

Kautilya Economic Conclave 2023

Determining priorities for the next stage of structural reforms & implications of disruptive technological change

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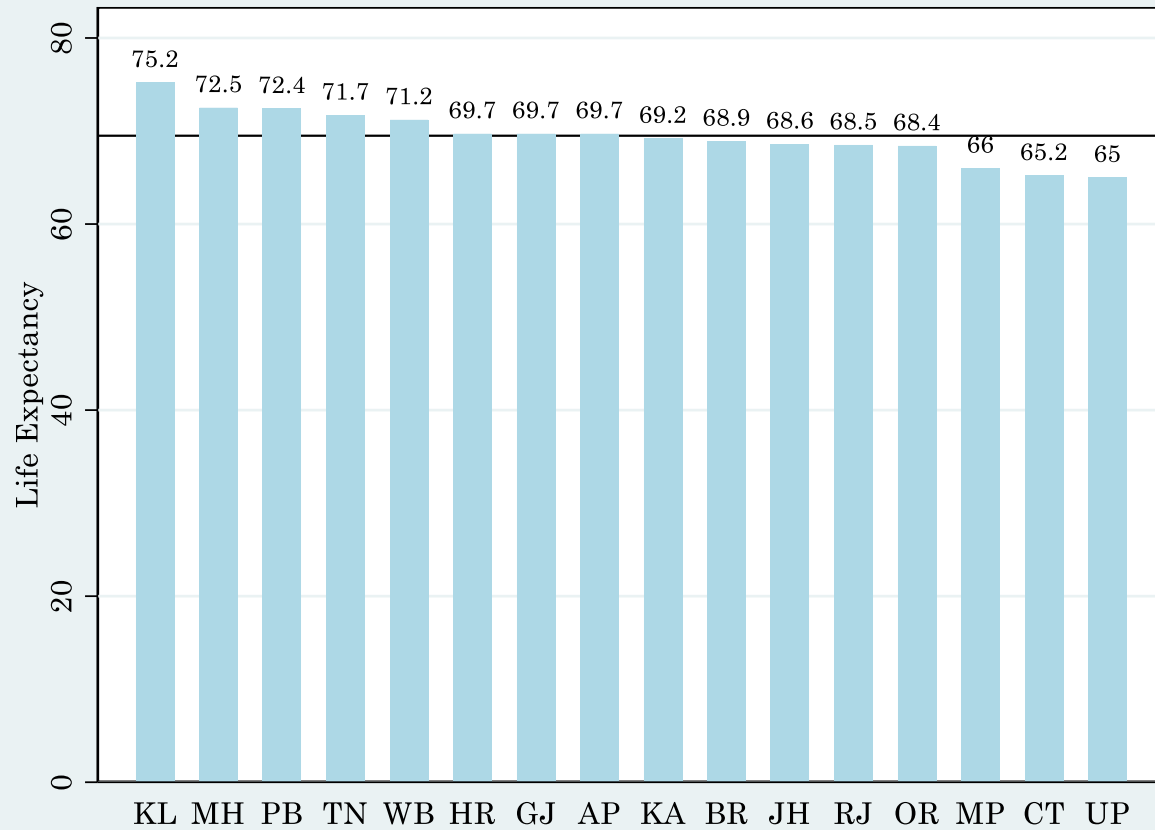
**Centre for Development Studies
India**

Inter-state differences in public service delivery outcomes should determine priorities for the next stage of reforms in India

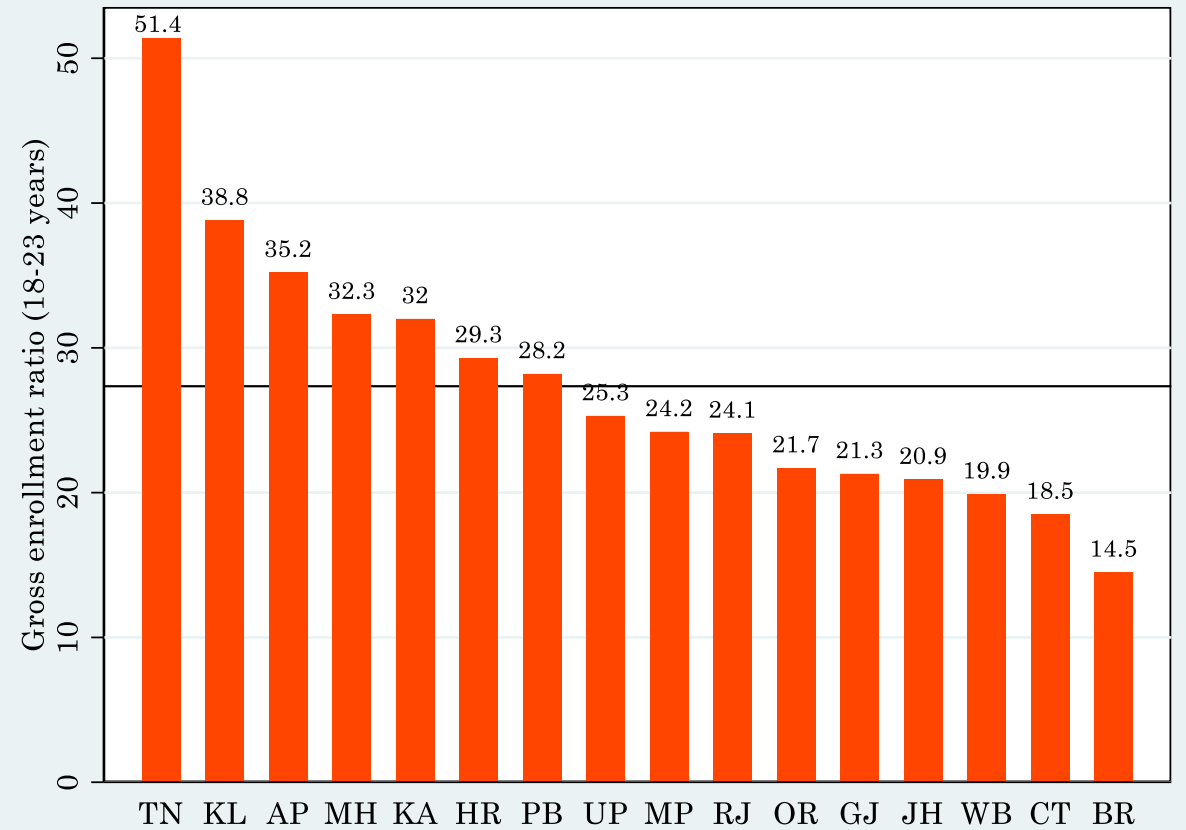
- Structural reforms have hitherto focused on national policies & institutions, the next stage of reforms will mainly require action at the state level
- Internationally, development outcomes in some countries yield valuable lessons on 'best practices' for reforms in other countries
- However, this approach constrained by large differences in conditions across countries
- What works in one context may not work in another
- However, within large federal countries with a common market, shared legal & administrative framework, shared history, etc. comparisons across states are more robust
- Outcome differences between leading and lagging states can offer powerful 'best practice' lessons from the leading states to guide reforms in the lagging states.
- This presentation mainly focuses on illustrating and making the case for this approach
- This will be followed by some observations on the implications of disruptive technological changes that are emerging

Some illustrations of large inter-state variations in service delivery outcomes

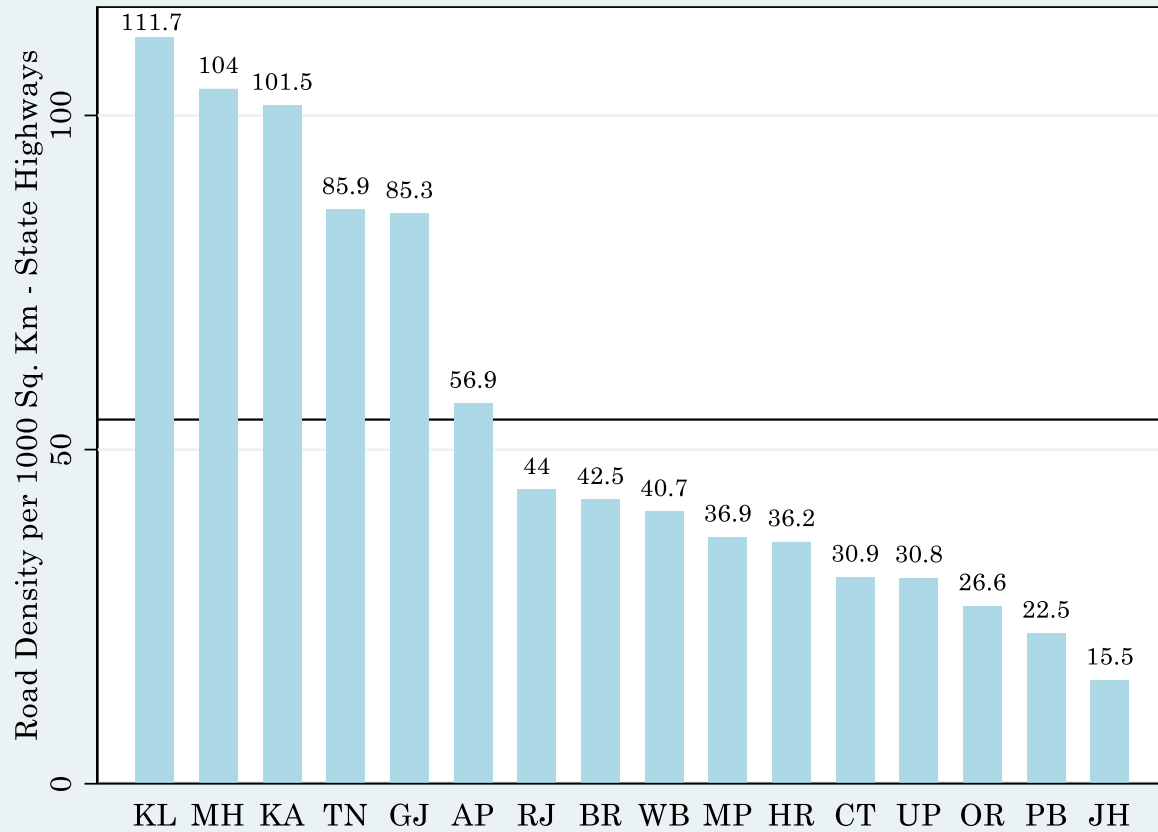
At 75 Kerala life expectancy 10 years longer than in UP



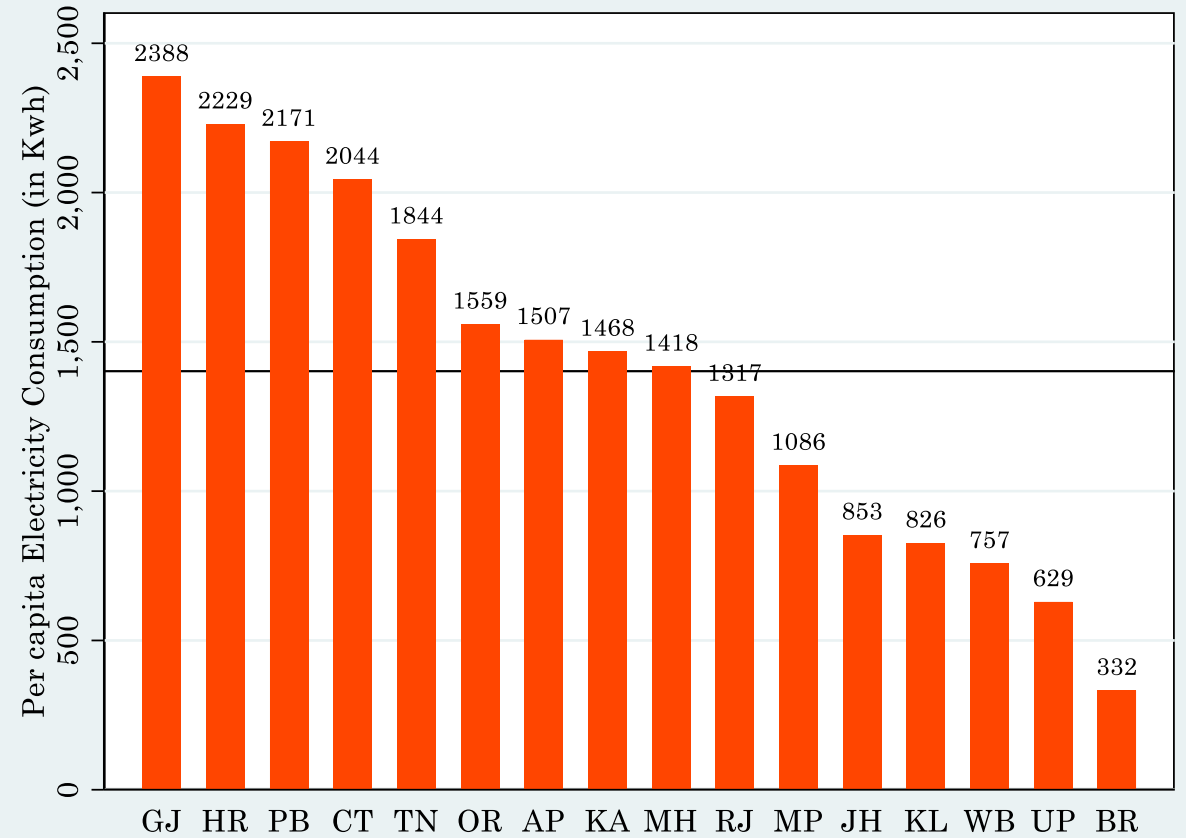
Tamil Nadu higher education enrollment 3.5 times that in Bihar



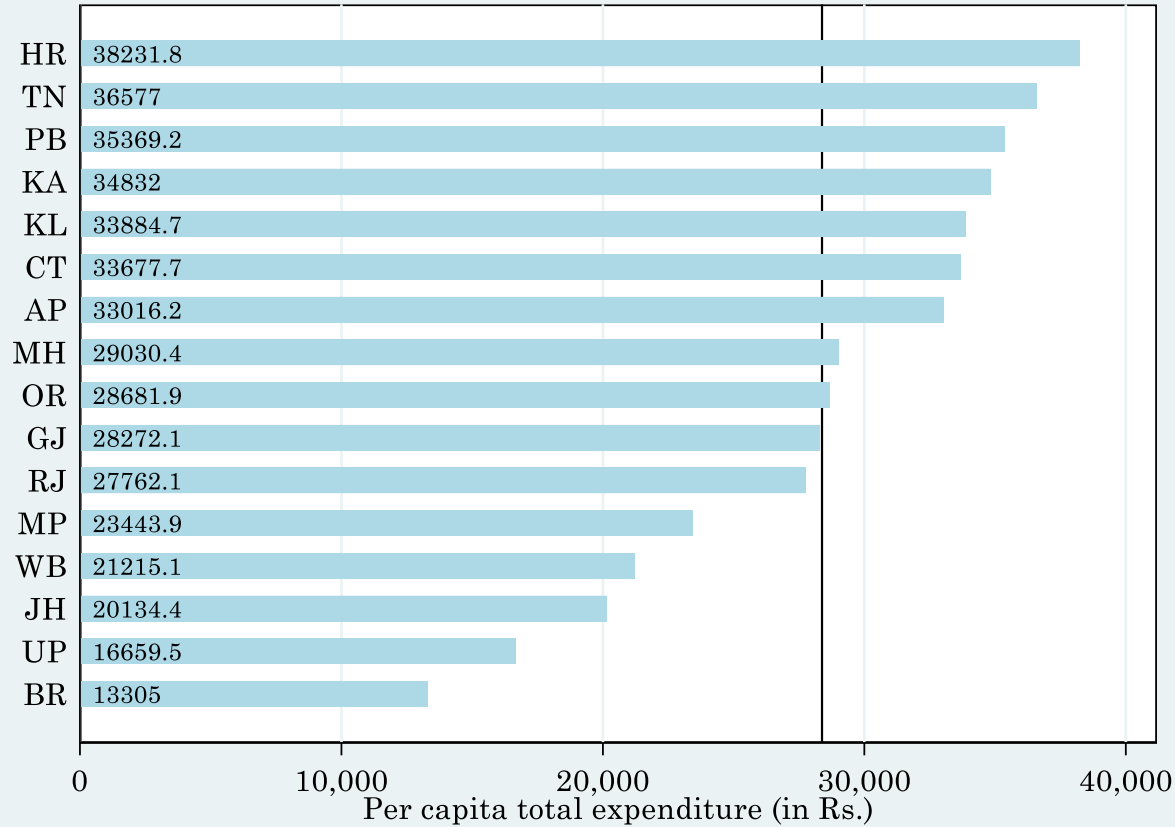
Kerala road density more than 7 times that in Rajasthan



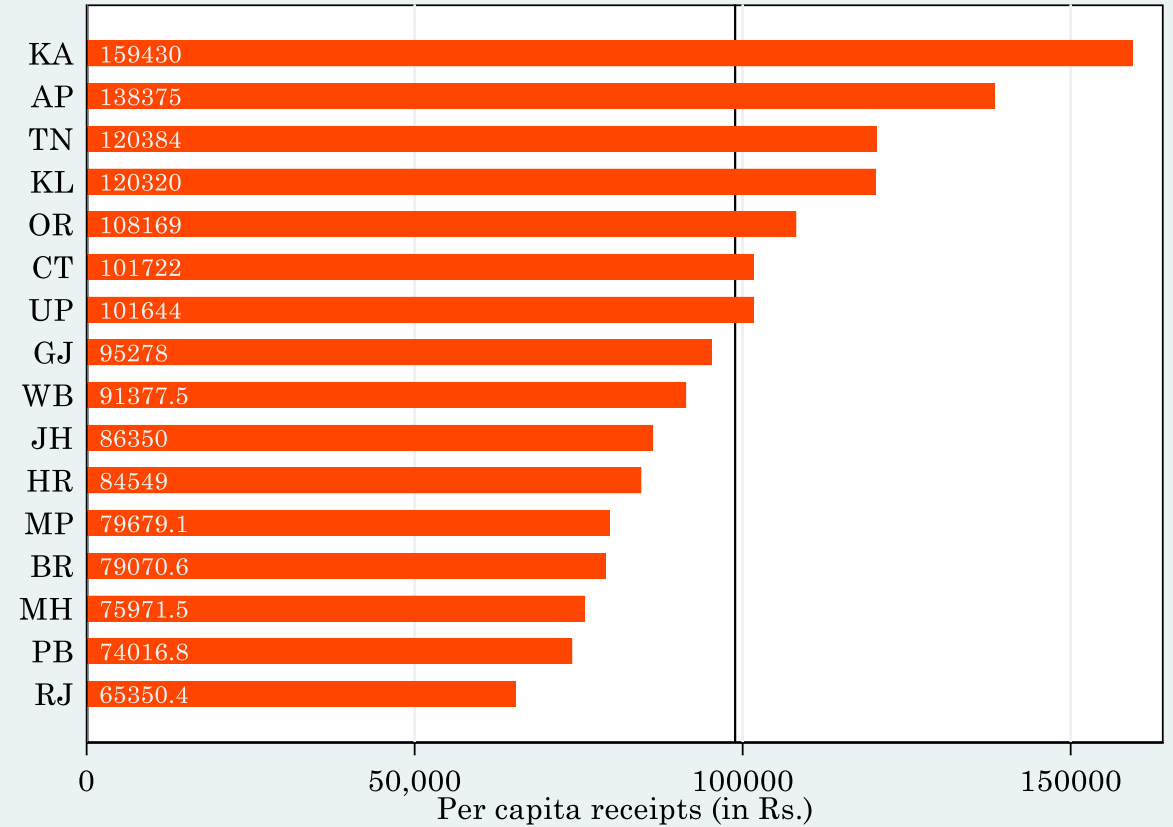
Gujarat power availability per capita more than 7 times that in Bihar

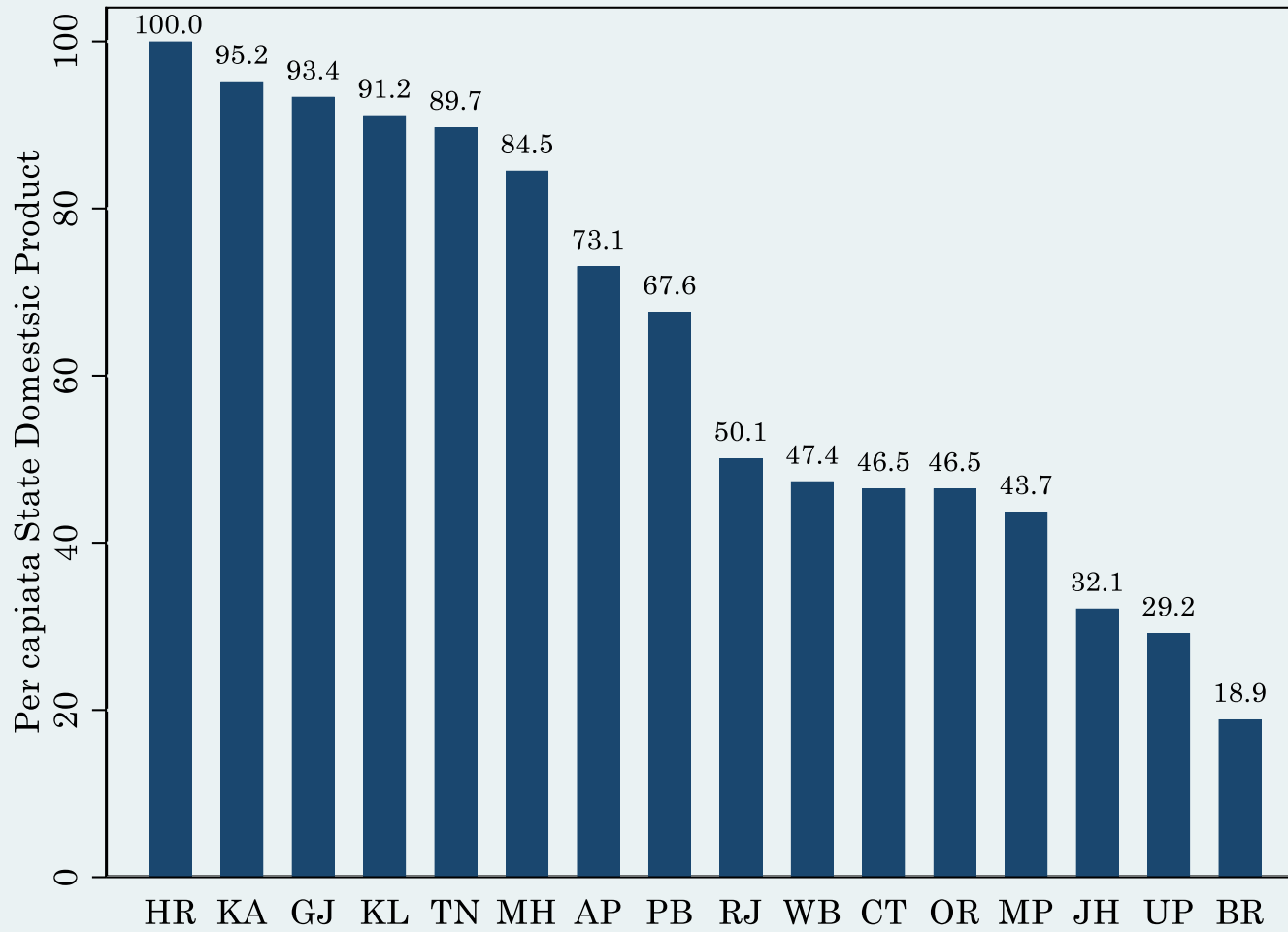


Haryana per capita public expenditure 2.9 times that in Bihar



Karnataka per capita receipts 2.4 times that in Rajasthan.





Service Delivery Outcome Rank of states

No	State	Life Expectancy	GER	Electricity Consumption	Road Density	Per capita Expenditure	Per capita Income
1	Tamil Nadu	4	1	5	4	2	5
2	Kerala	1	2	8	1	5	4
3	Karnataka	9	5	13	3	4	2
4	Gujarat	6	12	1	5	10	3
5	Haryana	6	6	2	11	1	1
6	Punjab	3	7	3	15	3	8
7	Maharashtra	2	4	9	2	8	6
8	Andhra Pradesh	6	3	7	6	7	7
9	Rajasthan	12	10	10	7	11	9
10	Odisha	13	11	6	14	9	12
11	Chhattisgarh	15	15	4	12	6	11
12	West Bengal	5	14	14	9	13	10
13	Uttar Pradesh	16	8	15	13	15	15
14	Jharkhand	11	13	12	16	14	14
15	Bihar	10	16	16	8	16	16
16	Madhya Pradesh	14	9	11	10	12	13

Key takeaways for reform priorities

- **Why are there such large variations in service delivery performance across state**
 - per capita power availability in Gujarat 7 times that in Bihar
 - Life expectancy in Kerala 10 years more than in Uttar Pradesh
- Partly attributable to differences in initial condition or state specific shocks
- Partly also attributable to per capita income differences, with causality running in both directions
- **Adjusting for these factors, the residual differences attributable to policy/administrative deficits that should be the focus of reforms**
- **Sectoral outcome deficits vary across states, requiring different reform priorities**
 - Gujarat leads in power availability but lagging behind in higher education
 - Kerala has highest life expectancy , but lagging behind in power availability
- **States lagging in many outcomes, are still relatively better off in some services, pointing the reform needle to other outcomes**
 - in Bihar relative road density deficit less than, say, relative deficit in power availability or higher education enrollment compared to the best performing state

Reforms must prepare for disruptive technological transformation in response to global warming

- So far discussed an approach to prioritizing state level reforms in a conventional or 'business as usual' scenario
- However, addressing global warming will require a fundamental technological transformation
- In next two to three decades fossil fuel based production systems will have to be transformed to renewable energy based systems
- The policy and regulatory ecosystem both at the federal level and in the states must be reformed towards this goal
- Entrepreneurs need the incentives and freedom to adopt and innovate the new systems

The binding constraint for this transformation is not technology but financing to roll out these new technologies at scale in the EMDEs

- Some mitigation technologies are still at the development stage, but others like solar & wind power or green hydrogen are being deployed
- But massive investments will be required to roll them out at scale in the EMDEs, where they can be most effectively deployed
- A ballpark estimate is that globally climate finance of \$5 trillion per year will be required, including \$1 trillion in EMDEs (excluding China)
- Resources at this scale will mostly have to come from private sources
- The Summers-Singh reports estimates that to leverage such private resources, MDB operations must be tripled to \$390 billion by 2030
- The reports have also proposed comprehensive MDB reforms towards this end. But implementing these reforms is the big challenge

Can reforms be designed to deal with the massive unemployment and inequality that AI and large learning models will generate?

- AI and large learning models are likely to fundamentally transform virtually all human activity
- Experts are divided between utopian and dystopian narratives of what is likely to unfold
- The utopian narrative envisages enormous leaps in creativity and productivity in virtually all branches of human activity
- But dystopian narrative of Geoffrey Hinton, the founding father of AI, & others see AI systems eventually evolving into an existential threat for humanity
- More moderately, Acemoglu & Johnson argue that technical change has always maximized productivity & minimized the role of labour
- This dual pattern will be taken to a whole new level with AI, leading to massive unemployment and inequality. Can reforms be designed to deal with that?