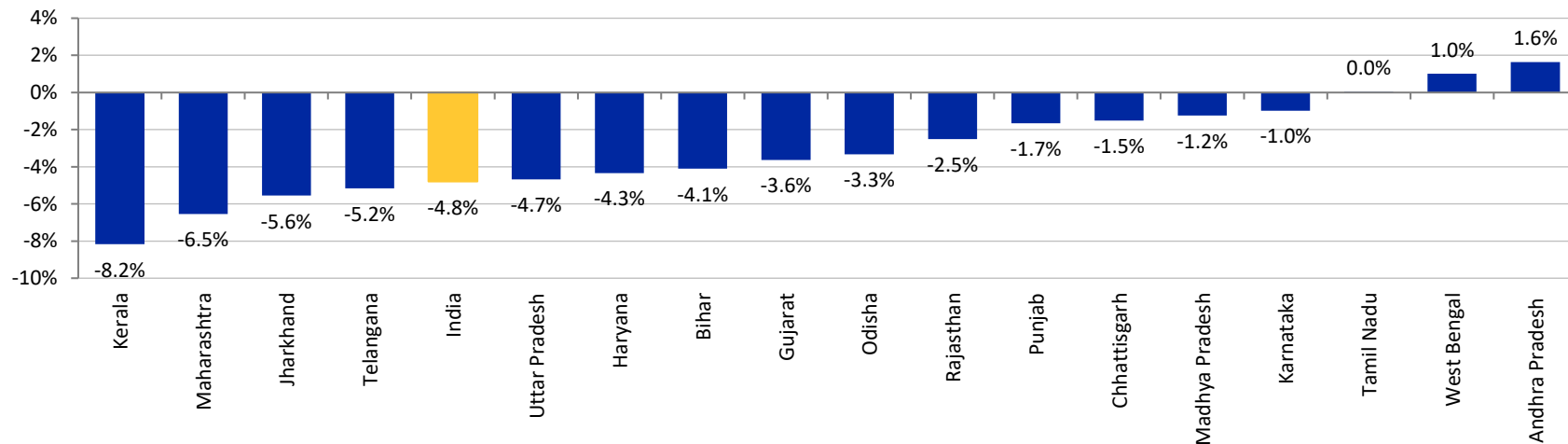
Exhibit: Sectoral trends in combined state/UTs GSVA and India GVA (at constant prices; 2011-12 base)



- In FY2021, the YoY growth of the combined agricultural GSVA stood at 5.0%, sharply higher than 3.3% at an all-India level, with the agricultural growth of 14 of the 28 states and 4 UTs being higher than the national average.
- Similarly, the pace of YoY contraction in the services sector of the states/UTs at 4.9% was substantially lower than the 7.8% decline at the all-India level, led by 25 states.
- However, the aggregate states/UTs' industrial GSVA contracted by 4.6% in FY2021, wider than the 3.3% decline for India. This was led by 20 of the 32 states/UTs whose industrial growth rate underperformed the national industrial growth rate.

Amongst the 17 largest states, only Kerala, Maharashtra, Jharkhand and Telangana reported a deeper contraction than the 4.8% decline in India's GVA in FY2021

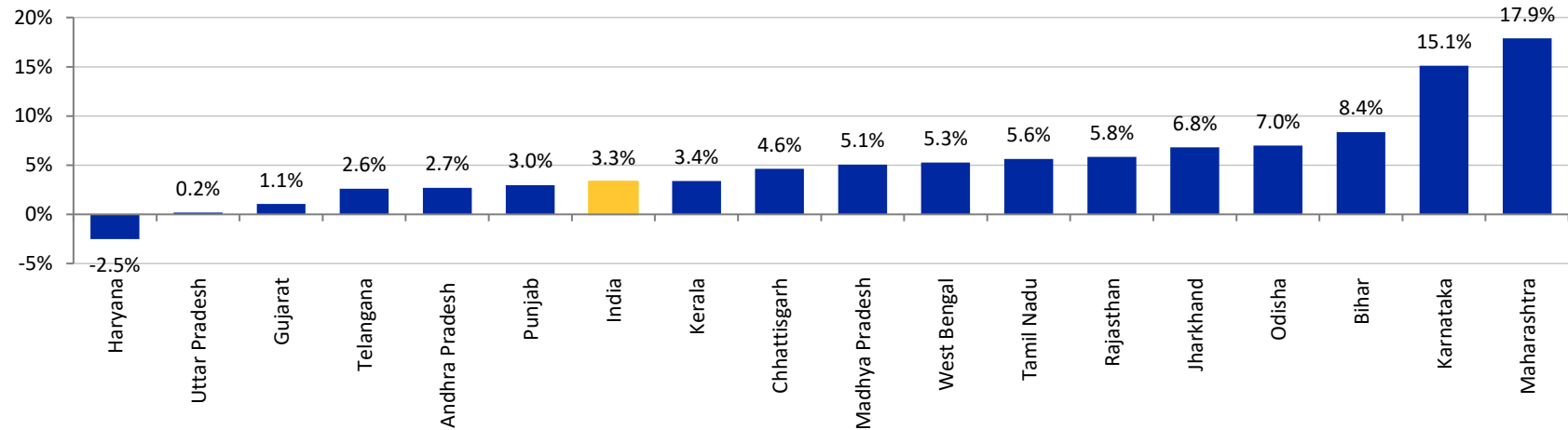
Exhibit: Trends in state GSVA and India GVA in FY2021 (at constant prices; 2011-12 base)



- The economies of Kerala and Maharashtra shrank by a sharp 8.2% and 6.5%, respectively, in FY2021, with the former likely to reflect the dependence on tourism and remittances. UP and Telangana exhibited a slightly deeper contraction than India's GVA performance.
- The GSVA of Odisha, Gujarat, Bihar, Haryana and UP shrunk by between 3-5% each in FY2021. The GSVA of Karnataka, MP, Chhattisgarh, Rajasthan and Punjab exhibited limited contraction between 1-2.5% in FY2021 compared to the 4.8% decline at the all-India level.
- However, the GSVA output of AP, WB and TN rose in the range of 0.02-1.6% during the pandemic-hit FY2021, in contrast to the contraction indicated by several other states.

Seven states reported 4-7% agricultural growth in FY2021, with Karnataka and Maharashtra witnessing a high double-digit expansion

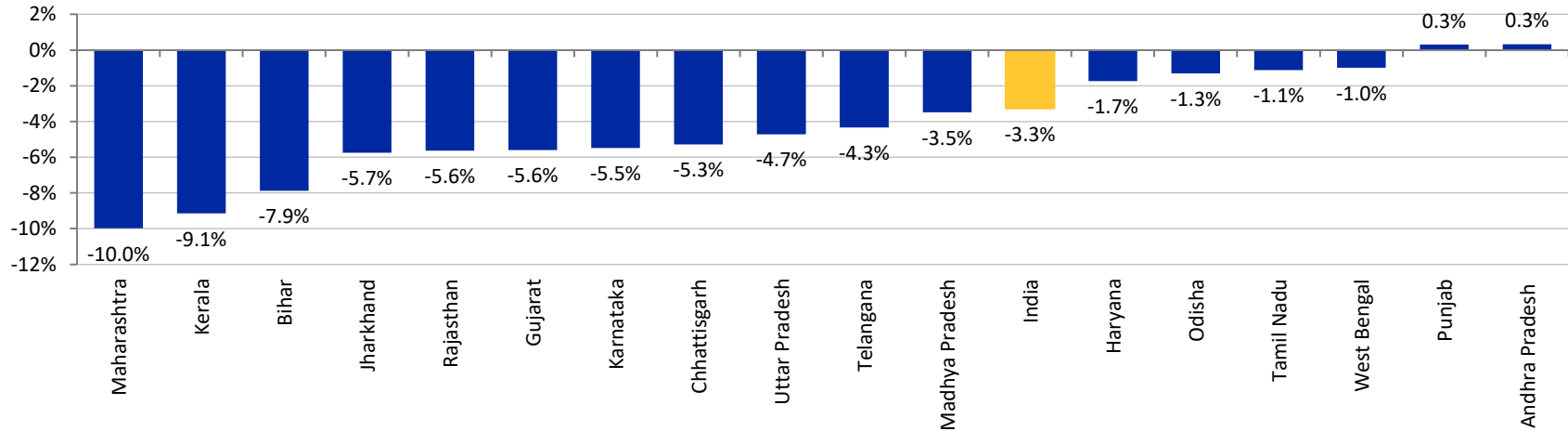
Exhibit: YoY trends of agricultural sector (at constant prices; 2011-12 base) in FY2021



- Agriculture was the only major sector that displayed a growth during the pandemic-hit FY2021. This supported the GSVA of those states with a higher share of this sector in their economy (refer Annexure A.2).
- The YoY growth of agriculture of several of the sample states ranged between 4-7%, higher than the national average. The states whose agri GSVA growth trailed the national average in FY2021 were UP, Gujarat, Telangana, AP and Punjab.
- Maharashtra's agricultural sector recorded a robust 17.9% YoY growth in FY2021, which was mainly led by the crop and livestock sub-sectors. Additionally, led by the latter, the agricultural sector of Karnataka and Bihar expanded by 15.1% and 8.4%, respectively, in FY2021, on a YoY basis.
- In contrast, Haryana's agricultural output contracted by 2.5% in FY2021 relative to FY2020, led by the livestock sub-sector.

Six states recorded a superior industrial performance in FY2021 relative to the 3.3% contraction at the all-India level

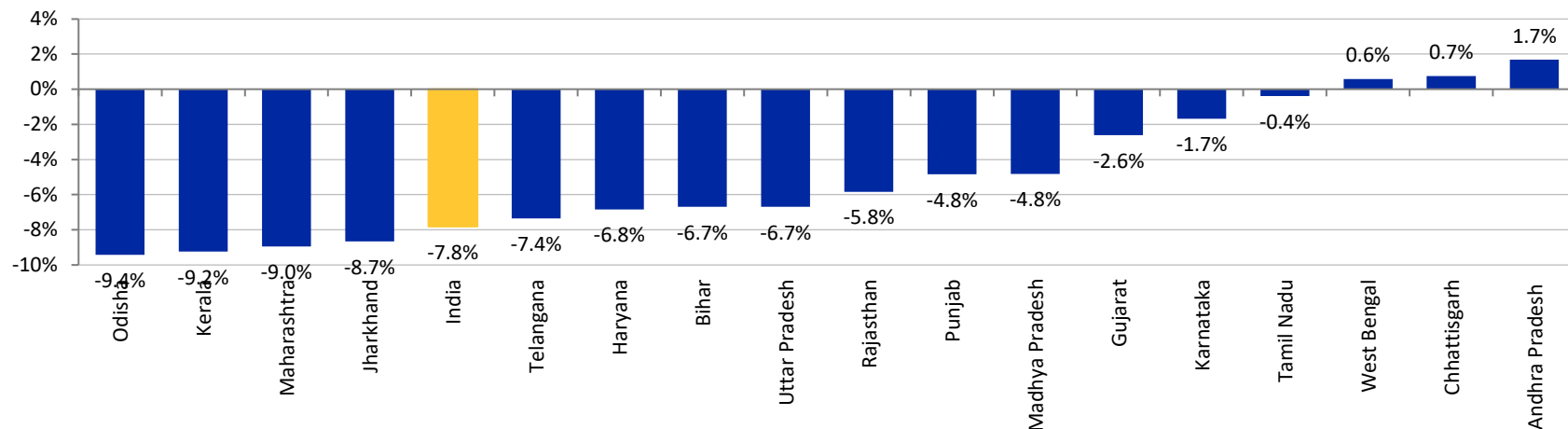
Exhibit: YoY trends of industrial sector (at constant prices; 2011-12 base) in FY2021



- The industrial performance of six of the sample states outpaced the national average in FY2021, with Punjab and AP eking out a marginal growth.
- In contrast, the industrial output of Maharashtra and Kerala recorded a deep contraction of 10.0% and 9.1%, respectively, in FY2021.
- Gujarat and Chhattisgarh, with large industrial sectors, trailed India's industrial GVA performance in FY2021. Chhattisgarh's industrial contraction was on account of the sharp ~24% decline in mining output, with electricity recording a 1% dip, and manufacturing and construction displaying mild 1% growth. For Gujarat, all the sub-sectors recorded a YoY decline in the range 3-9% in FY2021.

Only four states' services sectors performed worse than the national average in FY2021

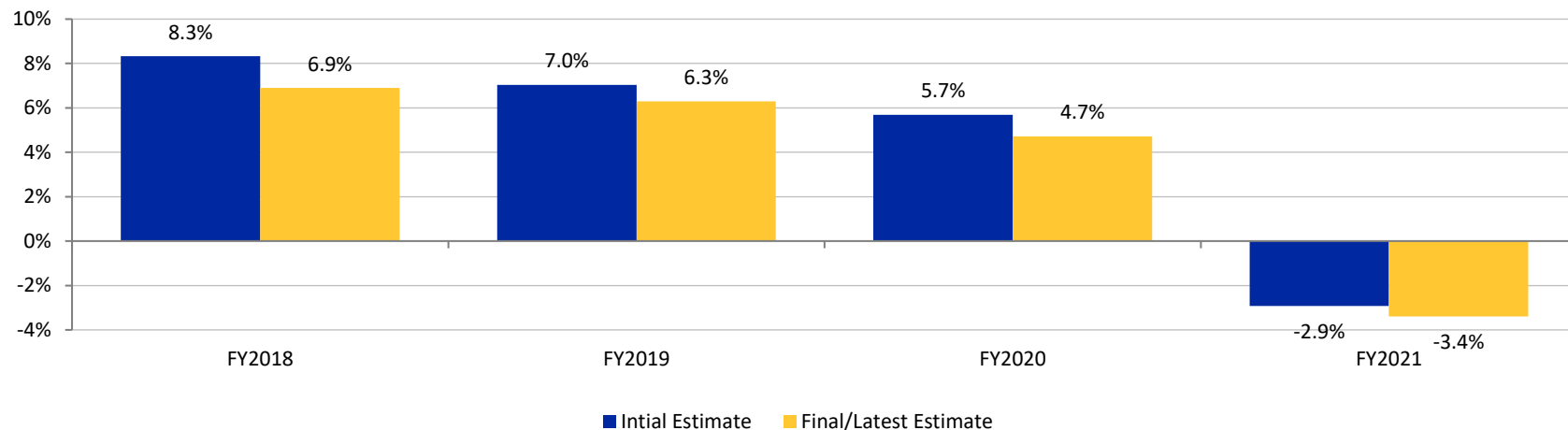
Exhibit: YoY trends of services sector (at constant prices; 2011-12 base) in FY2021



- The services sector of WB, Chhattisgarh and AP recorded mild growth between 0.5-2% in FY2021, on a YoY basis.
- That of TN and Karnataka contracted by a muted 0.4% and 1.7%, respectively, in FY2021.
- The shrinkage in the services GSVA of Gujarat, MP, Punjab, Rajasthan, UP, Bihar and Haryana ranged between 2.6-7% during FY2021, lower than the 7.8% contraction recorded at the all-India level.
- However, the services sectors of Odisha, Kerala, Maharashtra and Jharkhand contracted by a sharp 8.7-9.4% in FY2021, weaker than the Indian average as well as the performance of the rest of the sample.

Contraction in combined FY2021 GSDP of all states likely to be deeper than the initial estimate, similar to the downward revision in their growth in recent years

Exhibit: Aggregate states/UTs GSDP (at constant prices; at 2011-12 base) as per the month of release during FY2018-21



- The GSDP data for recent years indicates a trend of downward revision from the initial estimate of that fiscal.
- In our assessment, the contraction in the aggregate states/UTs GSDP in FY2021 (GSDP estimate for Andaman and Nicobar Islands are not yet available) may be deeper than the 3.4% estimate published by the NSO in August 2022, which is the latest estimate available at present, and has already been revised downward from the initial contraction of 2.9% estimated in March 2022.
- The net borrowing ceiling (NBC) in percentage and the process of estimating the GSDP* for calculating the absolute borrowing limit for each state by the GoI is based on the recommendations of the successive FCs.
- **Downward revisions in the GSDP/GSDP over a period of time could lead to some states' fiscal deficit relative to GSDP inadvertently exceeding the limit set by the FC, highlighting the need to improve the early GSDP/GSDP estimates.**

*Note: *The 14th FC recommended that for the purpose of assigning state specific borrowing limits as a percentage of GSDP for a given fiscal year T, GSDP should be estimated on the basis of the annual average growth rate of the actual GSDP observed during the previous three years or the average growth rate of GSDP observed during the previous three years for which actual GSDP data are available. GSDPs for T-1 and T should be estimated by applying the annual average growth rate of GSDP in T-2, T-3 and T-4 on the base GSDP of T-2 (using GSDP data published by NSO).*

Source: NSO; FC reports; ICRA Research

Consistent downward revision in GSDP estimates displayed by majority states; few major states recorded wide variation during FY2018-21

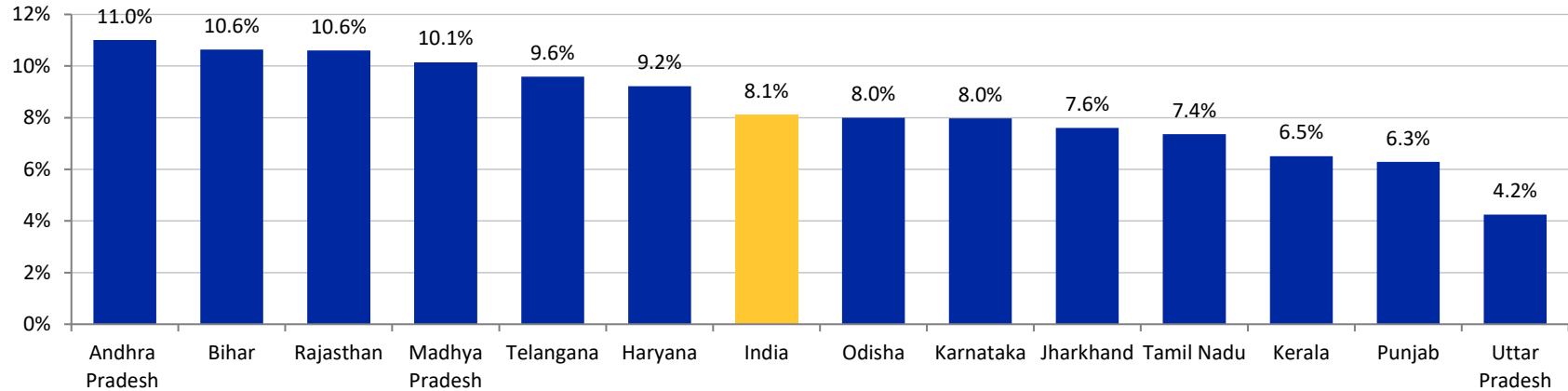
Exhibit: State-wise share of variation between initial and final/latest estimate of GSDP (at constant prices; 2011-12 base)

Rs. Billion	FY2018	FY2019	FY2020	FY2021
Andhra Pradesh	-1	53	-22	187
Assam	-88	-159	-81	-225
Bihar	-127	-130	-167	-342
Chhattisgarh	16	59	64	-
Goa	-41	-135	-86	-116
Gujarat	-32	-71	-37	39
Haryana	-120	-69	-62	82
Himachal Pradesh	-6	-14	-32	1
Jammu & Kashmir	1	22	-51	-70
Jharkhand	-70	-35	-83	-81
Karnataka	-238	-418	-512	301
Kerala	-44	-52	-21	-
Madhya Pradesh	36	212	138	37
Maharashtra	-541	-661	-901	-
Odisha	21	-7	-133	45
Punjab	2	-7	-56	136
Rajasthan	-53	-345	-321	169
Tamil Nadu	95	-29	-515	-939
Telangana	-21	-44	-220	-335
Uttar Pradesh	-235	-401	-470	-152
Uttarakhand	1	-72	-125	30
West Bengal	-164	-618	-88	-

- As many as 22 out of the 32 states/UTs recorded a downward revision in their GSDP as per the final estimates relative to the initial estimates. This number rose to 24 in FY2019 and further to 28 in FY2020.
- For FY2021, the number of states with downward revision is lower at 13, as per the latest estimates that are available.
- Notably, 10 of the 32 states/UTs, namely Arunachal Pradesh, Assam, Gujarat, Kerala, Maharashtra, Manipur, Mizoram, Nagaland, Uttarakhand and Chandigarh, had published their initial FY2021 GSDP estimates as late as March 2022.
- Wide variations are observed for a few of the states, namely, Karnataka, Maharashtra, Tamil Nadu and Uttar Pradesh, in their initial and final/latest GSDP estimates in some of the recent years.
- In contrast, Andhra Pradesh, Kerala, Odisha and Punjab have seen the least variations during these years.

The GSVA growth of AP, Bihar, Rajasthan, MP, Telangana and Haryana in FY2022 outpaced the 8.1% increase in India's GVA

Exhibit: Trends in state GSVA and India GVA in FY2022 (at constant prices; 2011-12 base)



- The FY2022 GSVA/GSDP estimates are still not available for 13 of the 32 states/UTs from the NSO. Additionally, out of the 17 largest states, FY2022 GSVA/GSDP data is not available for Chhattisgarh, Gujarat, Maharashtra and WB.
- After outperforming national GVA in FY2021, the GSVA of AP, Bihar, Rajasthan, MP and Haryana expanded in the range of 9-11% in FY2022, higher than the 8.1% expansion at the national level. Additionally, the GSVA growth of Telangana at 9.6%, exceeded the national growth rate in FY2022. The GSVA of Odisha, Karnataka, Jharkhand, TN grew between 7-8% each in FY2022, similar to India's GVA performance.
- Following a sharp contraction in FY2021 (higher than the national level and the 17 states), Kerala's economy expanded by 6.5% in FY2022, trailing the growth of India's GVA. Moreover, the GSVA of Punjab and UP grew by a relatively muted 6.3% and 4.2%, respectively, in the same year.



Annexures

Annexure A.1: Size of GSVA and the per-capita GSVA ranking of a few states diverges sharply

Exhibit: Size of a state's GSVA in India's GVA in FY2021 (at constant prices; 2011-12 base)

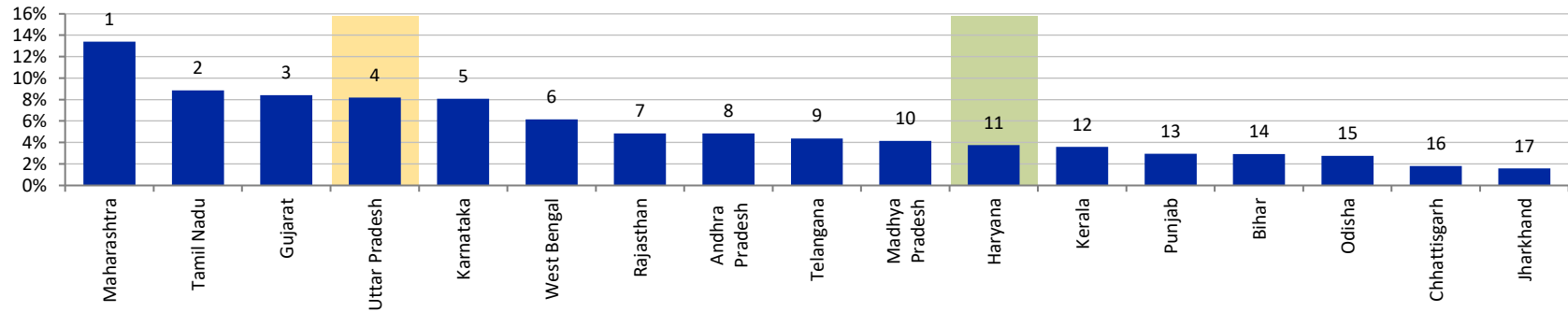
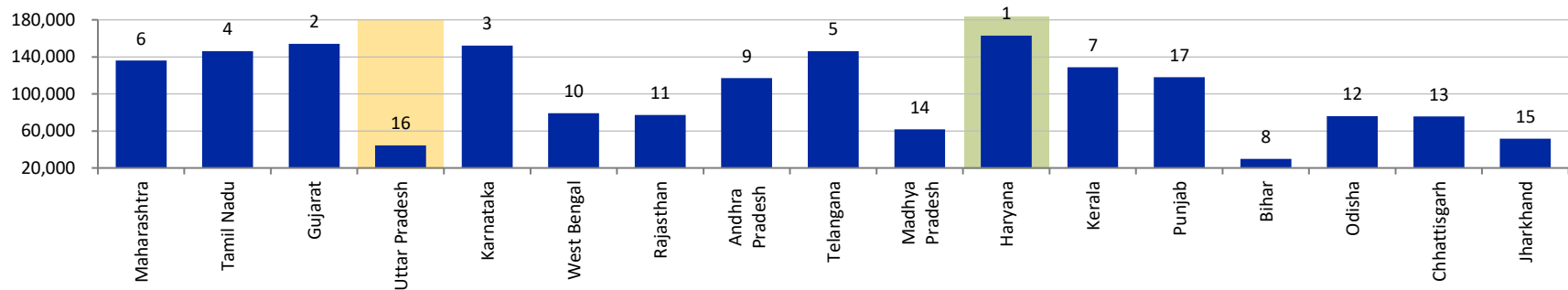
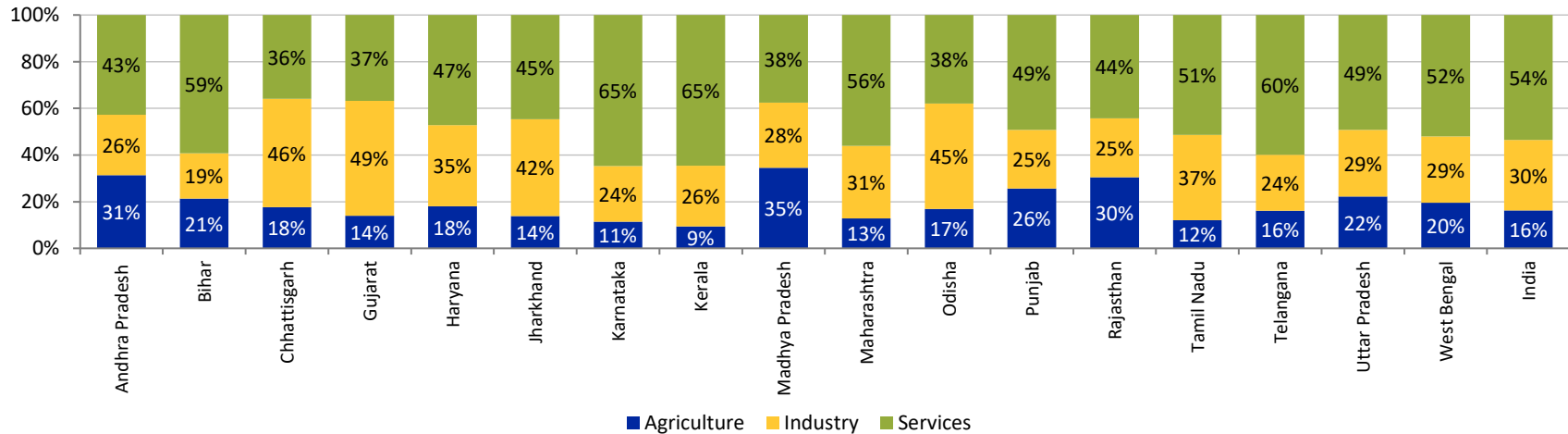


Exhibit: Per-capita GSVA (at constant prices; 2011-12 base) in FY2021 and ranks within the 17 sample states



Annexure A.2: Share of agriculture, industry and services within individual states' GVA, was highest for MP, Gujarat and Karnataka, respectively

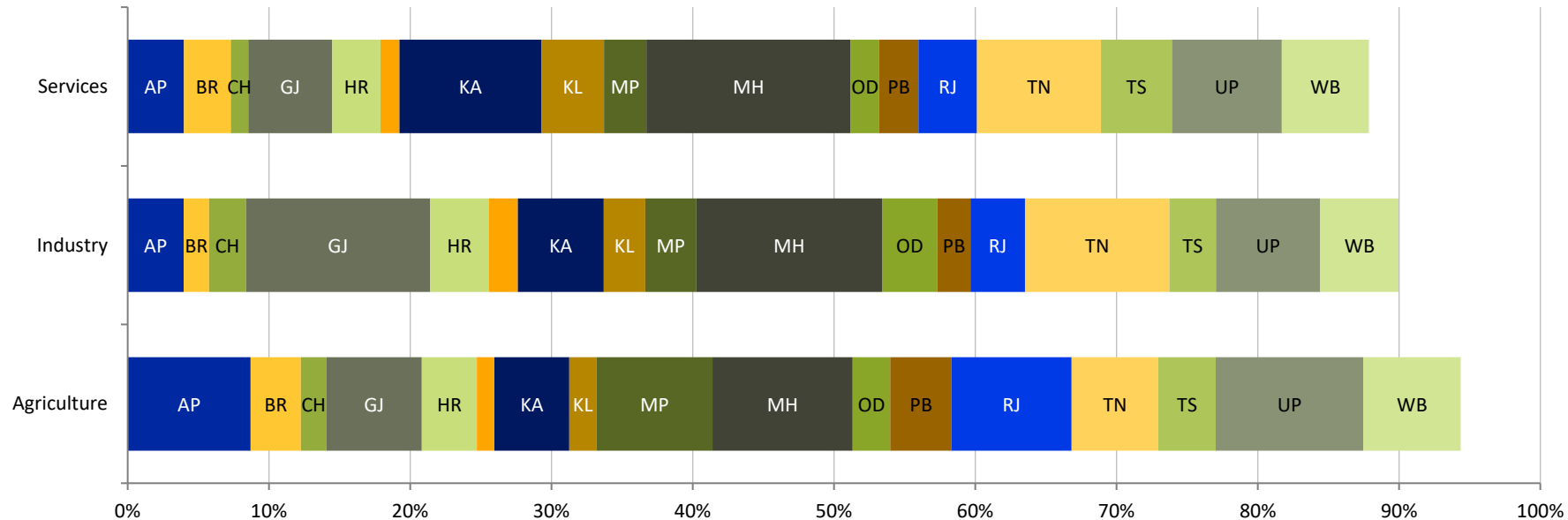
Exhibit: Composition of state GVA and India GVA in FY2021 (at constant prices; 2011-12 base)



- The share of agriculture within GVA was relatively higher for MP, AP, Punjab and Rajasthan compared to most of the other states. However, the net irrigation coverage of AP and Rajasthan is far lower than that of Punjab and MP, suggesting a higher vulnerability of agricultural activities in AP and Rajasthan to the spatial and temporal variations of the monsoon rainfall. In contrast, Karnataka, Kerala and TN had a relatively low share of agriculture at 9-12% of their GVA.
- Among the 17 states, the highest share of industry within GVA was displayed by Gujarat at 49%, with manufacturing being a key contributor to its industrial sector. Among the 17 sample states, the share of the industrial sector within GVA was the lowest at 19% for Bihar in FY2021.
- At ~65% each, Karnataka and Kerala had the highest share of services in GVA in FY2021. The services sector in Karnataka is dominated by technology-intensive industries, such as information technology, software and pharmaceuticals, while tourism and trade of agricultural commodities provide a boost to the service sector in Kerala. In contrast, the services sector of Chhattisgarh and Gujarat comprised a relatively small 36-37% of the respective state economy in FY2021.

Annexure A.3: Maharashtra has the largest industrial and services sectors amongst the state economies; UP's agri output exceeds that of the other states

Exhibit: Size of a state's sub-sector output in aggregate states/UTs sub-sector output (at constant prices; 2011-12 base) in FY2021



- The size of the 17 largest states' GSVA sub-sector output comprised nearly 90% of the respective 32 states'/UTs' sub-sector output in FY2021.

Note: AP: Andhra Pradesh, BR: Bihar, CG: Chhattisgarh, GJ: Gujarat; HR: Haryana, JH: Jharkhand, KA: Karnataka, KL: Kerala, MP: Madhya Pradesh, MH: Maharashtra, OD: Odisha, PB: Punjab, RJ: Rajasthan, TN: Tamil Nadu, TS: Telangana, UP: Uttar Pradesh and WB: West Bengal
Source: NSO; ICRA Research



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