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PUBLIC AFFAIRS INDEX
PAI
Governance in the States of India

Public Affairs Index 2021

3 Pillars | 5 Themes | 14 SDGs | 43 Indicators

Public Affairs Index - 2021

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Public Affairs Centre (PAC) engages in action research focussing on Sustainable Development Goals (SDGs) in the context of India. PAC is a not for profit Think Tank established in 1994 with a mandate to improve the quality of governance in India. The Centre is also a pioneer in deploying innovative Social Accountability Tools (SAT) to measure the quality and adequacy of public services. Over the years, its scope of work has expanded to include the whole gamut of research-advocacy-action to lead evidence-based research on governance across sectors, geographies and populations in India. PAC ensures that gender is an over-arching theme in all its focus research areas.

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Public Affairs Index

GOVERNANCE IN THE STATES OF INDIA

2021

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Preface

The year 2020-2021 brought into sharp focus, as never before, that Sub-national Governance is important, with long-term implications for human development for large swathes of people and across diverse geographies in the country. The Public Affairs Index (PAI) 2021 provides evidence-based analyses on the Governance performance of the States in the difficult year gone by. PAI 2021 is the sixth edition of the annual flagship report from the Public Affairs Centre and is presented in the aftermath of the country-wide economic and social disruption that COVID-19 has wrought. The year past exerted unprecedented Governance challenges - human, economic, social and political - and the States bore the brunt of the crisis. All things considered, it would be fair to say that the government - at the Centre and in the States - did well in the face of the fact that the world was overtaken by events.

The importance of a constructive but critical appraisal of the Governance challenges in the States arises from our argument that, in the medium-long term, it is likely that much of the current development value will centre on some States while others, at least in the near term, face less than optimal prospects. PAI 2021 is a rigorous philosophical, technical, and economic analysis of why we hold this view. The use of the term Sub-national Governance throughout the report makes clear the approach: the States are the theatres of development action; and Decentralised National Governance means a Governance ecosystem in which the building blocks of economic and social progress must be constructed by the States. The States therefore must build public governance capacities to navigate context-specific technical and economic bottlenecks; render their workings transparent and socially accountable; and ensure not just the development outcomes but even the architecture of citizen engagement operates on these principles. This alone can insulate governance in the States from individuals or entities that might from political-economic self-interest affect development pathways, in the form of agitation action to advantage themselves or to disadvantage others. The goal is, in effect, Sub-national Governance in which all participation is honest and all honest participation is fostered, such that a sustained and inclusive development trajectory is unlocked.

The evidence that PAI 2021 presents is from the perspective of first principles: proof of work done in the States and the results therefrom that data points to; the barriers that appear to constrain the States from achieving full potential; the process of convergence, even if slow; and the considerable development deficits that States must devote focused attention to. In doing so, it highlights that the common and popular metrics that capture the extent of apparent development progress can be misleading as indicators of the governance performance, and primarily serve to encourage further capital inflows, but without necessarily contributing to real economic productivity or social progress. PAI 2021 thus provides State-specific rationale for strategic interventions in investing in those sectors and

spaces that are most in need. Using data analytics it argues that the most sensible investment thesis for each State is one that centres on those development deficits taking longer and being more difficult to build. Two additional features in PAI 2021 bear mention: a COVID -19 Response Index measuring the relative performance of the States in responding to the pandemic; and a comparative assessment of the performance of the States in implementing five important Centrally Sponsored schemes that have implications for Growth, Equity and Sustainability.

A caveat would be in order: The States operate in a resource constrained environment and the political economy of Sub-national Governance is not easy to navigate. This renders the task of Governance in the States and the assessment of the Governance performance of the States, more difficult. Given the complexity of the task we have set ourselves, PAI 2021 is intended to present evidence-based findings and arguments and provide a discussion base for good faith disagreement.

PAC welcomes bouquets and brickbats alike, for in the end, all are striving towards a common goal - Good Governance.

G. Gurucharan

Director

Public Affairs Centre

Research Team

Gurucharan Gollerkeri is Director, Public Affairs Centre (PAC), Bengaluru. A civil servant from the Indian Administrative Service, in the higher echelons of Government for over 34 years, he retired as Secretary to the Government of India, in 2016. He served with distinction as the first director of the India Centre for Migration (ICM), a policy 'think-tank' on International Migration, during 2010-13. Based on his work at the ICM, he co-authored 'Migration Matters: Mobility in a Globalizing World' (OUP, 2016). In 2004-05, Mr. Gollerkeri was a Visiting Fellow at the Centre for Public Policy at the Indian Institute of Management, Bangalore. Mr. Gollerkeri spearheaded the PAI 2021 project.

Samridhi Pandey is a Programme Officer at PAC. She is the Team Lead for PAI 2021. She has played a key role in developing and authoring analysis of findings from the Governance Model and Delta Analysis. She was responsible for ensuring robustness of data and methodology of the Governance Model, Scheme Analysis and COVID-19 Response Index. Samridhi holds a Bachelor's and a Master's degree in Economics with specialisation in Development Studies. Samridhi's research interests include Data and Governance, Quantitative Economics, Sustainable Development Goals and Gender Studies.

Anjana Kizhpadathil is a Programme Officer at PAC. She was responsible for conceptualising, developing and authoring the section on Scheme Analysis. She offered support in developing the Governance Model and co-authoring sections of the report. She holds a Bachelor's degree in Journalism and a Master's degree in Public Policy and Governance. Anjana's research interests include Decentralisation and Local Governance, Sustainable Development and Intersectional Approaches to Understand Gender.

Data Team

Thomas Jacob heads the Centre for Open Data Research (CODR) – the analytics arm of PAC. He was the strategic supervisor for PAI – 2021 and was responsible for ensuring the robustness and veracity of data and methodology in all sections of the report. He holds a Master's degree in Computer Science. His research interests include Information Systems Architecture, Design & Development of Enterprise Business Solutions, Data Engineering, Data Science & Analytics, AI & ML.

Ganesh Aravindh V P is an Associate Data Scientist at CODR. He was responsible for the application of scientific techniques to arrive at the Composite Index for the Governance Model, Scheme Analysis and Delta Analysis. He holds a Master's degree in Data Science with specialisation in computer vision and is currently pursuing a PhD in Data Science. Ganesh's research interests include Machine Learning, Artificial Intelligence, Neural Networks, Modelling in R & Python, and Visualisation tools (Tableau & Power BI).

Sai Sidharth M is an Associate Data Scientist at CODR. He played a key role in conceptualising, applying scientific techniques and co-authoring the COVID-19 Response Index. He holds a Bachelor's degree in Statistics and a Master's degree in Biostatistics and Demography. He also offered support in co-authoring sections of the report. Sidharth's research interests surround Statistical Analysis and Application of Machine Learning Techniques in Health and related areas.

Editing And Design Team

Dr. Annapoorna Ravichander, Executive Director, Public Affairs Foundation and Head-Policy Engagement and Communication, PAC oversees all the activities related to branding, engaging with stakeholders and policy engagement She was overall in charge of the production and editing of PAI 2021.

Esha Daftari is a Graphic Designer. She oversees all design elements and brings in her experience of using graphics, photography and designing in mailing complex information as an easy to read experience based on the audience. She started her career 12 years back as a Graphic Designer and has been working as a Freelance Photographer since the last 8 years. She has conducted Photography workshops for beginners, students and corporates. For PAI 2021 she developed and designed the infographics and relevant graphics.

Vrishika M. N. is a Creative Content Writer and Graphic Designer. She completed her studies in visual arts and communication from Jyoti Nivas College, Bengaluru. For PAI 2021 she assisted Esha Daftari to design some of the elements, assigned to her.

We would like to thank the following interns in assisting with collecting data and writing elements of the report, Abhishek Kumar, Abhishek Tripathi, Khushi Shetty, Mohammed Fairos Mirza, Rahul Das (Programme Officer- PAC), Shruti Chaturvedi, Trishna Saraf and Varsha R.K.

Executive Summary

"Talk, talk, talk: the utter and heartbreaking stupidity of words."

William Faulkner

Mosquitoes

"Data are just summaries of thousands of stories - tell a few of those stories to help make the data meaningful."

Dan Heath

'Made to Stick, Switch'

The Public Affairs Index (PAI) is a data-based framework that measures the quality of governance at the Sub-national level, and ranks the States of India on a Composite Index (CI). States are classified into- Large States, Small States (using population as the criteria) and Union Territories. PAI 2021 builds on PAI 2020 with more scientific rigor in the methodology and analysis. PAI 2021 has also included two new assessments of Sub-National Governance - Scheme Analysis and the COVID-19 Response Index. Complementing the Governance model is also the chapter on Delta Analysis assessing the year-on-year progress of the states on the Key Human Development Indicators.

Chapter I, PAI 2021- Introduction, this 6th edition discusses issues around the broad *'sustainable development'* space centered on three primary themes: Growth, Equity and Sustainability. From a philosophical perspective, it elaborates on the key imperatives of Governance in the States that make for good performance, as well as what makes each State unique. From a technical perspective, PAI 2021 evaluates how these imperatives are lacking to a greater or lesser extent in different States and how this is impacting human development. From an economic perspective, PAI 2021 points to State-specific concerns to the path to establishing a sustained trajectory for Growth, the basis for a just and equitable society and the barriers that might constrain progress. PAI 2021 results also include the rankings of the States at the SDG level, where it also keeps in mind the SDG 2030 Agenda of '*leave no one behind*'.

Chapter II, carrying forward the breakthrough in terms of methodology in the PAI 2019, this year's PAI 2021 also follows a similar path. The approach remains the same as PAI 2019 where the three dimensions of sustainable development - Growth, Equity, Sustainability - as the overarching goals of governance constitute the bases of measuring the performance of the States. Each of the three Pillars branch into five Themes - Voice and Accountability, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption. These Themes are then mapped to 14 Sustainable development Goals (SDGs) as specified by the United Nations Agenda of 2030. Further, to these Sustainable Development Goals, 43 different indicators are used in generating the Composite Index (CI).

The scientific rigour of the methodology has been ensured. The Principal Component Analysis (PCA) technique was used to enable self-selection of standalone component indicators, eliminating auto co-relationships. The raw data for the various indicators were first converted to scaled scores (using normalized Z scores) that appropriately aligned with the direction of the indicator. A Composite Index was calculated at each level of the data structure. A variation of the *'Manhattan Distance*' was applied for aggregating the individual components, at all three levels – SDG, theme, and pillar – to arrive at the CI. A similar technique was adopted for both Scheme Analysis and the COVID-19 Response Index.

Chapter III, In PAI 2021, the Equity Principle was explored through 21 indicators across economic, social, gender and legal representations. These 21 indicators represent a range of human development parameters

starting from the proportion of the population covered under social protection schemes to the proportion of Anti-Corruption Cases closed as a proportion of total cases registered. In the Large States category, the State of Gujarat ranks the highest in the Pillar of Equity, followed by Kerala and Rajasthan. Kerala and Gujarat also indicate a similar performance in the overall PAI 2021 Index and rank among the good performing States. While Rajasthan is 3rd in the Pillar of Equity, it ranks 11th in the overall PAI 2021 Index. Among the poor performers in the Equity Pillar are the States of West Bengal (WB), Maharashtra, Karnataka, Odisha and Uttar Pradesh (UP). In the Small States category, interesting changes can be observed compared to last year's performance of the States. Sikkim ranks 1st in the Equity Pillar as well as the overall Index, followed by Meghalaya ranking 2nd, and Mizoram ranking 3rd. Similarly, Uttarakhand ranks 9th, Delhi 10th and Arunachal Pradesh 11th. Goa is on the list of top three in the overall Index ranks 6th in the Equity Pillar. Manipur which is at the bottom of the overall Index ranks 8th dropping five places compared to Equity Pillar in PAI 2020. For Union Territories, Puducherry tops, the rankings (also 1st in the overall PAI 2021 Index) followed by Jammu and Kashmir ranking 2nd (improving one rank compared to PAI 2020). With a correlation coefficient of 0.760 with the overall Index, the Equity Pillar turns out to be the driver of the performance of the States. Placing at the bottom are Andaman and Nicobar Islands (5th) and Dadra and Nagar Haveli and Daman and Diu (6th).

Chapter IV deals with the Growth Pillar and assesses India's challenges towards attaining holistic development. In PAI 2021, the Growth Pillar is built on 15 indicators used for assessing the quality of governance and is based on two Themes: Government Effectiveness and Regulatory Quality. The top three States in the Large States category are Telangana, Kerala and Jharkhand. A surprise addition to the top performers of the Growth Pillar is Jharkhand which has ranked 3rd, while it ranked 14th in PAI 2020. Madhya Pradesh, Uttar Pradesh and Bihar are poor performers in the Growth Pillar and they also rank at the bottom in the overall Governance Index, a similar performance to PAI 2020. In the small States category, Goa ranks 1st, followed by Delhi and Himachal Pradesh. Performing last are Meghalaya, Nagaland and Manipur. For the Union Territories (UTs) due to unavailability of data, SDG 8 indicators under the Government Effectiveness Pillars could not be incorporated. The UTs are centrally administered; however, it varies for Puducherry which has unicameral legislation and elected representatives. The UTs ranking of PAI 2021 is quite surprising if one compares it with the scores of PAI 2020. In the Growth Pillar, Puducherry maintains the 1st rank, followed by Dadra Nagar Haveli and Daman and Diu. The poor performers are Chandigarh at 5th rank and Andaman and Nicobar Islands at 6th.

Chapter V addresses the indicators in measuring Sustainability. In the Large States category, the States positioned at 1st and 2nd rank are Kerala and Tamil Nadu, similar to last year. Following Kerala and Tamil Nadu on its pursuit to sustainability is Chhattisgarh improving one place since last year. In line with the last year's sustainability score is the performance of the bottom performers West Bengal at 16th, Bihar at 17th and Uttar Pradesh at 18th rank respectively. In the Small States category, the States placed at the top are Mizoram, Arunachal Pradesh and Goa ranking 1st, 2nd and 3rd respectively and the States placed at the bottom are Manipur, Uttarakhand and Delhi ranking 9th, 10th and 11th respectively. Himachal Pradesh is overall 7th in the Sustainability Pillar. This year's Sustainability Pillar's topper in the Union Territory (UT) category is Puducherry acquiring 1st position, followed by a surprising addition of Jammu and Kashmir at 2nd and Andaman and Nicobar Islands at 3rd position which slipped two ranks after topping this Pillar last year. The bottom performer in this Pillar is Lakshadweep.

Chapter VI provides the Delta Analysis to understand whether and to what degree the states are making progress in terms of Equity, Growth and Sustainability and whether this progress is measurable and impactful in the year-on-year performance assessment. In PAI 2021, twelve indicators across the three Pillars of Equity (five indicators), Growth (five indicators) and Sustainability (two indicators) are the outcome indicators crucial to assess Human Development. The performance in the Delta Analysis is then compared to the overall PAI 2021 Index.

In the Large States category Chhattisgarh ranks 1st, followed by Odisha and Telangana, whereas, at the bottom is Maharashtra at 16th, Assam at 17th and Gujarat at 18th. It is quite a contrast in their performance compared to the overall PAI 2021 Index. In the Small States category, Nagaland tops, followed by Mizoram and Tripura. Towards the tail end of the overall Delta ranking is Uttarakhand (9th), Arunachal Pradesh (10th) and Meghalaya (11th). Nagaland despite being a poor performer in the PAI 2021 Index has come out to be the top performer in Delta, similarly, Mizoram's performance in Delta is also reflected in it's ranking in the PAI 2021 Index.

Chapter VII ranks the performance of States in implementation of select Centrally Sponsored schemes - namely, National Health Mission (NHM), Umbrella Integrated Child Development Services (ICDS), Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Samagra Shiksha Abhiyan (SmSA) and Mid-Day Meal Scheme (MDMS). The States are ranked separately based on the funding pattern between the Central and the State governments into 90:10 division States and 60:40 division States (Central share: State share). The performance of the States is assessed under the themes of Access, Coverage Availability and Utilisation. This analysis adds an additional dimension to measure the performance of States in terms of governance. The top performers in NHM among 60:40 division States are Kerala, Goa and Tamil Nadu and the bottom performers are Uttar Pradesh, Bihar and Jharkhand. Among the 90:10 division States, top performers are Himachal Pradesh, Sikkim and Mizoram and the bottom performers are Manipur, Assam and Meghalaya. The top performers in ICDS among 60:40 division States are Odisha, Chhattisgarh and Madhya Pradesh and the bottom performers are Tamil Nadu, Telangana and Delhi. Among the 90:10 division States, top performers are Manipur, Arunachal Pradesh and Nagaland and the bottom performers are Jammu and Kashmir, Uttarakhand and Himachal Pradesh. The top performers in MDMS among 60:40 division States are Goa, West Bengal and Delhi and the bottom performers are Andhra Pradesh, Telangana and Bihar. Among the 90:10 division States, top performers are Mizoram, Himachal Pradesh and Tripura and the bottom performers are Jammu and Kashmir, Nagaland and Arunachal Pradesh. The top performers in SmSA among 60:40 division States are Chhattisgarh, Odisha and Kerala and the bottom performers are Delhi, Telangana and Haryana. Among the 90:10 division States, top performers are Mizoram, Himachal Pradesh and Arunachal Pradesh and the bottom performers are Uttarakhand, Nagaland and Jammu and Kashmir. The top performers in MGNREGS among 60:40 division States are Kerala, Andhra Pradesh and Odisha and the bottom performers are Goa, Jharkhand and Madhya Pradesh. Among the 90:10 division States, top performers are Mizoram, Sikkim and Nagaland and the bottom performers are Assam, Jammu and Kashmir and Manipur.

Chapter VIII, the preparedness and response to the COVID-19 pandemic varied from State to State but there is little doubt that the States in India deserve substantial credit for the success of the country's COVID-19 response. This is sought to be done by ranking the States on the COVID-19 Response Index. It ranks Indian States on their response to the pandemic ever since the first case was detected in the country till March 31, 2021. The COVID-19 Response Index is generated from seven indicators subsumed under two themes - Preparedness and Containment, all of which measured on a continuous scale. The results of this Index when seen from a Pan-India perspective represent a mixed bag. The findings from and the subsequent rankings of the Large States are to some extent comparable to the findings of the Governance Index, given a positive correlation between the indices scores. Among the 18 large States, the top five States with the highest COVID-19 Response Index scores are Kerala, Tamil Nadu, Andhra Pradesh, Assam and Karnataka while the bottom five States are Jharkhand, Uttar Pradesh, Madhya Pradesh, Bihar and Maharashtra respectively. While Kerala has the highest score in both the Indices, not all States have a similar trend. Tamil Nadu has a similar 2nd rank in both the Indices. These States have emerged as the front runners in the Governance Index as well. They have also shown better performance in the Pillar of Growth under SDG 3 which deals with Health and Well-being which justifies their performance in the overall COVID-19 Response Index under the theme of Containment. An evident trend that has been observed in the COVID-19

Response Index is the ranking of States that have a relatively poor economic and financial status. These are the States having low per-capita Gross State Domestic Product (GSDP), including Bihar, Jharkhand, Uttar Pradesh and Madhya Pradesh. These States have performed well in the theme of Containment, however, that may be due to the cyclical nature of the problem of poor health infrastructure, leading to low detection of cases, low caseloads, and subsequently lower death records.

Among the Small States, there is a dissimilar performance in the COVID-19 Response Index in comparison to the Governance Index. Goa, which ranks 2nd in the Governance Index, ranks last in the COVID-19 Response Index. Delhi, on the other hand which ranks 9th among the 11 Small States is a top performer in the COVID-19 Response Index due to its strong performance in the theme of Preparedness, despite having a poor Containment standard.

Chapter IX, The Epilogue-Cluster Analysis, The broad picture through the overall rankings in PAI 2021 reveals some interesting findings. Revolving around the mad scramble of a pandemic, PAI 2021 aimed to rank States on their Sub-national Governance without letting their legacy falter. COVID-19 has deepened the prevailing issues and highlighted the ones covered by the curtain of so-called economic progress. While some States could retain their development trajectory, some had to make a conscious trade-off between human lives and overall development. In the overall rankings of PAI 2021 in the Large States category, Kerala retains its position at the top with an increase in the overall score to 1.618 from 1.388 from last year. Similarly, Tamil Nadu is at 2nd place, at the 3rd place displacing Andhra Pradesh is Telangana, with a remarkable improvement. Towards the tail end of the rankings are Odisha (16th), Bihar (17th) and Uttar Pradesh (18th). In the Small States category, Sikkim topped the ranking where it ranked 4th in PAI 2020. Goa which was a top performer last year slipped one rank to 2nd. Another surprise was Mizoram which ranked 7th last year but has ranked 3rd in PAI 2021. In the Union Territories (UTs) ranking, Puducherry improving one place has come 1st (score 1.344), followed by Jammu and Kashmir which saw a massive improvement in its Sustainability score pulling up its performance to 2nd. The PAI 2021 conducted a Cluster Analysis, an unsupervised machine learning technique to group data points depicting similar behaviour and uncovers hidden patterns. The Clusters were first constructed at each of the Pillars then to a combined clustering of the States on all the indicators. The overall analysis of the Clusters depicts that, the 1st Cluster is driven by Equity Pillar, 2nd Cluster is driven by Equity and Growth together, whereas, the 3rd Cluster is the one with poor-performing States also encapsulating the most number of Aspirational Districts.

CONTENTS

CHAPTER I – INTRODUCTION

Introduction

"In statistical inference we reach the fundamental paradox: If statistical theory is right, predictions must sometimes come out wrong; on the other hand, if predictions are always right, then the statistical theory must be wrong."

P.C. Mahalanobis
'Why Statistics?'

"Begin at the beginning," the King said, very gravely, "and go on till you come to the end: then stop."

Lewis Carrol
Alice in Wonderland

Public Affairs Index (PAI) 2021 does not represent the views of the research team, but the evidence-based findings and analysis of government data on various dimensions of Sub-national Governance. It is intended as a philosophical, technical and economic assessment of the Governance performance of the States with a view to help them improve Public Governance outcomes. This edition discusses issues around the broad 'sustainable development' space centred on three primary themes: Growth, Equity and Sustainability. From a philosophical perspective, it elaborates the key imperatives of Governance in the States that make for good performance, as well as what makes each State unique. From a technical perspective, PAI 2021 evaluates how these imperatives are lacking to a greater or lesser extent in different States and how this is impacting human development. From an economic perspective, PAI 2021 points to state-specific concerns to the path to establishing a sustained trajectory for growth, the basis for a just and equitable society and the barriers that might constrain progress. Given the complexity of the task PAI 2021 is intended to present the evidence and the findings in a comparative fashion, ranking the States, to provide the basis for public discourse and perhaps a discussion base for good faith disagreement.

Since the Hobbesian idea of the Leviathan (1651)[1] to Gentle Leviathan (Jayal, 1994)[2], the notion of a nation-state has evolved tremendously. The welfare activities within these nation-states have also metamorphosed from an act of benevolence into an idea of entitlement. Though nation-states started off with only duties of protection from foreign invaders and security within, today it is expected to do more than just protect and secure. It is expected to grant and protect the social, political and economic liberties to all its citizens. This led to the development of the idea of a welfare state pioneered by William Beveridge (Beveridge Report, 1942). Further giving rise to a rights-based approach towards development; and subsequently governance.

The considerable changes in the welfare activities in a nation-state instinctively brings about changes in the way it is governed. Legitimacy of contemporary nation-states are commonly derived from a constitution. These constitutional provisions also provide fundamental rights to its citizen; therefore, guaranteeing inclusive and sustainable development of the state, market and economy. Liberalisation, Privatisation and Globalisation of various economies have significantly increased production and consumption. The importance associated to Gross Domestic Product (GDP) as a measure of development adds incentive for governments to improve production within its jurisdiction.

The impact of these activities on climate and its uncontainable nature necessitates a global effort. The visible impact of the developmental activities like depletion of naturally occurring non-renewable resources, ozone layer depletion, increase in temperature leading to melting of glaciers, etc. has garnered international and conjoined efforts towards sustainable development. International treaties, agreements and Sustainable Development Goals (SDG) agenda of the United Nations (UN) has brought immense international attention to internal developmental affairs of these nation-states.

The 17 SDGs are conceptualised as "*urgent call for action by all countries – developed and developing – in a global partnership*".

This attention quantitatively translates into the ranking of countries like the World Bank Index, World Hunger Index, SDG Index, etc. These focus on multiple domains beyond production and consumption like Health and Nutrition, Education, Poverty, Inequality amongst different sections of the population, etc. Performance of countries on these Indices become important for national development as it contributes to Foreign Direct Investments (FDI), international funding and improved stakes in international organisations and platforms. All of these gain further importance in the case of developing and under-developed countries.

Concentrated focus of development only on States that typically show higher contribution to GDP or major cities could lead to creation of huge disparities. Eventually, this would lead to creation of pockets of development and critical underdevelopment; thereby widening the distance between the better performing States and the worse performing ones. When different dimensions of poverty are further superimposed onto it, it furthers the distance of the gap.

The demographics pertaining to specific regions, the political leadership and socio-cultural elements of the States also play an important role in the process of development. For example, education is often perceived as the precursor to improve per capita income, increase social and political participation culminating in better economic development (Psacharopoulos , 1988)[3]. This could mean that in States with higher levels of education achievement, state interventions to catalyse development may show better results and may be easier to implement.

For an informed decision making process, it is important to understand the impact of the various developmental activities undertaken. It then becomes important for governments to gain better insights on the composition of population, socio-economic parameters and its geopolitical situation. While qualitative understanding of the situation is what helps the most, at an aggregate level, these could be better understood when quantified. The findings from these could then act as a guide for deeper root-cause analysis of the issue.

The international attention on governance of countries along with the responsibility of guaranteeing and protecting the basic rights of all its citizens creates the need for government action. Improvements in the multiple provinces within the nation-state is what eventually accumulates as development at the national level. This attribute of development, consequently, increases the importance of development of the Sub-national units within it. In the case of India, the national level government, hereafter referred to as the Central Government, has individual States and Union Territories (UTs) as its Sub-national units.

As development is inherently a process driven by the political ambitions of the ruling political party, it is only natural that the nature of its vote bank influences the government policies of the day. These policies would often rely on the immediate impact on ground as opposed to the long term outcomes that form as a result of these policies. Therefore, in PAI 2021, the performance of the States and UTs on governance is ranked on purely outcome indicators. The identification of these indicators on the themes of Growth, Equity and Sustainability are premised on the sub-themes – Government Effectiveness, Regulatory Quality, Voice and Accountability, Control of Corruption and Rule of Law. Findings from previous PAI reports consistently identify improved devolution of powers to lower levels of government, availability of open and reliable data that marks progress of various projects and legitimacy drawn from legal mandates and elections, as drivers of good governance by States.

As in the previous years, sourcing reliable and accurate data remains a limitation. The data used to arrive at the Composite Index is sourced only from Central Government sources.

The individual components of the PAI 2021 report are:

- **The Governance Model** – As discussed in great detail in the chapters to come, the Governance model (or also referred as overall PAI 2021 Index) is a three-tier assessment of the level of Sub-national Governance of the States and the UTs. In the 6th edition of the Public Affairs Index, the level of Governance is measured keeping in mind the reeling aftermath of the pandemic. How the States responded to a health hazard keeping in mind the universal agenda of '*leave no one behind*'

Introduction

- **Scheme Analysis** – While the Governance model of PAI evaluates the States and ranks them based on Governance, the scheme analysis attempts to complement the model by trying to understand the development activities undertaken by State Governments in the form of schemes and its contribution to performance of the States in the Governance model. This analysis adds an additional dimension to measuring the performance of States in terms of Governance.

- **COVID-19 Index** – The COVID-19 Response Index is an attempt to rank Indian States on their response to the pandemic ever since the first case was detected till March 31,2021. The Index subsumes two thematic areas – Preparedness and Containment. Pandemic preparedness is a continuous process of planning, exercising, revising and translating into action national and Sub-national pandemic preparedness and response plans whereas containment relies on strategies aimed at detecting cases early by adopting suitable testing strategies, isolation of cases, contacts and providing adequate treatment.

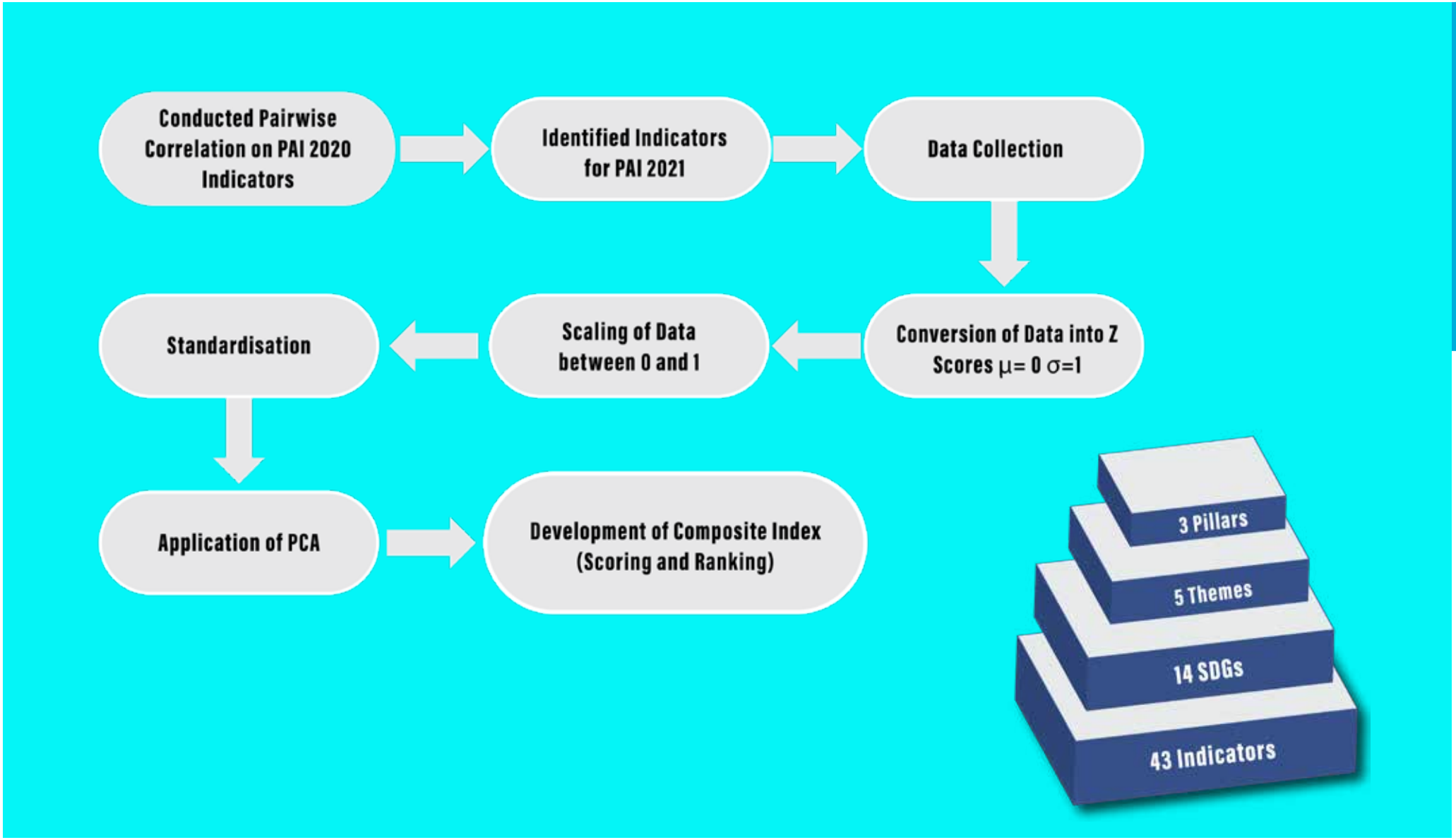
- **Delta Analysis** – The Delta Analysis tries to capture the rate of improvement or decline of the various indicators over a period of five-ten years. The Delta is a measure of the year on year progress made by the States on Key Development Indicators.

The PAI 2021 is an addition to the existing set of Indices released every year, and to name a few includes the NITI Aayog's SDG India Index, Ease of Living Index, Swachh Survekshan, and the Municipal Performance Index. PAI 2021 results also include the rankings of the State at the SDG level, where it also keeps in mind the SDG 2030 Agenda of '*leave no one behind*'. The progress measured under each SDG, is reflected in the performance of the States in the SDG India Index 2021. While there exist contradictions in the rankings of PAI 2021 and SDG India Index, both these Indices have a common goal to guide the States on improving their performance at the Sub-national level. The data analytics presented through PAI 2021, acts as a catalyst to improve the development trajectory to aid data driven policy interventions for the Indian States.

[1] *Hobbes, Thomas (1651), The Leviathan*

[2] *Jayal, N. G. (1994). The gentle leviathan: Welfare and the Indian state. Social Scientist, 18-26.*

[3] *George Psacharopoulos, EDUCATION AND DEVELOPMENT: A Review, The World Bank Research Observer, Volume 3, Issue 1, January 1988, Pages 99–116, https://doi.org/10.1093/wbro/3.1.99*



CHAPTER II – MODEL AND METHODOLOGY

Model And Methodology

"'There is a missing moral core in our technological advance. In rich nations and poor, the moral foundations of economic growth are often lacking. And we are too embarrassed even to mention morality any more."

Mahbub Ul Haq

- Reflections on Human Development

"The time has come", the Walrus said, "To talk of many things: Of shoes - and ships - and sealing wax - Of cabbages - and kings- And why the sea is boiling hot - And whether pigs have wings."

Lewis Carrol

- The Walrus and the Carpenter

It is axiomatic that a complex phenomenon like Sub-national Governance cannot be measured by a single or even a set of descriptive indicators. Instead, it has to be represented in its multi-dimensionality, through a combination of factors as proxy for how Governance effects manifest in the real world. Among these factors is a mix of outcome, process and institutional indicators that combine to generate Government Effectiveness and the Regulatory Quality and also manifest as barriers or enablers for Voice and Accountability, the Rule of Law and the Control of Corruption in the delivery of public services. The methodological challenges in the construction of a Composite Index like the Public Affairs Index are two-fold: first, the choice of indicators-the process rendered even more complex by the need to find the most appropriate method to determine the types of indicators, aggregation, comparisons to be made, and the weights to be assigned. The second, is the availability of data: to define data requirements, identify the data sources and its standardisation for analyses. Despite these difficulties, the Composite Index as a tool for measuring economic, social and political phenomena emerges as one that is practical, infuses rigour and is scientific.

This chapter elaborates on the model that PAI 2021 deploys and the method applied to complete the delicate task of developing the Composite Index to measure the performance of the States in India on Governance and rank them. It starts by emphasising that PAI 2021 process entailed gathering, compiling, standardising, analysing, and interpreting data from Government data sources on a wide range of Governance concerns systematically. If assessing Governance is complex, obtaining statistics in the context of the states is even more difficult. Data gaps and unevenness influence both the choice of indicators and the analyses of data.

Raw scores for each indicator were converted into Z scores to ensure scaling of data. The scaled data was fed into the model to ensure a standard alignment of values based on the directionality of the indicators (positive/negative). The goal of adopting this methodology over other Index generating techniques adopted by multiple Government organisations was to improve the statistical rigour and power to test the hypothesis or theory of change of PAI 2021 for all tiers - SDG, Governance Themes and Pillars - of the Composite Index. The intrinsic qualitative character of Governance makes this a challenging task, yet PAI 2021 succeeds in substantial measure through the use of constructed variables developed from Government data sources. In what follows, brief details about the technique used to create the model are explained.

The UN SDG Agenda 2030, in substantial measure, rests on the conceptual framework of the Human Development Index. To understand why this is so, we must make a brief detour to consider the Gross Domestic Product (GDP), the other measure of progress that governments continue to rely on and in the public mind space conjures up a powerful statistical indicator of national development, no matter how far removed it might be from the freedom of choice to be or to do. The modern concept of the GDP as an empirical measure of economic growth and hence of national development was first proposed by Simon Kuznets in 1934. But it was

not until the Bretton Woods Conference in 1944, that GDP became the main tool for measuring a country's economic progress. Ironically, besides the dodgy data that goes into generating the GDP, it is the method of calculation that makes it the hand maiden of political expediency. Gross Domestic Product (GDP) = C + I + G +[X – M] (or Consumption plus Investment plus Government Spending plus Net-Exports), gives governments of the day an incentive to spend more money, because greater government spending tautologically increases that sum. Bear in mind that the value of government spending includes the salaries of government employees, not the value of their output. It is not surprising then that the GDP as a measure is often described as 'the price of everything and the value of nothing'. The necessity of assessing Governance going beyond assessing the GSDP of states becomes important, particularly in the light of the urgency to advance the efforts in the states towards achieving the goals of the UN Agenda 2030 for Sustainable Development.

The PAI 2021compels us to ask what matters more, the quantitative expansion of an economy, or the qualitative improvement in the capabilities of society. In presenting a Composite Index, it infuses an ethical dimension to the development discourse. The use of publicly available data for Governance measurement serves two objectives: It enables a state-by-state comparison based on data supplied by the government. This type of comparison encourages healthy competition among the states. Furthermore, a data-driven evaluation offers the states assessments of key indicators that must be focused on to make evidence-based decisions. Since 2016, the Public Affairs Centre has been working to produce value-added studies to assist governments in implementing Good Governance principles in many development practice sectors. PAI 2021 thus emphasises the need to include process and outcome indicators where the process indicators measure the states on their effectiveness or efficient operation of programmes while the outcome indicators enable us to understand if the programmes/schemes were implemented successfully from a Public Governance perspective. PAI 2021 is significant in two ways: First, the perspective it provides on the principle that development is, in essence, a rights-based socio-political process; and therefore Public Governance must focus on those who are disadvantaged or vulnerable. Second, it highlights the need for every State to ensure that no one is at the risk of being left behind in its philosophical approach, policy formulation, or programme design. The indicators in the model have been grouped into five thematic areas: Voice and Accountability, Governance Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption; each of which serves to provide the State Governments with actionable insights on exploring Governance processes and enhancing Governance outcomes. The model's substantive use of measuring Governance quality lies in the specificity of the problems and opportunities that it points to for each state, regardless of rank; in highlighting the urgent need for enforcing the rule of law, to prevent egregious acts of the S tate's administrative apparatus and hold it accountable. Like the previous editions, the PAI 2021 model is based on measuring Governance at the Sub-national level as a process that creates objective conditions for three-tier autonomy for all citizens: rights-based entitlements, aspiration-based economic opportunities, and capacity-based community agency.

Structure of PAI 2021

In a diverse country like India, where each state is socially, culturally, economically, and politically distinct, measuring Governance becomes increasingly tricky.

The focus of the PAI 2021 methodology was on constructing a Composite Index using a scientifically rigorous methodology of Principal Component Analysis (PCA) by which the model itself generates the weights for the chosen indicators rather than relying on domain specific or subjective weightages.

From a growth standpoint, it is self-evident that all three pillars must work together. Two of the three pillars, Growth and Sustainability without Equity, Growth and Equity without Sustainability and Equity and Sustainability without Growth, are hard to accept. The variables that are used in building the PAI 2021 Index are the three pillars of Growth, Equity and Sustainability. As a result, identifying variables of interest to assess these created variables is critical.

Model And Methodology

The World Governance Indicators (WGI) constitute the five themes that serve as variables of interest under these pillars:

Voice and Accountability (VA):
The extent to which people of a state can engage in the Governance process as change agents rather than as mere beneficiaries or just recipients of largesse

Government Effectiveness (GE):
The adequacy and quality of public services, civil service quality and capacity, and policy development and programme execution quality and capacity

Regulatory Quality (RQ):
The government's ability to design and enforce good rules and regulations that allow and support private sector development and distribution of common property resources

Rule of Law (RL):
The extent to which agents trust and follow society's laws, particularly the quality of contract enforcement, police, and maintaining law and order

Control of Corruption (CC):
The extent to which the use of public power and authority for private gain may be prohibited, encompassing both petty and grand types of corruption, as well as the capture of the state by elites and corporate interests.

PAC has also incorporated the relevant Sustainable Development Goals (SDGs) in the model to align PAI with global standards. PAI 2021 includes fourteen SDGs, namely:

- **SDG 1: No Poverty**
- **SDG 2: Zero Hunger**
- **SDG 3: Good Health and Wellbeing**
- **SDG 4: Quality Education**
- **SDG 5: Gender Equality**
- **SDG 6: Clean Water and Sanitation**
- **SDG 7: Affordable and Clean Energy**
- **SDG 8: Decent Work and Economic Growth**
- **SDG 9: Industry, Innovation and Infrastructure**
- **SDG 10: Reduced inequalities**
- **SDG 11: Sustainable Cities and Communities**
- **SDG 12: Responsible Consumption and Production**
- **SDG 15: Life on Land**
- **SDG 16: Peace, Justice and Strong Institutions**

The most crucial element of the model is the last layer, which assesses each variable of interest individually.

PAC 2021 has selected 43 indicators that will assist in defining the constructed variables that will be used to measure Governance.

A comprehensive assessment of current indicators from 2020 was performed as part of PAC's efforts to ensure that all aspects of Governance are reflected in the PAI computation. The goal of the exercise was to guarantee that all indicators are independent of one another and that no significant indicator was left out of the model.

Based on this action, a total of four new indicators were added to the model for PAI 2021, while 12 indicators were dropped

The revisions to the indicator list are summarised below. The details of the indicators are provided in the Pillar-wise chapters and in the Annexure.

New indicators included

1. Real wage (casual labour)
2. Performance Grading Index
3. Rural Non-farm Employment
4. Percentage of Nitrogen fertilisers out of total N P K.

Model of PAI 2021

Because of the powers and obligations placed on states by the Indian Constitution, measuring the quality of Governance at the Sub-national level is essential. Because of the country's diversity a one-size-fits-all policy is not the best option for long-term growth; therefore, governments must establish and implement policies at the sub-national level to advance 'Good Governance.' The PAI rankings provide states with a clear picture of which indicators and themes deserve immediate attention.

PAI 2021 creates two significant factors for measuring the quality of Governance in the Indian States by adopting topics from the World Governance Index and keeping a parallel with the United Nations' Sustainable Development Goals for 2030, which establishes a shared development agenda. While the SDGs offer nations objectives and metrics to track progress, they are global in scope and must be contextualised for India's development.

The Ministry of Statistics and Programme Implementation (MoSPI) and the NITI Aayog, Government of India, which also coordinates the Central and State governments' activities and institutions, are in charge of identifying indicators for measuring the SDG performance.

PAI 2021 intends to provide governments with prescriptive measures and a deeper level of knowledge by incorporating a Governance Index.

PAC 2021 has selected 43 indicators that assist in defining the constructed variables that will be used to measure Governance.

Methodology of PAI 2021

Background

Creating a Composite Index from several Governance indicators is a complicated process that requires careful scaling, weighting and aggregation. These calculations must account for data skewness, outliers, data spread or significant variation and indication orientation. Each of these unique data features contributes to distorting the ranking results by biasing the Composite Index.

PAI 2016, 2017 and 2018 used weighted averages at each level of aggregation, where the weights were either uniformly distributed or assigned using subjective analysis by domain experts.

To arrive at a Composite Index, the PAI 2019 model removed the subjectivity of weights and applied a scientific process. Before generating the Composite Index, a process for proper scaling to eliminate outliers and skewed data was applied. The aggregate employed a self-selection method to produce a Composite Index at each level without relying on subjective weights.

PAI 2021 – Computing the Composite Index

The data for PAI 2021 is organised from a bottom up approach, the 43 indicators linked to the corresponding SDGs are mapped in such a way that each indicator corresponds to precisely one SDG. Each SDG in the "SDG layer" corresponds to one of the Themes in the "Theme Layer," and each Theme corresponds to one of the Pillars in the uppermost layer. Each indicator may be linked to a Pillar, Theme, and the SDG it corresponds to in the "Indicators Layer" at the bottom. Equity, Growth, and Sustainability are the three pillars, whereas Voice and Accountability, Government Effectiveness, Regulatory Quality, Rule of Law, and Corruption Control are the five themes. The 43 indicators cover 14 SDGs.

Data Selection

PAI 2021 data is extracted from only central government sources to eradicate any significant bias relating to data collection. The data is then standardised according to GSDP, population etc. to ensure comparability across states. The PAI 2021 Index is generated separately for Large States, Small States and UTs to ensure a scientific rigour is applied in the rankings. One of the most important features of the PAI model is that there are no null values taken since they may skew the performance of the States. To ensure the indicators thus selected measure what they are meant to measure, a 'Pairwise Correlation' exercise is undertaken to narrow down to the most significant indicators and eliminate autocorrelation from the model. The PAI 2021 model has introduced "author constructed variables" for better assessment of poverty, inequality, informalisation in the formal sector, structural transformation in the agricultural sector and food security.

Pairwise Correlation

The strength of the linear relationship between the two variables is measured by correlation. A Pairwise Correlation table displays the correlation values calculated from all observations with non-missing values for any two variables. The correlation coefficient can have a range of values from -1.0 to 1.0. A perfect negative correlation is shown by a correlation of -1.0, whereas a perfect positive correlation is indicated by a correlation of 1.0. There is no link between the variables if the value is zero. A pair of variables that have a correlation coefficient of 0.07 to 1 (or -0.7 to -1.0) is said to be closely connected.

All variables with a significant p-value (=0.05) and those that were judged domain-relevant were listed. Based on domain consultation, one from each linked pair was removed. Using the correlation coefficient and domain inputs, the initial 54 variables were reduced to 43 variables. For the Index computation, these 43 factors were considered.

Data Preparation

The raw data for the various indicators were first converted to scaled scores (using normalised Z scores) that appropriately aligned with the direction of the indicator. For all indicators, a high score suggests better performance and vice versa. Normalised Z scores [(indicator score – Mean)/Standard Deviation] was preferred over the Min-Max scaling method [(indicators score – Min)/(Max-Min)] to ensure that the variance characteristics in the data were not lost.

Calculating PAI 2021

A Composite Index was calculated at each level of the data structure (Refer to Figure 2) using the indicators that group the respective SDG, Themes and Pillars.

At each level starting from lowermost (SDG), a Composite Index was calculated for each entry at that level. In this case (lowermost SDG level), a Composite Index was calculated for each of the SDGs using the indicators that group to a specific SDG. The calculation of each Composite Index involved the following:

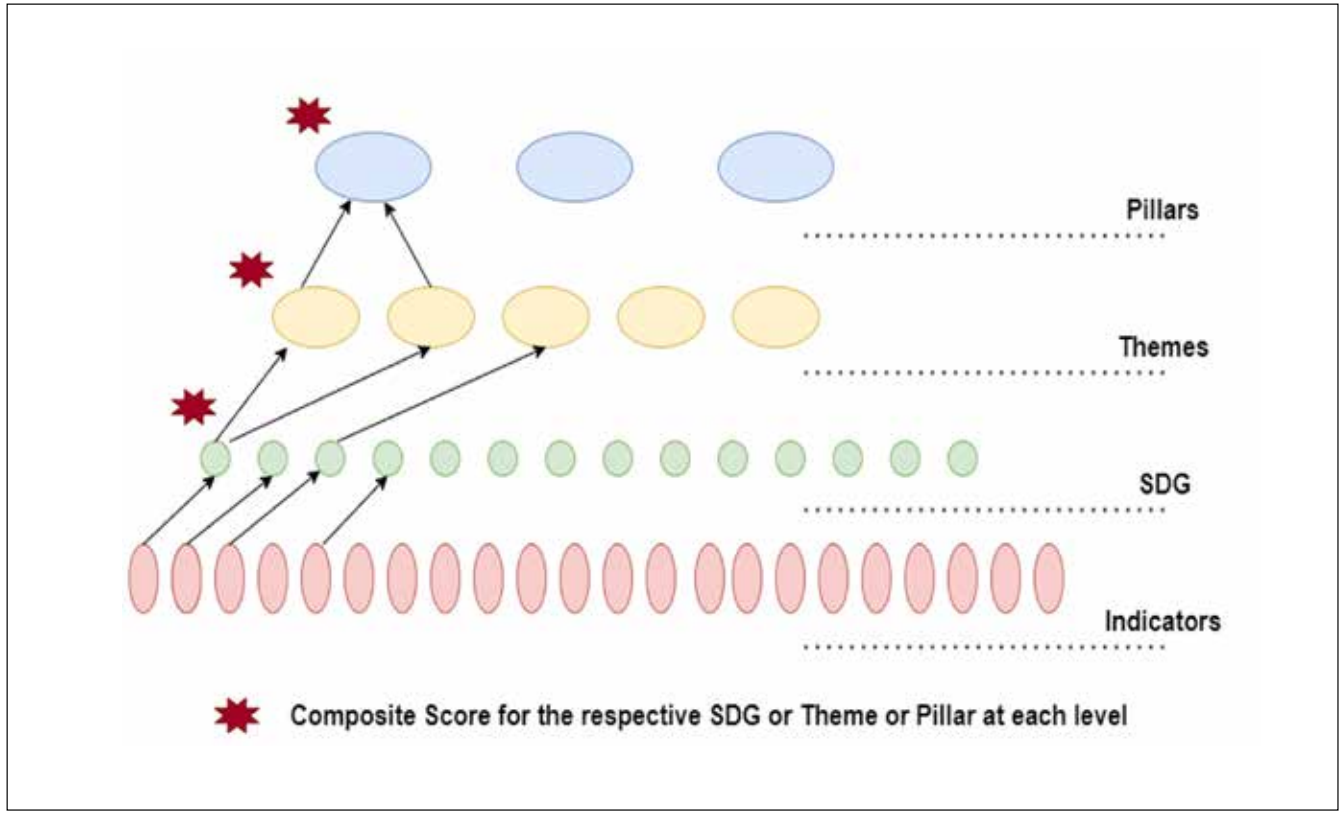


Figure 2: Arriving at a Composite Index

Model And Methodology

1 Calculating the components that make up the Composite Index

Principal Component Analysis (PCA), a popular scientific process was used to determine the optimal components. These optimal components capture multiple ways of representing the aggregating nodes (at the SDG level, multiple indicators aggregate into one specific SDG), in a manner that these components help best distinguish the states at each level. Each component also contains the amount of variation explained in the data.

2 Aggregating the individual components to arrive at the Composite Index

The scores of the individual components can be aggregated using a variety of methods:

- A simple summation called ***"Manhattan Distance"***
- ***"Euclidean Distance"*** as explained below

A diagrammatic representation below explains the difference in aggregation in both methods.

PAI 2021 employs a ***"Manhattan Distance"*** variant where each significant component is split by the proportion of variance it explains. This technique reduces the bias induced by data dispersion or significant volatility in calculating the Composite Index. Considerable data variation tends to spread out the scores, with larg values skewing the Composite Index toward a high rank. When contrasted to another state whose scores are substantially above average on most of the indicators, this circumstance creates a bias favouring states that score very well in a few indicators compared to a wide range of low performing indicators.

This process was repeated at each level to arrive at the Composite Index for each of the pillars namely – Equity, Growth and Sustainability. The Pillar scores were averaged (simple average) to arrive at the overall Composite Index, i.e. PAI 2021.

Thus, the PAI 2021 Composite Index calculation and ranking methodology follows a systematic and scientific procedure to arrive at the Composite Index from the base indicators. Composite Indices are measured on their robustness and sensitivity. The PAI 2021 methodology is both robust and sensitive since it –

1. Eliminates subjectivity of weights
2. Self-selects components using a universal and widely used technique (PCA)
3. Reduces bias in index calculation owing to skewed data distribution and spread of data
4. Provides a mechanism to decompose the index at each level – pillars, themes and respective SDGs

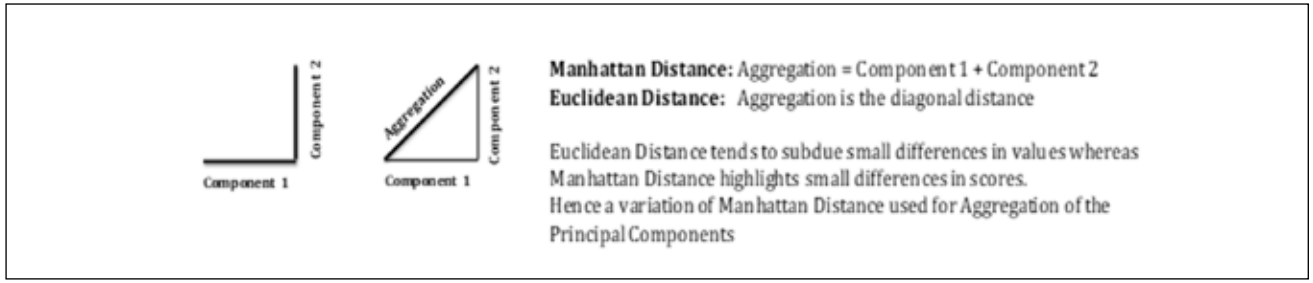


Figure 3: Explanation of Manhattan Distance and Euclidean Distance

PUBLIC AFFAIRS INDEX
PAI
Governance in the States of India

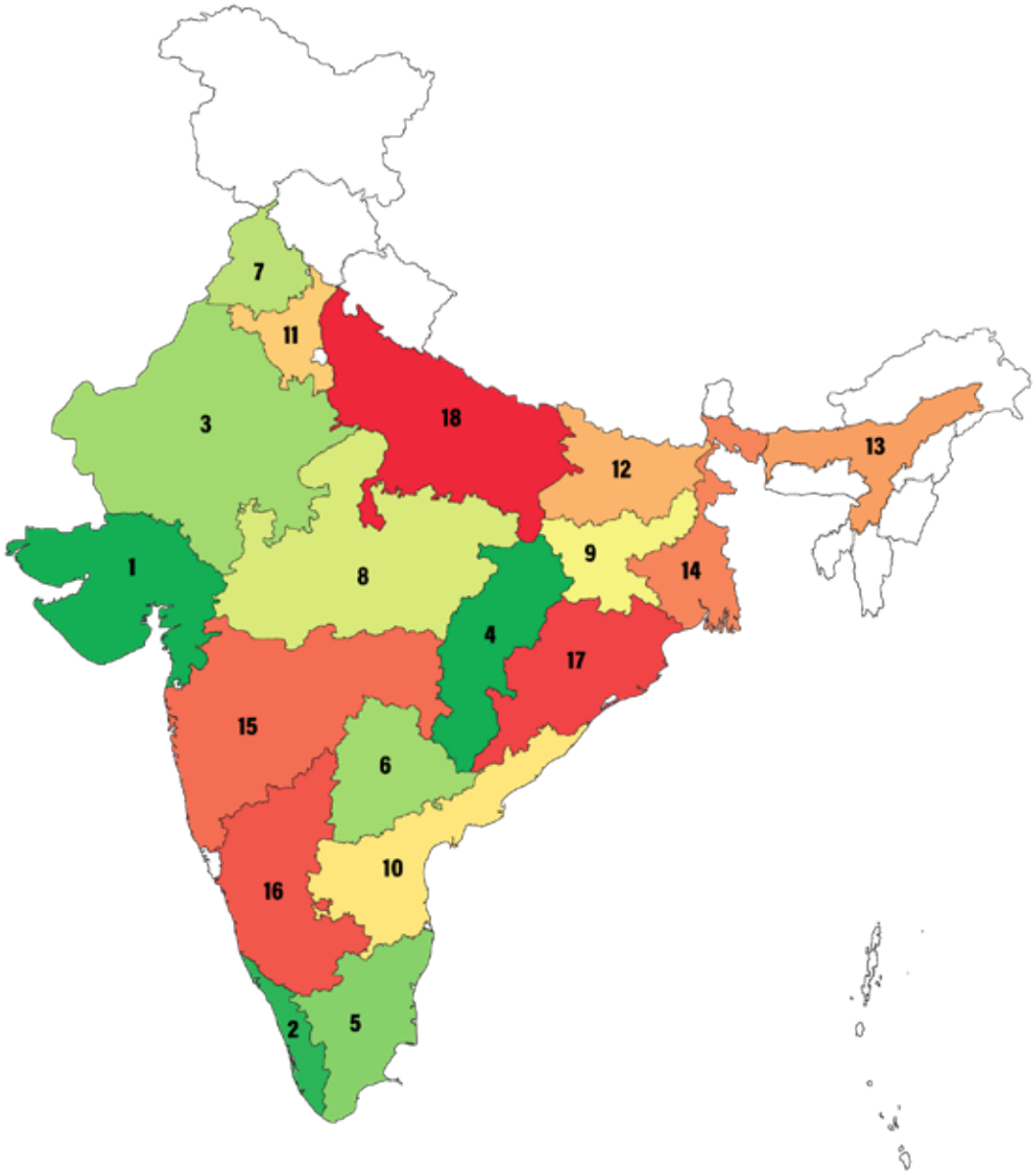
States

Pillar	Theme	SDG	Indicators
Equity	Voice and Accountability		Proportion of population covered by social protection (IGNOAPS, IGNDPS, IGNWPS, Maternity Benefit)
			Prevalence of malnutrition amongst children below 6 years
			Proportion of seats held by women in (a) State Legislature and (b) Local Government
			Utilisation of Nirbhaya Fund
			Palma ratio of household expenditure in urban and rural India
			Real wage (casual labour)
			Proportion of urban population living in slums
	Government Effectiveness		Infant Mortality Rate (IMR)
			Percentage of Deprived households across all 7 Deprivation
			Rural Indebtedness
	Rule of Law		Number of victims of intentional homicide per 100,000population Unsentenced detainees as a proportion of overall prison population Incidence of Crimes against SC and ST Child sex ratio Crimes against children Dowry deaths per 10 lakh population Rapes per 10 lakh population
	Regulatory Quality		Worker Population Ratio (Female) (WPR)
	Control of Corruption		No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
			Average out of pocket expenditure

Union Territories

Theme	SDG	Indicators
Voice and Accountability		Prevalence of malnutrition amongst children below 6 years
		Palma ratio of household expenditure in urban and rural India
		Real wage differential (casual labour)
Government Effectiveness		Infant Mortality Rate (IMR)
		Percentage of Deprived households across all 7 Deprivation
Rule of Law		Number of victims of intentional homicide per 100,000population
		Unsentenced detainees as a proportion of overall prison population
		Child sex ratio
		Crimes against children
		Dowry deaths per 10 lakh population
		Rapes per 10 lakh population
Regulatory Quality		Worker Population Ratio (Female) (WPR)
Control of Corruption		No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
		Average out of pocket expenditure

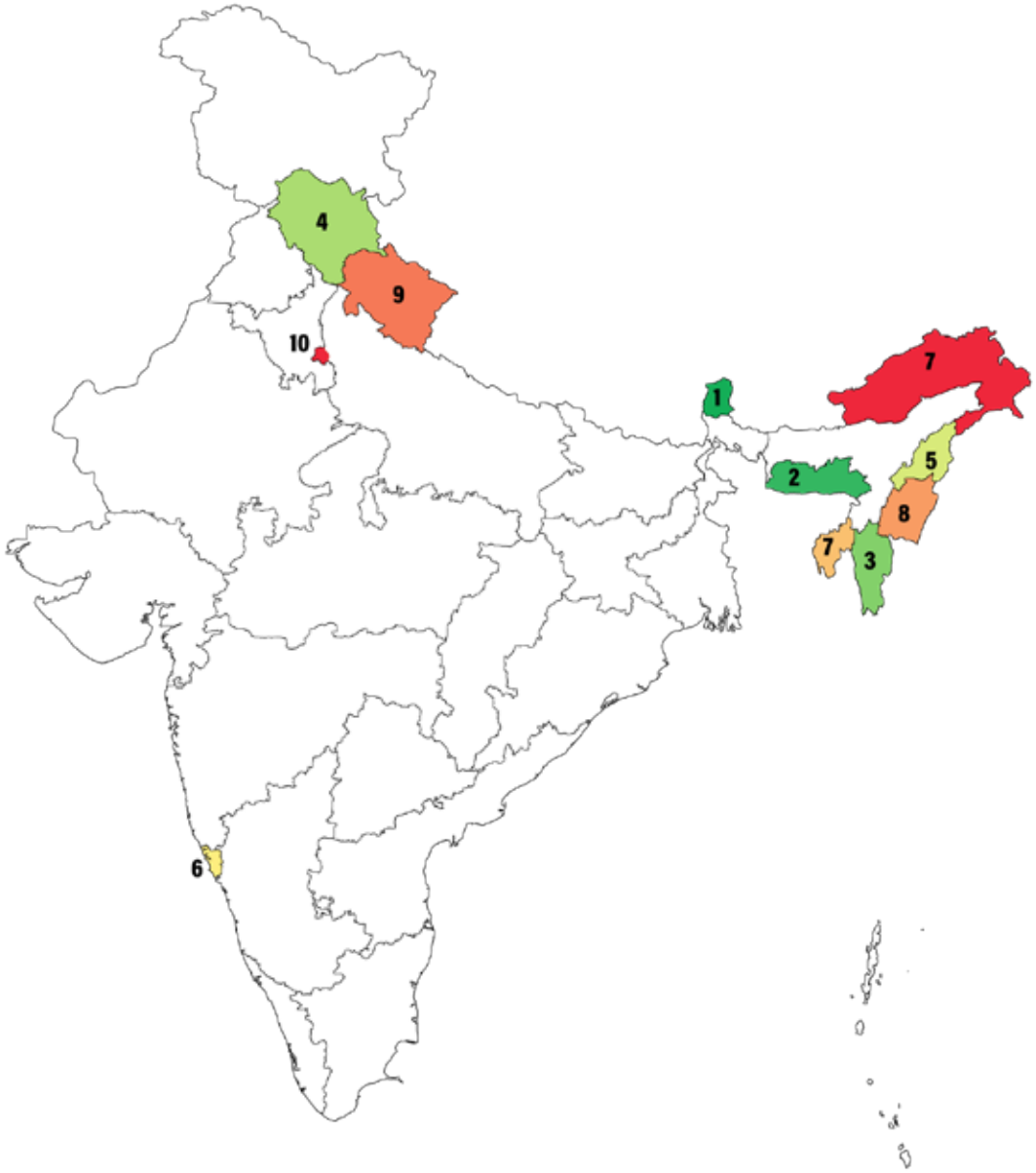
The Equity Principle



Rank	Large States	Index
1	Gujarat	1.409
2	Kerala	1.360
3	Rajasthan	1.199
4	Chhattisgarh	1.192
5	Tamil Nadu	0.777
6	Telangana	0.642
7	Punjab	0.618
8	Madhya Pradesh	0.578
9	Jharkhand	-0.022
10	Andhra Pradesh	-0.086
11	Haryana	-0.243
12	Bihar	-0.734
13	Assam	-0.749
14	West Bengal	-0.809
15	Maharashtra	-1.008
16	Karnataka	-1.161
17	Odisha	-1.462
18	Uttar Pradesh	-1.500

Highest Index Value — Lowest Index Value

EQUITY

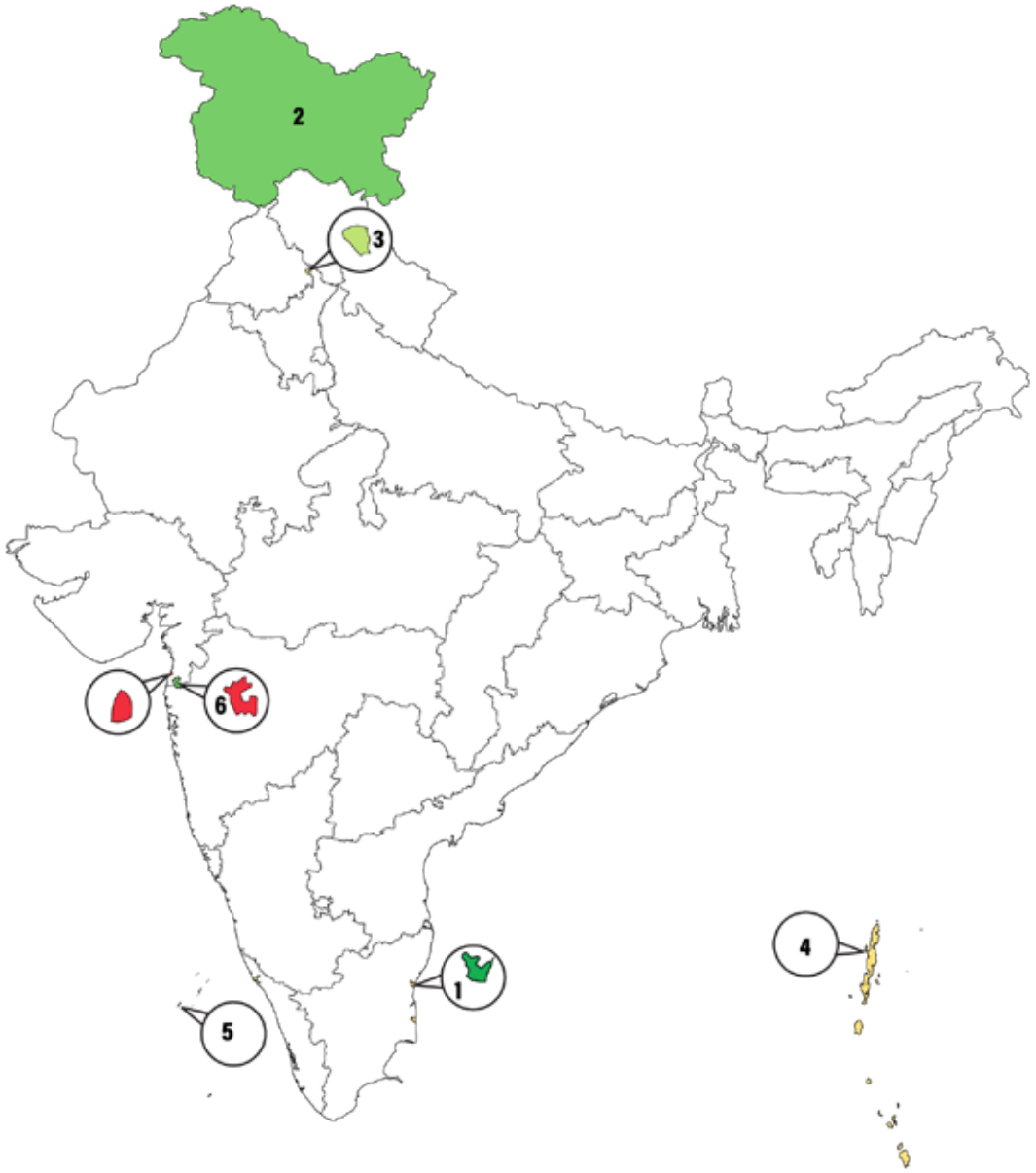


Rank	Small States	Index
1	Sikkim	1.617
2	Meghalaya	1.144
3	Mizoram	1.123
4	Himachal Pradesh	0.446
5	Nagaland	-0.004
6	Goa	-0.126
7	Tripura	-0.251
8	Manipur	-0.422
9	Uttarakhand	-0.874
10	Delhi	-1.132
11	Arunachal Pradesh	-1.521

Highest Index Value — Lowest Index Value

EQUITY

The Equity Principle



Rank	Union Territory	Index
1	Puduchery	1.182
2	Jammu & Kashmir	0.705
3	Chandigarh	0.628
4	Lakshadweep	-0.516
5	Andaman & N. Island	-0.526
6	Dadra & Nagar Haveli	-1.473

Highest Index Value — Lowest Index Value

EQUITY

"So long as there are tears and suffering, so long our work will not be over. And so, we have to labour and to work, and work hard, to give reality to our dreams. Those dreams are for India..."

Jawaharlal Nehru
'A Tryst with Destiny'

"Would you tell me, please, which way I ought to go from here?" "That depends a good deal on where you want to get to," said the Cat. "I don't much care where—" said Alice. "Then it doesn't matter which way you go," said the Cat.

Lewis Carrol
Alice in Wonderland

The real world is at once impersonal and harsh in equal measure for those disadvantaged, vulnerable, or underprivileged. Inequality brutalises life. Equity therefore is not just an ethical question; it is a material question, of providing rights-based entitlements to those most in need. It is not the case that behind a *'veil of ignorance'* are objective humans striving to uphold the values and norms that advance equity and a hypothetically ideal society, its governing principles practiced to maximise liberty and justice for all. What manifests instead, is an empirically messy world that one needs to recognise and needs to work with. The task before the States is to address the political economy of development and engage deeply and thoughtfully with the challenge of productivity inclusiveness in a manner that provides equality of opportunity.

In an already deeply unequal economy and society, amidst the daily struggles of livelihood for a large population in the country came the pandemic that has exacerbated the Equity crisis. From the perspective of the Equity principle, COVID – 19 has reminded us of our vulnerability and mutual dependence. While Public Governance is seen as a normative goal to be addressed through the architecture and design of accountability and regulatory frameworks, the notion of Equity provides a reasoning in real-world processes of decision making and adequate distribution of resources. This is primarily due to the fact that all schemes, policies and interventions by the Government have a direct or indirect impact on the aspect of Equity. Though the processes to ensure Equity are usually initiated with a positive policy intention, they are largely affected by the organisational structures and resources available with the Government, and also influenced by socio-political factors in a nation. Further, the idea of Equity in the scheme is exacerbated due to the traditional values and norms ingrained in the routine policy-making process, being largely driven by regional sentiments and political gains leading to a disparity in resource allocation. These challenges make it difficult to ensure an equitable policy framework, which can only be addressed by ensuring that existing institutional exclusion and power inequalities are reduced. Thus, the problem of Equity, or rather the lack of it, can be addressed through diverse policy interventions, solving system issues, considering end-users segregated at multiple levels of intervention and drawing on a multi-disciplinary perspective.

The Equity Pillar of the PAI 2021 Index analyses the inclusiveness impact at the Sub-national level in the country; inclusiveness in terms of the welfare of a society that depends primarily on establishing that all people feel that they have a say in the Governance and are not excluded from the mainstream policy framework. This requires all individuals and communities, but particularly the most vulnerable, to have an opportunity to improve or maintain their wellbeing. This chapter of PAI 2021 reflects the performance of States and UTs during the pandemic and assesses the Governance infrastructure in the country, analysing the effectiveness of schemes and the general livelihood of the people in terms of Equity. The Equity Pillar of PAI 2021 uses specific indicators to ensure that a comprehensive analysis of all aspects of Equity drives the

performance of the States. There are five themes in the Pillar of Equity; Voice and Accountability, Government Effectiveness, Rule of Law, Regulatory Quality, and Control of Corruption. These themes are further divided into 21 indicators and mapped to the respective SDGs.

PAI 2021 has featured indicators of Real Wage of Casual Labour and Deprivation, for better assessment of SDG 1 under the theme of Voice and Accountability and Government Effectiveness; and Out of Pocket Expenditure, for better assessment of SDG 3 under the theme of Control of Corruption.

Overall Performance of Large States, Small States, and UTs in the Growth Pillar

The State of Gujarat ranks the highest in the Pillar of Equity, followed by Kerala and Rajasthan. Kerala and Gujarat also indicate a similar performance in the overall PAI 2021 Index and rank among the good performing States. While Rajasthan is 3rd in the Pillar of Equity, it ranks 11th in the overall PAI 2021 Index.

This is primarily due to its poor performance in the Pillars of Growth and Sustainability. Gujarat has an overall rank of 5th in the PAI Index due to its moderate performance in these two Pillars. Tamil Nadu and Chhattisgarh are also among the good performing States in both the Pillar of Equity and the overall PAI Index; they have a rank of 2nd and 4th respectively in the PAI 2021 Index, and 5th and 4th in the Pillar of Equity. This pattern of comparable performance has been observed in several other States as well, across the Pillar of Equity and the PAI 2021 Index. This is evident from the high correlation (correlation coefficient = 0.799) between the rankings in the Pillar of Equity and the overall PAI 2021 Index. Among the poor performers in the Equity Pillar are the States of West Bengal (WB), Maharashtra, Karnataka, Odisha and Uttar Pradesh (UP). While UP, WB, and Odisha have shown similar performance in the PAI 2021 Index, Karnataka performs substantially well with a rank of 7th in the PAI 2021 Index, but 16th in the Pillar of Equity slipping four places compared to last year.

Thus, despite a positive performance in the Pillars of Growth and Sustainability Karnataka has a poor rank in the PAI 2021 Index essentially driven by its performance in the Equity Pillar.

While drilling down to the theme level, the correlation coefficients are not very strong as they range from 0.3 to 0.6, there is a similar trend visible in terms of the coefficients in the SDGs where the correlation coefficient is not very prominent

The Equity Pillar is explained through SDGs 1 (No Poverty), 2 (Zero Hunger), 3 (Good Health and Well Being), 5 (Gender Equality), 10 (Reducing Inequalities), 11 (Sustainable Cities and Communities) and 16 (Peace, Justice and Strong Institutions). SDGs which have relatively high correlation coefficient are SDG 5 (under Voice and Accountability), SDG 1 (under Government Effectiveness), SDG 10 (under Regulatory Quality) with coefficients of 0.442, 0.633 and 0.464 respectively.

States performing well in these SDGs would also show an improved performance in the overall PAI 2021 Index.

Gujarat is the top performing State in the Pillar of Equity. It has a strong performance in the themes of Voice and Accountability (ranking 3rd) and Control of Corruption (ranking 2nd), while a moderate performance across other themes. With regard to SDGs, the State is placed in the top three in the indicators pertaining to SDGs 10 and 16. Gujarat has a Palma ratio of 0.84 (rural and urban combined) which is lower than the national average of 0.99.

Gujarat also has a high proportion of women in the legislature and local government, ensuring equitable participation of women in the governance framework. In 2021, 12% of the seats were won by women in the State legislature, while almost 50% of the seats were held by women in the Panchayati Raj institutions. This is among the highest in the country, only after Uttarakhand and Rajasthan.

Closely following Gujarat is Kerala, who is also the top ranker in the overall PAI 2021 Index for consecutive three years. Kerala tops the theme of Voice and Accountability which has a correlation coefficient of 0.478.

While looking at the SDG performance Kerala tops SDGs 1, 2 and 11 under the theme of Voice and Accountability and in SDG 3 under Government Effectiveness. Kerala has always been considered a 'Welfare State', but the State has secured last position in SDG 10 under the Voice and Accountability theme implying high prevalence of inequalities in the State.

Kerala's neighbour Karnataka also bears the burnt of high inequalities and regional imbalances. However, it is true that both these States have high per capita income, therefore increasing the per capita consumption of the State. Kerala also ranks 2nd last under the theme of Control of Corruption, as the average out of pocket expenditure in PHCs is Rs. 6,096 (NFHS-4).

Rajasthan has emerged as a top performing State in the Pillar of Equity, while it has a poor performance in the overall PAI 2021 Index. This is rather contradictory to its trends in the other Pillars as well; it ranks 13th in the Pillar of Growth and 15th in the Pillar of Sustainability. The performance of the State in the Equity Pillar is largely backed by its very strong performance in the theme of Voice and Accountability, where it is 2nd only to Kerala. At 56.4%, Rajasthan has the highest proportion of seats held by women in the Panchayati Raj institutions. The State has also indicated improved empowerment and safety of women through the utilisation of Nirbhaya Fund; compared to States like Bihar (42%) and Madhya Pradesh (55.4%), more than 78 % of the funds have been used. This argument is also supported by the substantial reduction in the number of rapes per 10 lakh population between 2016 and 2019; in 2017 the number of reported cases were 5526, which reduced to 2485 in 2019. Schemes of Maternity Benefit have also generated positive outcomes in the State. In 2021, 56.1% of mothers received financial assistance under Janani Suraksha Yojana (JSY) for births delivered in an institution.

Chhattisgarh's performance in the Pillar of Equity is boosted due to its very strong performance in the themes of Rule of Law, Regulatory Quality, and Control of Corruption and a moderate performance across all other themes. The Worker Population Ratio for females in Chhattisgarh stands at 51.2%, and is the highest among all Large States.

This points directly to the successful implementation of several schemes that the Government of Chhattisgarh has introduced to increase the empowerment of women through livelihood and employment promotion. Schemes such as Female Labourers SHG, Chhattisgarh Mahila Kosh, Swalambhan Yojana, etc., have directly or indirectly impacted general as well as minority communities and improved their income earning opportunities. Thus, reduced inequality and gender parity has been a feature of the State. In terms of corruption, data from the Anti-Corruption Bureau indicate that the State of Chhattisgarh has the highest cases disposed, as a percentage of the total cases under investigation; an average of 37.5% of cases were disposed between 2016 and 2018. In terms of SDG 16 indicators (theme of Rule of Law), the State is a Front Runner.

Karnataka has slipped to 16th rank where it was 12th last year under the Equity Pillar. The State ranks 17th in SDG 10 under Voice and Accountability and 16th in SDG 3 under Control of Corruption. This cannot take away the fact that the State has improved its performance in terms of addressing crimes against women. Karnataka has only reported 528 cases of rapes per 10 lakh population which is much lower than the national average of 1092 cases, also the growth rate of rape cases reported for the past five years is -46.23% (NCRB, 2019).

Karnataka lags behind in addressing the issue of malnutrition in the State, where it has reported 36.2% stunting, 26.1% wasting and 35.2% underweight amongst children below five years of age (NFHS-4). The State also has prevailing inequality and deprivation which is also seen as an impact in the State's poor performance in the indicator of Rural Non-farm Employment further explained in the Growth chapter. Following Karnataka is Odisha, while it is amongst the top three in SDG 1, it ranks last in SDG 5 under the Voice and Accountability theme. Odisha has only 23% participation of women in the Panchayati Raj Institutions. In 2019 only 3.92% of Anti-corruption cases were closed out of the total cases registered for investigation in Odisha. This brings down the ranking of the State under the theme of Control of Corruption to 16th.

The Equity Principle

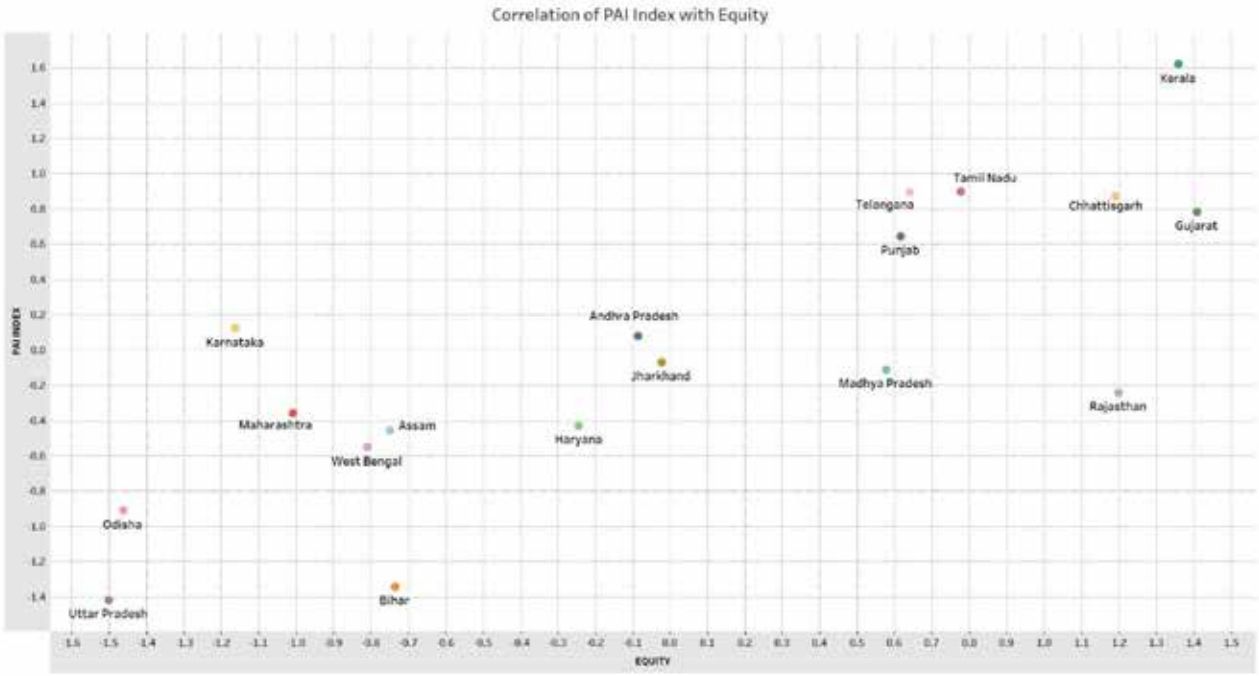
The State performing consistently in the bottom over the years under the Equity Pillar in the Large States category is Uttar Pradesh. The State places itself in the bottom of the rankings under SDGs 5, 3 and 10. Apart from these SDGs Uttar Pradesh also ranks last in terms of dowry deaths per 10 lakh population (2410 cases reported against the national average of 244 cases) as per the statistics released by National Crime Records Bureau in 2019. Rate of crimes against ST is registered is 63.6% in the State. Infant Mortality is as high as 64% in the State, this is also attributed to the State's high stunting (46.3%), wasting (17.9%) and underweight (39.5%) in children below five years of age.

The poor performance of the State in health outcomes is also visible under the Growth Pillar where the State has performed poorly in terms of institutional deliveries, immunisation achievement and health worker density.

Special mention goes to the States of Tamil Nadu which has a strong performance in theme of Rule of Law (1st rank), while Andhra Pradesh has a spectacular performance in the themes of Regulatory Quality (2nd rank). This can be attributed to the low rate of crimes against children (20.5%) and reduced deaths of dowry victims per 10 lakh population (28 deaths). According to NFHS-4, Tamil Nadu has Infant Mortality Rate of 20% compared to a national average of 33.59%. On the flip side, States like Maharashtra record high crimes against children (51%). Madhya Pradesh which ranks 15th in the Equity Pillar has recorded high incidence of crimes against SC (46.7%), Infant Mortality Rate (51%), stunting (42%) and underweight children (42.8%).

The Figure below explains the correlation between the PAI Index and the Equity Pillar for Large States. The distance between Kerala and Uttar Pradesh elaborates the divide in development through Equity parameters. The State of Uttar Pradesh will require to work on improving its development paradigm with utmost rigour to match Kerala's performance. The spread of the Large States is forming clusters towards the top right and bottom left corner with only Andhra Pradesh, Jharkhand and Haryana placed in the middle. This is also indicative of the fact that in the Equity Pillar either the States have performed very well or have performed very poorly. Given the ongoing pandemic situation, the States who have experienced a large impact of the pandemic (as discussed in the COVID-19 Response Index further) see a poor performance in the Equity Pillar.

In the Small States category, interesting changes can be observed as compared to last year's performance of the States.



Sikkim ranks 1st in the Equity Pillar as well as the overall Index, followed by Meghalaya ranking 2nd and Mizoram ranking 3rd. Similarly, Uttarakhand ranks 9th, Delhi 10th and Arunachal Pradesh 11th. Goa being on the list of top three in the overall Index ranks 6th in the Equity Pillar. Manipur which places at the bottom of the overall Index, ranks 8th dropping five places as compared to Equity Pillar in PAI 2020.

The correlation coefficient of the Equity Pillar with the overall PAI 2021 Index is a positive correlation of 0.675. The other Pillars of Growth and Sustainability do not have a significant correlation coefficient, making Equity Pillar the determinant factor for the rankings of the States on the overall Index. Drilling down to the theme level, apart from the themes of Voice and Accountability (correlation coefficient of 0.59) and Regulatory Quality (correlation coefficient of 0.731) do not have significant correlation results. Sikkim and Mizoram secure places in top three for the themes of Voice and Accountability, Government Effectiveness and Control of Corruption. Surprise addition to the top performers in Voice and Accountability is Delhi (ranking 2nd), and in Rule of Law is Arunachal Pradesh (ranking 1st). Himachal Pradesh tops the theme of Regulatory Quality, while Tripura places last. On the contrary to top performers, similar to their performance in PAI 2020, Uttarakhand, Nagaland and Delhi place towards the bottom in Theme rankings. Further exploring the performance of the States at the SDG level, Sikkim is a top performer in SDGs 1 and 10 in the Voice and Accountability theme. In the theme of Regulatory Quality, Sikkim ranks in top three and tops the theme of Control of Corruption. Meghalaya might not be a top performer in the overall rankings, but it ranks 2nd in the Equity Pillar. Meghalaya ranks 1st in SDG 10 under the themes of Voice and Accountability, Government Effectiveness and Regulatory Quality. Mizoram on the other hand tops SDG 1 in Voice and Accountability and Government Effectiveness and SDG 2 in the theme of Voice and Accountability. Uttarakhand on the contrary has performed poorly under SDG 1, 2 ,3 and 10, likewise Delhi as anecdotally expected ranked last in the theme of Rule of law, indicating poor performance in addressing crimes.

The driver of Sikkim's performance is its ranking in the theme of Control of Corruption. Almost 100% cases that were charge sheeted for corruption complete action was taken on them, this shows that Sikkim took essential steps to counter corruption and facilitate Good Governance. Even in the theme of Regulatory Quality, explained through SDG 10 and the indicator of Worker Population Ratio (WPR) (female), according to the Annual Periodic Labour Force Survey 2018-19, Sikkim has a WPR of 51.1% 3rd after Meghalaya (51.3%) and Himachal Pradesh (60.6%).

Sikkim ranks 1st in the Equity Pillar as well as the overall Index, followed by Meghalaya ranking 2nd and Mizoram ranking 3rd. Similarly, Uttarakhand ranks 9th, Delhi 10th and Arunachal Pradesh 11th. Goa being on the list of top three in the overall Index ranks 6th in the Equity Pillar. Manipur which places at the bottom of the overall Index, ranks 8th dropping five places as compared to Equity Pillar in PAI 2020.

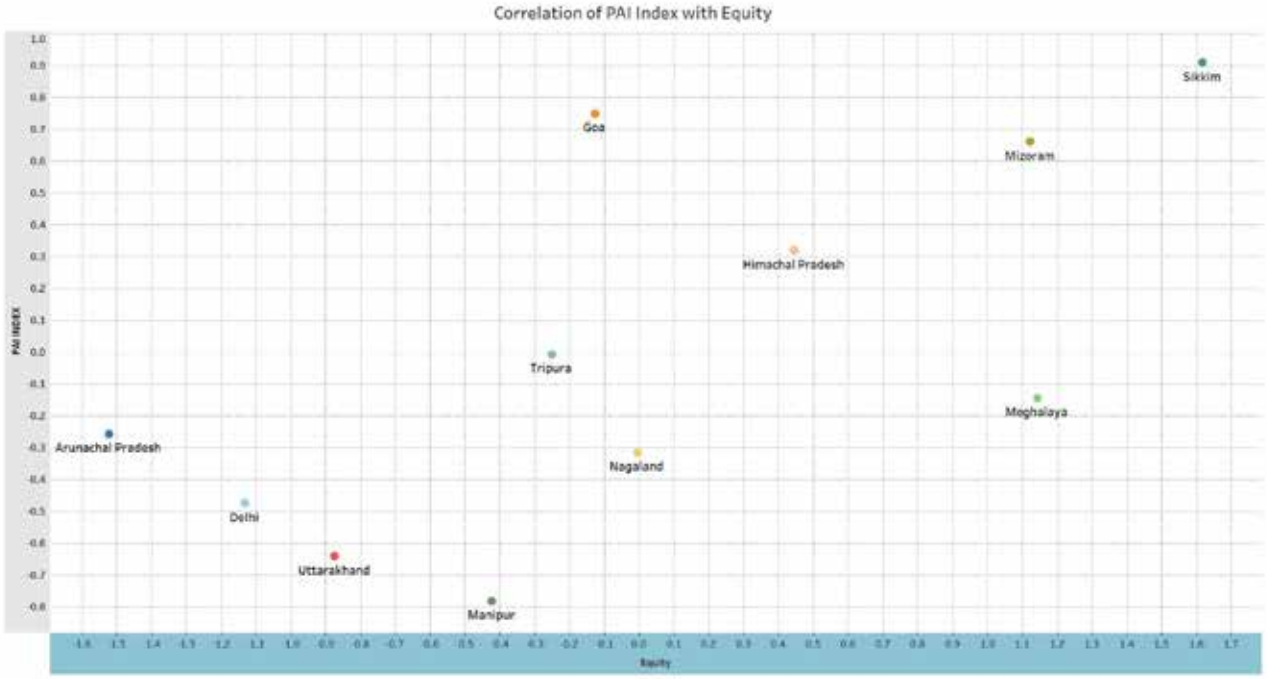
Delhi also has a very high influx of skilled and semi-skilled migrants in search of jobs every year, ensuing a problem of decent living and increasing urban slum population (10.63% as per Census 2011). Arunachal Pradesh on the other hand ranks at the bottom of the Equity Pillar. The State performs poorly in terms of providing social protection, expenditure in social sector and also WPR.

Only 3.25% of the total charge sheeted cases were completed in Arunachal Pradesh moving its performance to the bottom of the ranking under the theme of Control of Corruption. Arunachal Pradesh has however come first in SDG 16 performance under Rule of Law, attributing to having low crimes against the vulnerable communities, only 74 cases registered of intentional homicide, eight cases of rapes and only one dowry death victim as per the NCRB statistics of 2019.

The Equity Principle

The Figure explains the correlation between the PAI Index and the Equity Pillar for Small States.

The scatter of the plot emphasises on the weak correlations. The theme of Voice and Accountability, Government Effectiveness, Rule of Law and Control of Corruption have weak positive correlations of 0.59, 0.385, 0.37 and 0.493. At the SDG levels, under the theme of Voice and Accountability SDG 1 and SDG 10 have moderate positive correlation with the Equity Pillar of 0.561 and 0.65 respectively; under Government Effectiveness, SDG 10 has a moderate positive correlation with the Equity Pillar of 0.534. States performing well in Equity Pillar have also performed well under SDG 1, 10 and 16 therefore terming them as a catalyst for improvement in their ranks in the overall PAI 2021 Index.



Finally, for Union Territories Puducherry tops the rankings (also 1st in the overall PAI 2021 Index) followed by Jammu and Kashmir ranking 2nd (improving one rank compared to PAI 2020). With a correlation coefficient of 0.760 with the overall Index, the Equity Pillar turns out to be the driver of the performance of the States.

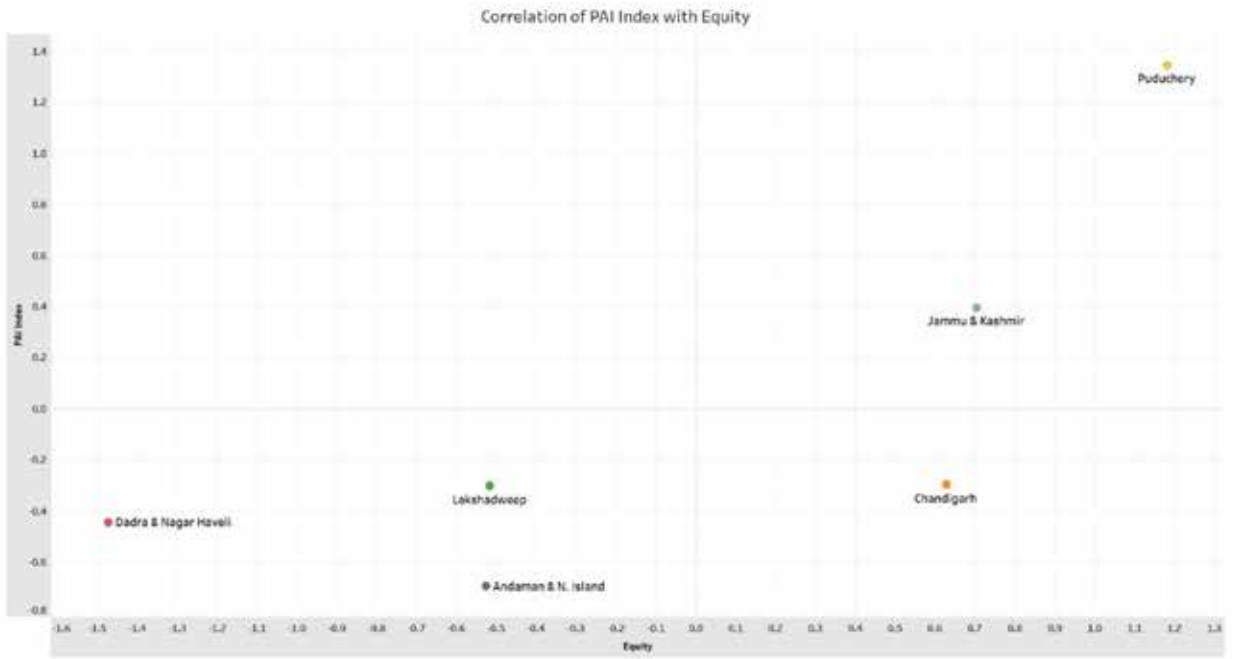
Placing at the bottom are Andaman and Nicobar Islands (5th) and Dadra and Nagar Haveli and Daman and Diu (6th). Merging Dadra and Nagar Haveli and Daman and Diu turned out to be not so beneficial for the state from Equity perspective. In some cases, the regression generates false positives or confounding counter-factual. For instance, the correlation coefficients at the theme level appear weak, with some of them being negative. The negative correlation with a theme would suggest that the States finding themselves at the bottom are actually the top performers, for example, the theme of Rule of Law has a negative correlation coefficient of -0.436 with the Equity Pillar, Puducherry ranking at the bottom under Rule of Law actually tells that the State has performed well under this particular theme. This is also vetted by the UT's performance in the Indicators of SDG 16. These must be treated for what they are - false positives - when the predictor variables in a multiple regression model are correlated and one or more of them contains random measurement errors, the chances for false positive research findings, go up significantly. We must leave it at that.

Further exploring the SDG-wise performance, Chandigarh ranks 1st in SDG 1 under the theme of Voice and Accountability, attributing to per day wage of casual labour of Rs. 274 adjusted to inflation.

SDG 1 despite having a moderately positive correlation (0.68) with the Equity Pillar, does not necessarily lift Chandigarh's performance as a whole, as the UT witnesses a fall of two places in it's ranking in the Equity Pillar as compared to last year.

Puducherry on the other hand has outperformed every UT under SDGs 1 and 3 under the theme of Government Effectiveness. Low Infant Mortality rate (16%) attributed by low malnutrition levels (19.25%) has helped the UT top the rankings in the Pillar. While Dadra and Nagar Haveli and Daman and Diu have the highest Infant Mortality Rate of 33% (NFHS-4) attributed by high malnutrition levels of 27.78% which is very high as compared to the national average of 19%.

Jammu and Kashmir reports the highest number of intentional homicide victims (181 cases) but has a negative growth rate of -11% over a period of four years, while Andaman and Nicobar Islands witnesses a high increase in the growth rate of 66% for the same time period. Chandigarh has seen an approximate 50% increase in the number of rape cases reported (68 cases in 2016 to 112 cases in 2019) with an annual growth rate of 0.22% of cases adding each year



On the contrary all other UTs has a negative annual growth rate to addition in reporting of rape cases. It then turns into a paradox where, higher reporting of cases could mean a better awareness on the issue, compliance by the police forces etc. and higher reporting of cases could also mean that the crimes have increased over the years, then questioning the competence of the law in the UT.

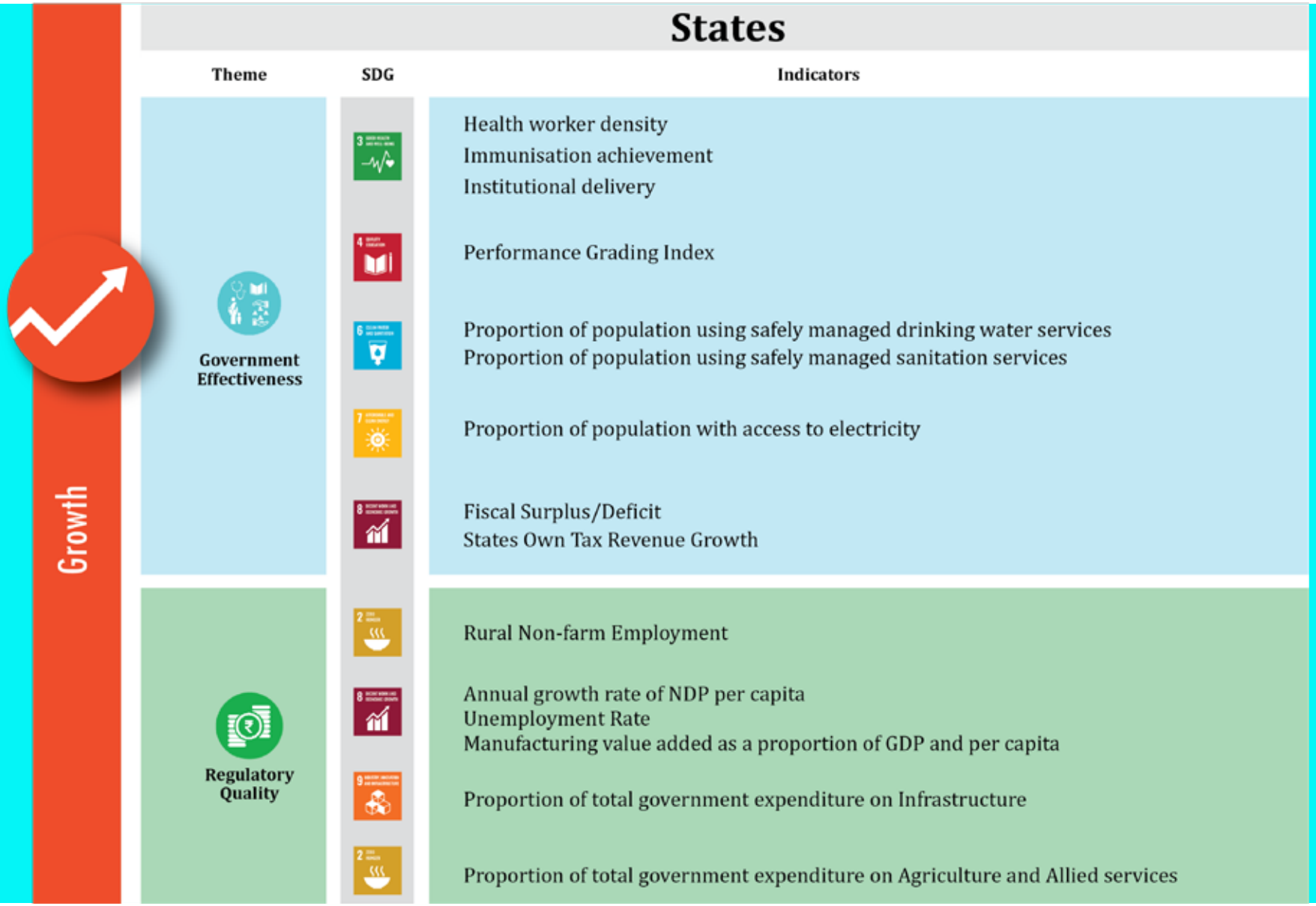
The Figure above explains the correlation between the PAI Index and the Equity Pillar for UTs.

The spread of the UTs in the graph indicate the distance between the top and bottom performer is huge, where Puducherry placed at top right hand corner and Dadra and Nagar Haveli at the bottom left. SDG 10 under the Voice and Accountability theme, has a negative correlation coefficient of -0.636. SDG 1 under the Government Effectiveness theme has a strongly negative coefficient of -0.855, while other SDGs do not show any significant correlation with the Equity Pillar. The Governance in these centrally governed UTs in the Pillar of Equity would be challenged to bridge the gap between the top and bottom performers.

Concluding the Equity Chapter, it is safe to say that, that the Equity Pillar for every category was driven by its performance in SDGs 1, 10 and 16. While for Large States and Small States, SDG 3 too played a key role in their performance. A better livelihood, catering to better access to nutritional attainment for children can boost performance of the States/UTs. The Equity Pillar is proof of the fact that 2/3rd of the country's population which accounts for women and children need to be prioritised in terms of stopping heinous crimes against women and children, providing them with better nutritional outcomes and a safe and secure environment for holistic development. This milestone can only be achieved by the conscious steps taken by the Government in increasing its expenditure for Women and Child Development instead of slashing the funds by 27%[1] .

[1] *"Budget for Women and Child Development shrinks, Poshan slashed by 27%"* *https://www.thehindu.com/business/budget/budget-for-women-and-child-development-shrinks-poshan-slashed-by-27/article33721315.ece*

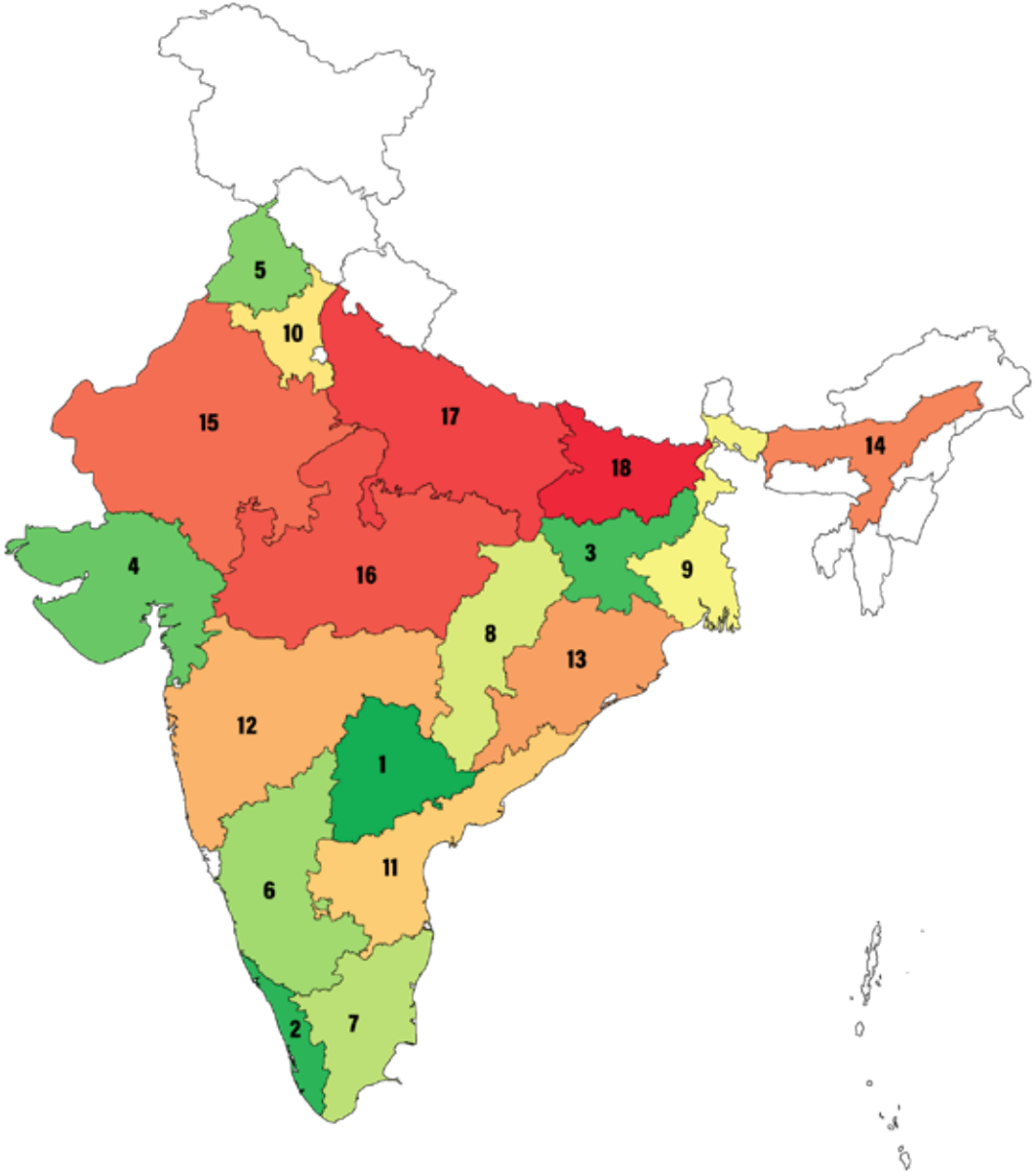
PUBLIC AFFAIRS INDEX
PAI
Governance in the States of India


Growth
States
Theme
SDG
Indicators
Government Effectiveness
Health worker density
Immunisation achievement
Institutional delivery
Performance Grading Index
Proportion of population using safely managed drinking water services
Proportion of population using safely managed sanitation services
Proportion of population with access to electricity
Fiscal Surplus/Deficit
States Own Tax Revenue Growth
Regulatory Quality
Rural Non-farm Employment
Annual growth rate of NDP per capita
Unemployment Rate
Manufacturing value added as a proportion of GDP and per capita
Proportion of total government expenditure on Infrastructure
Proportion of total government expenditure on Agriculture and Allied services

Union Territories

Theme	SDG	Indicators
Government Effectiveness		Immunisation achievement
		Institutional delivery
		Performance Grading Index
		Proportion of population using safely managed drinking water services
		Proportion of population using safely managed sanitation services
		Proportion of population with access to electricity
Regulatory Quality		Rural Non farm employment
		Unemployment Rate

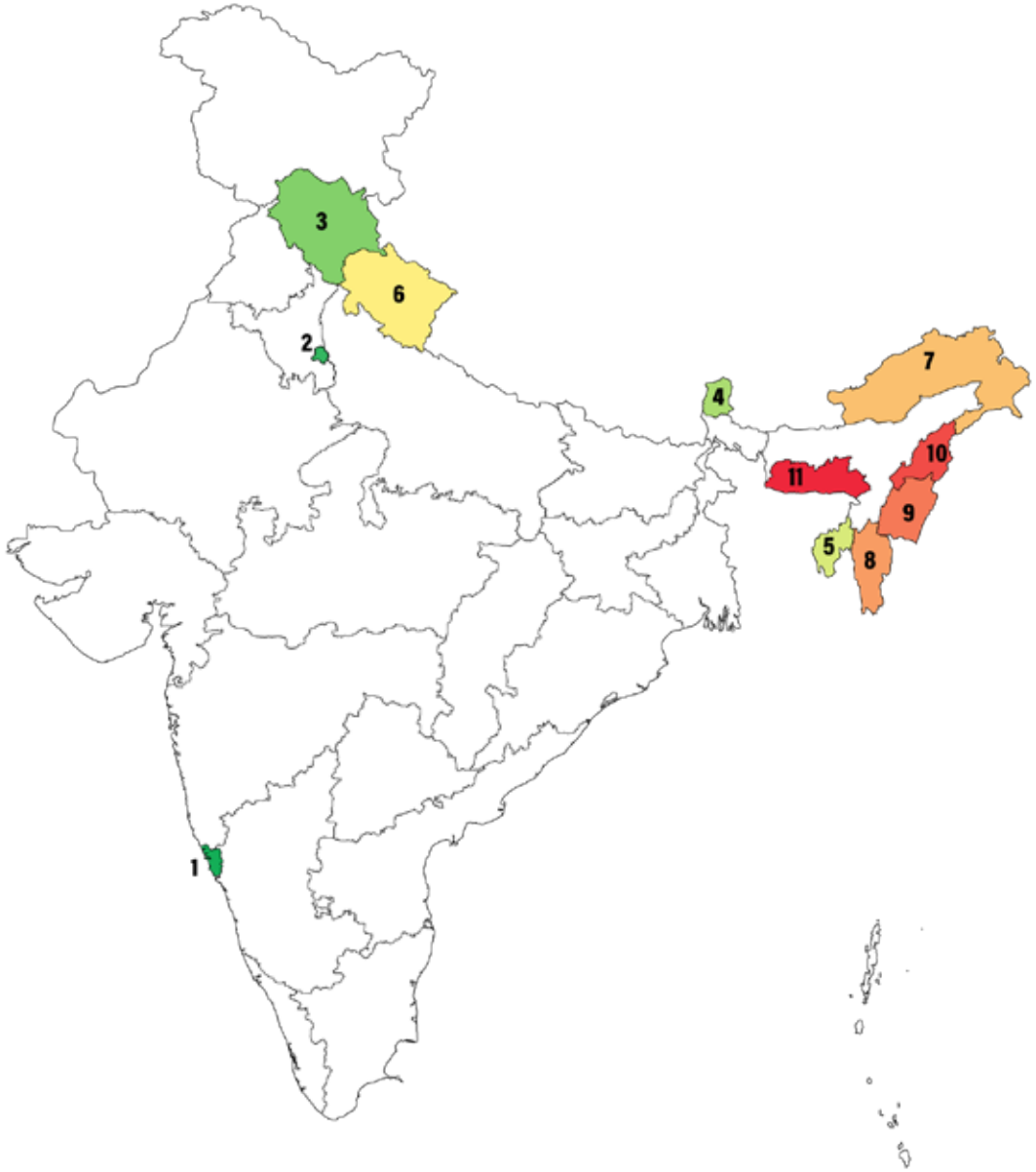
Growth and its Discontents



Rank	Large States	Index
1	Telangana	1.380
2	Kerala	1.348
3	Jharkhand	0.930
4	Gujarat	0.805
5	Punjab	0.698
6	Karnataka	0.693
7	Tamil Nadu	0.673
8	Chhattisgarh	0.477
9	West Bengal	0.287
10	Haryana	-0.010
11	Andhra Pradesh	-0.101
12	Maharashtra	-0.201
13	Odisha	-0.556
14	Assam	-0.556
15	Rajasthan	-0.914
16	Madhya Pradesh	-1.321
17	Uttar Pradesh	-1.521
18	Bihar	-2.114

Highest Index Value — Lowest Index Value

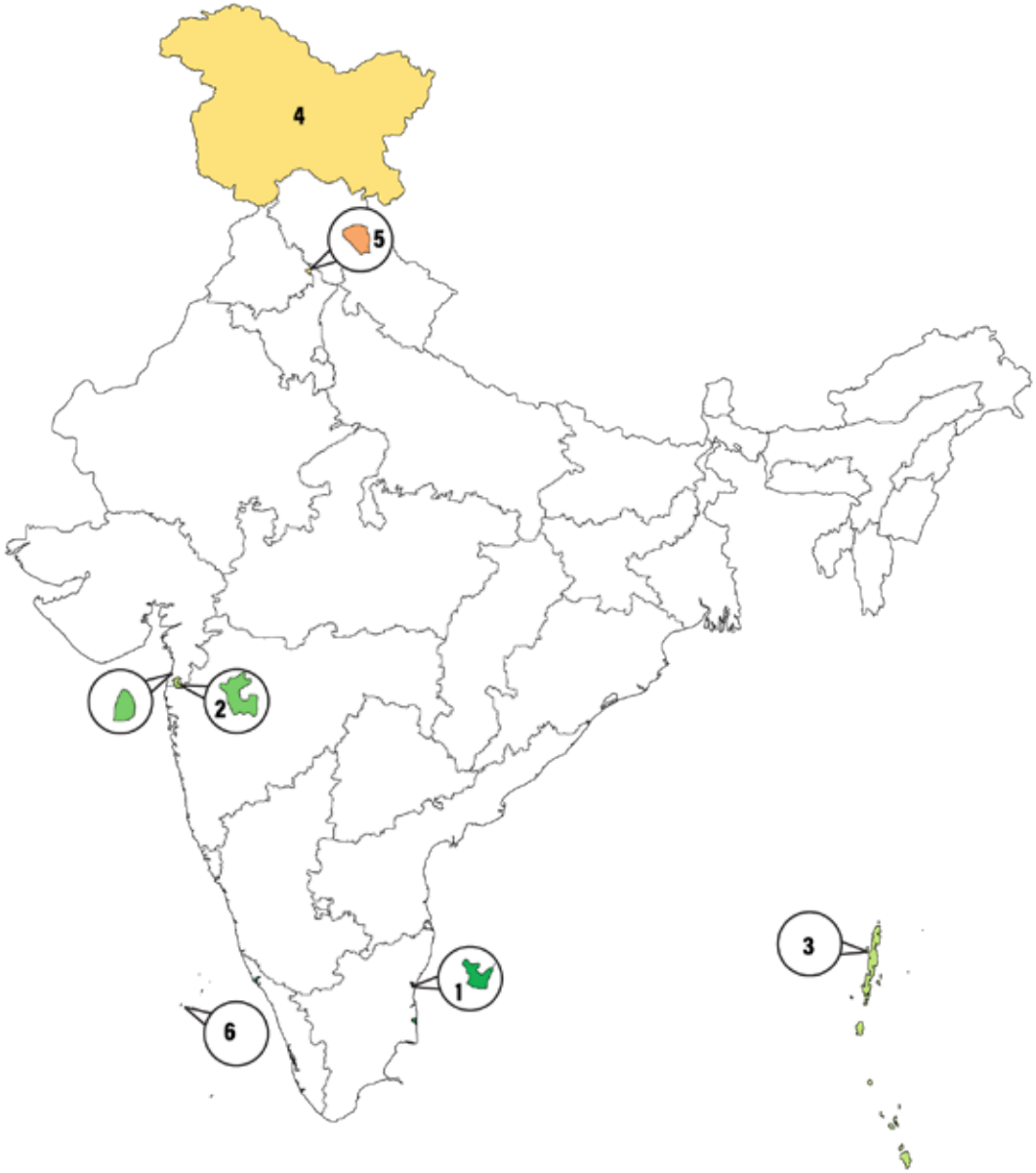
GROWTH



Rank	Small States	Index
1	Goa	1.533
2	Delhi	1.334
3	Himachal Pradesh	0.745
4	Sikkim	0.735
5	Tripura	0.319
6	Uttarakhand	0.004
7	Arunachal Pradesh	-0.625
8	Mizoram	-0.672
9	Manipur	-0.963
10	Nagaland	-1.187
11	Meghalaya	-1.222

Highest Index Value — Lowest Index Value

GROWTH



Rank	Union Territory	Index
1	Puduchery	1.160
2	Dadra & Nagar Haveli	0.655
3	Lakshadweep	0.566
4	Jammu & Kashmir	-0.107
5	Chandigarh	-0.747
6	Andaman & N. Island	-1.528

Highest Index Value — Lowest Index Value

GROWTH

"Economic institutions shape economic incentives: the incentives to become educated, to save and invest, to innovate and adopt new technologies... It is the political process that determines what economic institutions people live under, and it is the political institutions that determine how this process works."

Daron Acemoglu

Why Nations Fail: The Origins of Power, Prosperity, and Poverty

"Here we must run as fast as we can, just to stay in place. And if you wish to go anywhere you must run twice as fast as that."

Lewis Carrol

Alice in Wonderland

In the decade following the recession of 2008-09 and its aftermath, economic growth emerged as a matter of concern across the world. In India, during this period, real incomes per capita declined, especially for the poor, more than at any other time in recent memory; and deceleration in growth was evident in almost every aspect of the economy - production, consumption, savings and investment. Even as the recovery was slow and jobs scarce, the COVID-19 pandemic has in the past year worsened the economic downslide posing even more serious challenges to the fragile foundations of India's future growth prospects. The results of PAI 2021 confirm what was widely believed to be the case on the basis of anecdotal evidence: that the pandemic has served to exacerbate economic inequality; disrupted the large informal sector; and therefore livelihoods. The results from PAI 2021 compel one to rethink the nature of economic growth and focus on its contrasting effects on the rich and the poor. The short run impact of the pandemic on aggregate economic activity has been severe on those at the margins of the organised market economy, resulting in a significant reduction in internal trade particularly in the services and the small and micro sectors. The long run effect will likely be the slowing of potential economic growth and an increase in poverty. The growth performance of the States in India during 2020-2021 must be seen in the shadow of the COVID-19 pandemic and the profound social and economic challenges that it threw up.

A great part of the PAI 2021 results reflect how the states responded to these challenges and constituted the growth story of the past year. The disruption caused by the pandemic has, if anything, created a sense of disenchantment with the idea of economic growth, as hitherto understood. As the migrant crises unfolded in state-after-state in India, bringing into serious question the idea of India as a common market; and exposing the unconscionable inequality in incomes, it became clear that it is time to rethink sustainable pathways for India's future development. What is perhaps clear is that the pursuit of laissez-faire economics - liberalising, privatising and globalising - alone, is unlikely to help banish poverty and inequality, expand healthcare, or universalise education by 2030. The data analysis of the performance of the States in the pandemic year demonstrates that India's pathways to achieve the SDG goals are not as robust and resilient as might have been supposed. The fundamental finding that the results from PAI 2021 point to is, that the States must chart a new course to remain on track to meet the human development dimensions of the UN SDG Agenda 2030. As the country recovers from the pandemic, the states must establish some clear priorities. It is PAC's conviction from the data analysis that PAI 2021 provides, that among these of prime importance, is: SDG 1 - No poverty; Target 1.2: halve proportion of people living in poverty by 2030 and Target 1.4: provide equal access to basic services; SDG 2 - Zero Hunger; Target 2.3: double agricultural productivity and incomes of small-scale food producers; SDG 3; Target 3.8: achieve universal health coverage; SDG 4 - Quality Education; Target 4.1: provide free, equitable and quality education for all children.

The States are typically resource constrained and must prioritise some broad strategic goals. Prioritising from amongst diverse and competing goals will not be easy. While sustained Per capita economic growth is in itself an SDG target, the States would do well to focus on improving well-being rather than on increasing economic throughout. Economic growth, after all, is the cumulative increase in the capacity and production of an economy. It is characterised by the improvement of both the quality and quantity dimensions of material and wealth expansion. This dual character is synchronous to the understanding of the basic economic concepts of economic growth and economic development. The former is focused on the expansion of goods and services, the latter on the equitable distribution of these goods and services. When PAI looks at growth, it is through this lens. Basis the PAI 2021 results, and the underlying patterns, PAI 2021would urge that the answers to three questions must inform decision-making in the States: Is policy intervention a priority? Whether it has a development rather than a growth focus? Is the intervention being considered community-centric and resilient? This is arguably the only way to build back better, as demonstrated by the performance of the higher ranked States on the PAI 2021 Index. Governments play a vital role in the propagation of such growth. There is evidence - both static and dynamic estimates - including from the results in PAI 2021, to suggest that gross capital formation, pattern of energy use and domestic consumption and investment are the primary drivers of economic growth in the states. State governments must shoulder the responsibility to lead the economy onto this path, despite political economy pressures to divert resources to non-productive activities. Governments strengthen the foundations of the economy, structuring the health, agriculture, welfare, infrastructure and security vectors. Only when the base of the economy is strong, can El Dorado be built upon it. India's growth story has seen a series of boons and banes. The onus of growth, however, is not solely the responsibility of the government and its agencies. It is the triumvirate of the State, the market, and the Civil Society that must work symbiotically towards the establishment of a prosperous and just economy.

Growth in its multidimensional form encompasses the essence of access to and the availability and optimal utilisation of resources. By resources, PAI 2021 refers to human resources, infrastructure and the budgetary allocations. Capacity building of an economy cannot take place if all the key players of growth do not drive development. The multiplier effects of better health care, improved educational outcomes, increased capital accumulation and lower unemployment levels contribute magnificently in the growth and development of the states. PAI 2021 introduces a set of constructed indicators that contributes to measure this performance. Two indicators in particular measure performance on both growth and development: the extent of structural transformation in the economy and the extent of informalisation of the formal sector of employment in manufacturing and services.

Structural Transformation

The quest for decent work brings the domino effect of change in a person's living standards. One must ask the question how? In simple labour economics, when the marginal productivity of labour in agriculture becomes zero, the surplus agricultural labour looks for opportunities beyond the agriculture and allied sectors. The Agriculture sector is no more profitable, therefore causing a shift in the occupation of the labourers. However, this shift does not guarantee upgradation in their skillsets, therefore rendering them vulnerable to low productivity, unskilled labour activities in the non-farm sector. The phenomenon of movement of skilled/unskilled agricultural labour from a traditional sector of occupation to industries and services is referred as structural transformation in the agricultural sector. Due to their acquired skills in being previously engaged in agriculture, most of the surplus agricultural labourers (non-agricultural labourers) engage in the informal sector. According to the Annual Periodic Labour Force Survey of 2018-19, 68.4% of the workers in non-agriculture sector were engaged in the informal sector. The share of males in the informal sector is as high as 71%, while that of females is over 51%, out of the total non-agricultural workers. In the country as a whole, 44% of the working population is employed in non-agricultural activities (the manufacturing and services sectors). However, over the years, the change is evident:

As per the 2011 Census, Agriculture employed 74% of working age population, but this number has declined to just over 55% of the population (Annual Periodic Labour Force Survey, 2018-19), though agricultural activities still remain the prime sector of employment in the country. To determine whether structural transformation, though inevitable, is necessarily a good thing or not, one must recognise that structural transformation triggers out-migration and the increased mobility of labour increases employment in manufacturing provided capital formation and innovation have been enabled, resulting in the emergence of Urban agglomerations as growth centres. The formation of Urban agglomerations, outgrowths and census towns are indicators of development. Oliver Walton in his helpdesk report "*Urbanisation and Growth*" provides a meta-analysis of the relationship between economic growth and urbanisation. While urbanisation might not have a direct causal relationship with economic growth, there is evidence that the form that urbanisation takes – the degree of urban concentration – has a strong causal effect on growth (Henderson 2000, Henderson 2003). Urban agglomerations and creation of cities however have a positive correlation with income levels of an individual, therefore leading to economic growth. Thus, the extent of structural transformation is one of the empiric measures of the economic growth performance of states.

Informalisation in the Formal Sector

The National Industrial Classification of 2008 categorises economic activities broadly under three categories: primary production (agriculture and mining activities), secondary production (manufacturing and construction activities) and services (transportation, commerce and administrative activities). With the growing informalisation of work and expansion in contractual jobs, in the absence of a comprehensive tax-funded social security system, the risks of deprivation of rights-based entitlements and hence the growing precariousness of labour is a matter of concern. The line dividing the formal sector from the informal sector is getting increasingly blurred. There is a large workforce borne on the formal sector enterprises but without formal written job contracts, paid leave, or any form of social security benefits. According the Annual Periodic Labour Force Survey of 2018-19, regular waged/salaried employees in non-agricultural sector out of the total surveyed population, who do not have written job contracts, access to paid leave and social security benefits account for over 69%, 54% and 52% respectively across rural and urban India, together. The percentage of males deprived of a formal job contract stands at 70% as compared to 66 in females, while the percentage of females deprived of social security benefit is slightly higher than that of males – 54 % and 51% respectively. Irrespective of the gender divide, the rates are quite high even at the national level.

Overall Performance of Large States, Small States and UTs on the Growth Pillar

The top three states in the large states category are Telangana, Kerala and Jharkhand, emerging as the best-performing states in the Growth Pillar. Telangana has succeeded Kerala from PAI 2020 in the Growth Pillar, while Karnataka which acquired the 2nd position last year has come down to 6th. A surprise addition to the top performers of the Growth Pillar is Jharkhand which has ranked 3rd, while it ranked 14th in PAI 2020. Madhya Pradesh, Uttar Pradesh and Bihar are poor performers in the Growth Pillar and they also rank at the bottom in the overall Governance Index, a very similar performance to PAI 2020.

The Growth Pillar captures the themes of Government Effectiveness and Regulatory Quality. Kerala has demonstrated an excellent performance in Government Effectiveness, while Telangana tops the theme of Regulatory Quality in the Growth Pillar. The SDGs that are encapsulated in this Pillar are SDG 2, 3, 4, 6, 7, 8 and 9. Kerala has done remarkably well under SDG 3, it is widely recognised that Kerala has invested in social infrastructure; this paired with the decentralised government that responds to local needs constructively, and fosters community participation, has resulted in high-quality healthcare in the country. Kerala also shows

an impressive performance on SDG 4 with over 96% literacy and a score of 862 in the Government of India's Performance Grading Index of 2020. On Regulatory Quality, however, the state falls sharply. Performance on SDG 2 - Zero Hunger is measured on the indicators of Rural Non-farm Employment and growth rate of expenditure on agriculture. Both these indicators point to the importance of the rural non-farm sector; with job opportunities beyond agriculture presenting themselves in rural areas, indicating lower rural-urban migration. On SDG 9, Kerala is at the tail end of the Index, with the 17th position out of 18. The State having an effective and established infrastructure and maintenance track record, steps in, not to contradict, but to supplement this Index.

Following Kerala is Telangana, which ranks 1st in the Regulatory Quality theme. Telangana tops the chart for the indicator of SDG 2 and outperforms every state in terms of Rural Non-farm Employment. Focusing on the agriculture sector has helped Telangana improve its ranking compared to last year. On the contrary, Telangana fares poorly in terms of SDG 9, explained by infrastructure development. The basic infrastructure element is below par in the state as it is also a poor performer in SDG 6 (access to improved sanitation).

A surprise addition to this year's top performer in the Growth Pillar is the State of Jharkhand. The State's performance is driven by SDG 8 and SDG 9. Jharkhand has the highest State's tax revenue growth rate of 25% for the year 2020-21, followed by an 11.1% growth rate in Net Domestic Product (NDP) per capita.

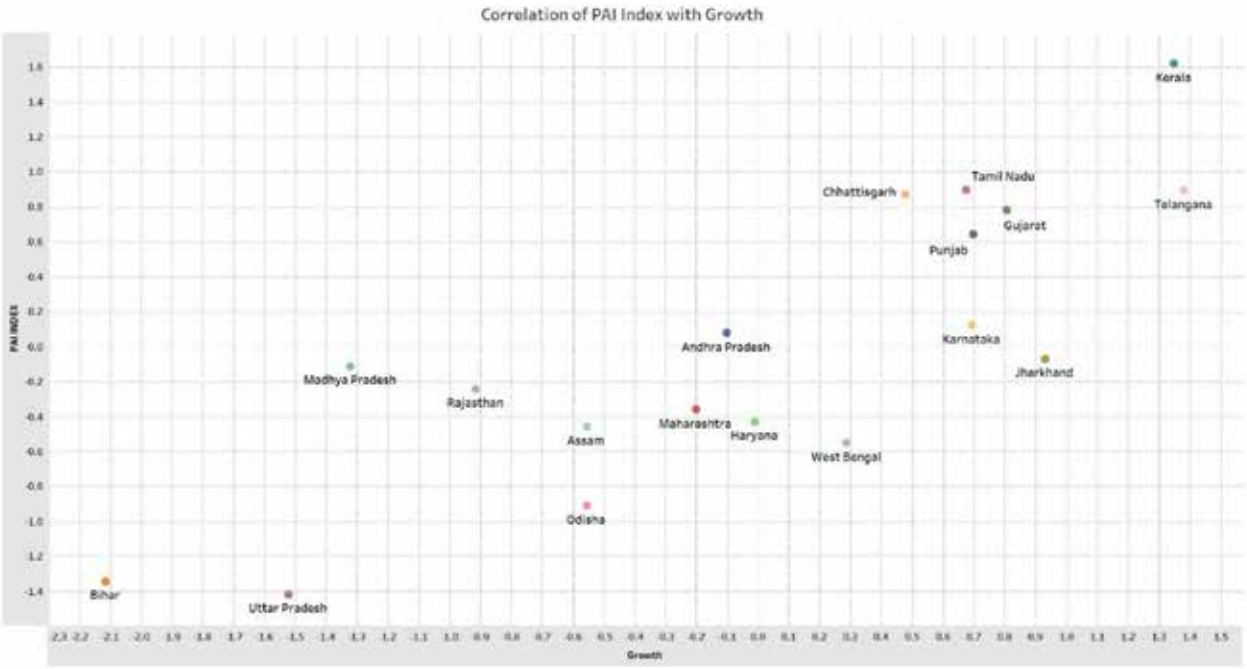
This indicates that the State's financial capital is growing progressively, however, the aspects of social capital and physical capital are still sub-optimal. Jharkhand is a poor performer in terms of SDG 6 and 7, only 24.2% of the population in Jharkhand has access to improved sanitation facilities far below the national average of 51.1%. Only 74.4% of the households in Jharkhand are electrified according to the data published by National Family Health Survey-4.

At the bottom, both on the PAI Index and the Growth Index is the State of Bihar and Uttar Pradesh. This is also in line with the results of PAI 2020 where the state performed at the same level. Bihar ranks 18th in the Growth Pillar and performs poorly in terms of human development indicators. Uttar Pradesh not far behind Bihar ranks 17 in the Growth Pillar. Both these states have performed poorly in SDGs 4, 7 and 2. Bihar and Uttar Pradesh score 689 and 704 respectively in the Performance Grading Index, the national average being 740 out of 1000. Legacy reflects that due to high population and prevailing multidimensional poverty in the State, there are barriers to educational attainment as well as to receiving quality health care in these States. In Healthcare, the immunisation drive for children appears to have halted because of the pandemic. The data reported points to a 33% fall in immunisation relative to the previous year in Uttar Pradesh. This has meant that 20-45% fewer children were vaccinated this year than the last (TOI). There is also an acute shortage of healthcare workers with the healthcare worker density resting at 4.9. In terms of Quality Education, the state has 18% of India's school-going population which is supported by less than 14% of the country's teachers, with the Pupil Teacher Ratio at 31. Despite being a poor performer in the human development indicators, on SDG 8 Uttar Pradesh shows better outcomes than the rest of the goals, ranking 2nd after Jharkhand. The only respite the state gets is from SDG 9, where is ranks 5th position. There have been large investments in building road works and expressways in the state to boost socio-economic conditions.

Apart from the top and bottom performers, States like Gujarat and Karnataka call for a special mention. Karnataka has slipped three ranks in the overall PAI Index, and has slipped four ranks in the Growth Pillar. Karnataka ranks 10th in the theme of Government effectiveness and 4th in the Pillar of Regulatory Quality. Karnataka's performance in the SDG of human development - SDGs 3, 4, 6 and 7 has been excellent where it ranks 2nd in all of them, but lags in terms of other SDGs. PAI 2021 being a relative ranking of the states, Karnataka's performance has not dipped in terms of indicator level performance, but the other States catching up rate on growth is much faster than Karnataka. This will be further discussed in the Delta Analysis chapter in this report.

The ongoing pandemic has severely impacted the social, economic and physical infrastructure of the State. Therefore, the prime focus aof the States was to contain the pandemic and reduce its impact. The States performing well in the indicators of health outcomes need not be termed as poor performers if their performance is not at par on the other SDG. This reflects in the performance of the states like Karnataka and Maharashtra in the COVID-19 Response Index.

The graph below shows correlation between the PAI 2021 Index and the Growth Pillar.



For the Large States category, the PAI 2021 Index has a strongly positive correlation of 0.89 with the Growth Pillar. This value is lower than last year's value of 0.905, suggesting that the impact that growth has had on the governance and sustainable development goal achievement has not been as conducive. In light of the fact that the time period of PAI 2021 is a year impacted by COVID-19 and the lock downs, that growth has suffered is understandable.

SDG 3 and SDG 4 have a moderate positive correlation coefficient of 0.54 and 0.57 respectively with the Growth Pillar, whereas SDG 7 has a strong positive correlation coefficient of 0.73. A look at the graph above shows the Large States follow a pattern, with a cut across the bottom left and top right quadrants, showing a positive correlation between the PAI 2021 Index and Growth.

Of the Large States, Kerala leads the others in this analysis, at the top right quadrant. Other States that follow suit are Andhra Pradesh and West Bengal, despite being on the weaker side of correlation. With their high levels of correlation, one can infer that their performance may be driven by their growth parameters.

There is also a large cluster of States near the middle, with States like Uttar Pradesh, Jharkhand and Rajasthan showing a negative correlation. It is interesting that of these States, Rajasthan and UP have come at the tail end of the Growth Index. At the bottom left quadrant are a handful of States, with the bottom being brought up by Bihar. Of the outliers, there have not been extreme ones; only Chhattisgarh and Gujarat can be seen as deviating slightly.

In the Small States category Goa ranks 1st, followed by Delhi and Himachal Pradesh. Performing last are Meghalaya, Nagaland and Manipur. Looking at a breakdown theme-wise, under Government Effectiveness, Goa ranks 4th, Delhi 2nd and Himachal Pradesh ranks 1st. Similarly, the States of Meghalaya, Nagaland and Manipur rank last under this theme. Under the theme

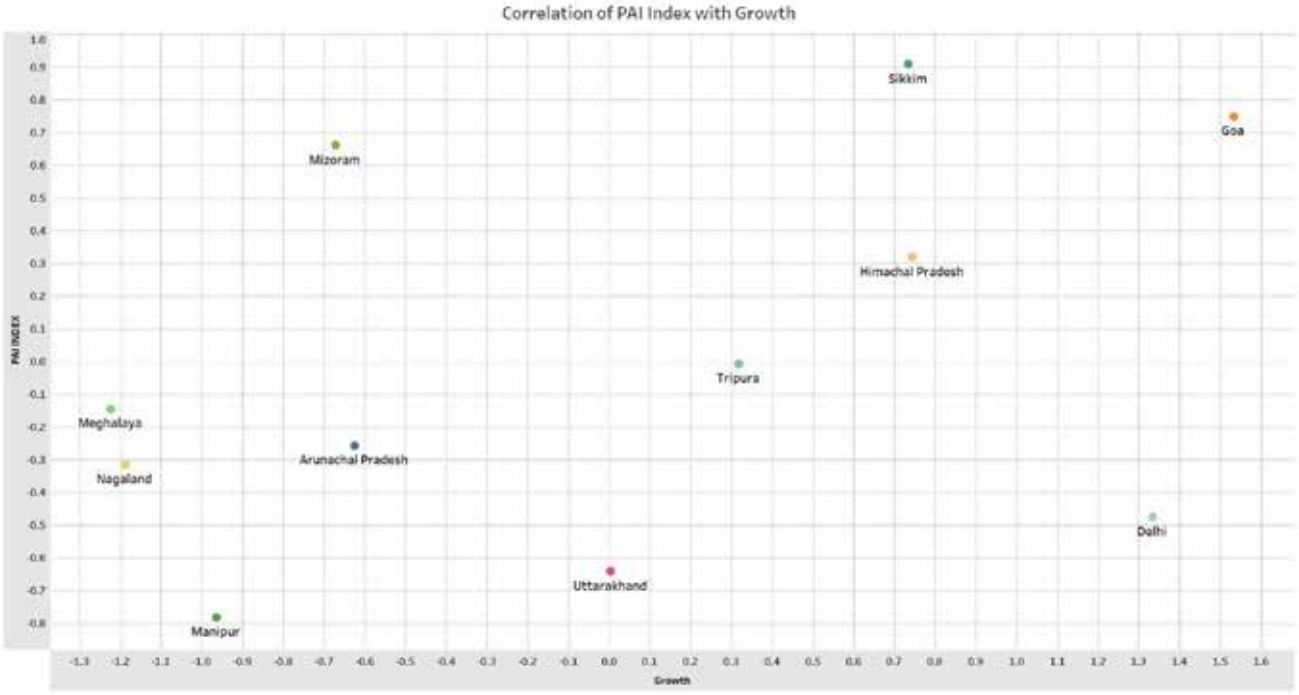
of Regulatory Quality, Goa tops yet again followed by Delhi and Sikkim and the States ranking towards the bottom are Nagaland, Arunachal Pradesh and Mizoram. The correlation coefficient of the themes of Government Effectiveness and Regulatory Quality for Small States with the Growth Pillar is 0.902 for both. This indicates that the SDG under both these themes have a very strong positive correlation with the Growth Pillar and are equally important in driving the State's performance.

The performance of the top States is driven by SDGs 4, 7 and 8. The correlation coefficient of SDGs 4, 7 and 8 with the Growth Pillar is 0.90, 0.73 and 0.82 respectively. The correlations are strongly positive which suggests that the indicators pertaining to these SDGs are catalysts to the State's performance.

On the SDG front, Goa has done well with Clean Water and Sanitation and Affordable and Clean Energy (SDG 6 and 7) with the state ranking of 2nd. It also has attained 2nd rank in SDG 2. Goa excelling in the Growth Pillar is conclusive of the fact that it is not at the bottom in any of the indicators. Goa has a composite score of 1.53 which is lower than its score in PAI 2020 which was 1.99. On the other hand, Delhi has always performed well in terms of growth, it's composite score is 1.23 which has acted as a catalyst to improve it's ranking from 4th last year to 2nd this year. Delhi ranks 1st in the SDGs 2, 4, 7 and 8, while it ranks last in SDG 6. It is interesting to note that Delhi being the centre of urbanisation does not leave room for rural employment, therefore it is very understandable that in terms of structural transformation it has 97.4% of the working population working in the non-farm sector. Delhi scores a remarkably high score of 829 in the Performance Grading Index, the state also has a 53.9% enrolment of students in the government schools. The state performs at bottom in the Scheme Index of Samagra Shiksha Abhiyan which is not reflective of the performance of the state because the State runs efficient education programmes on its own.

Delhi has electrified 100% of its households which places it to the top of SDG 7. A ground report[1] on the condition of slum dwelling and their access to sanitation facilities revealed that despite having built more than 19000 community toilets, people in the slums still chose open defecation. This is also justified with the performance of the State coming last in SDG 6. The pandemic has upset the progress for most of the States, Delhi ranks 3rd in SDG 3, this is also justified with the fact that Delhi was one of the worst hit States in the first wave of the pandemic. Delhi has ranked 1st in terms of containing the pandemic discussed in detail in the COVID-19 Response Index. Himachal Pradesh falls one place in the Growth Pillar as compared to PAI 2020 and placed 4th on the overall PAI 2021 Index. Along the Government Effectiveness theme, the State has done exceptionally well and stands first. This is supported by the high positions it has attained in SDGs 3 and 4 with 1st and 2nd rank, the 3rd rank in SDGs 6 and 8. This has meant that the State, despite the pandemic, has done rather well on all SDGs. This is witnessed by the fact that the State has been able to maintain its immunisation levels and is targeting solar power generation, with plans of solar parks in key areas.

In terms of the Regulatory Quality vector, the State ranks 5th. This is conditioned with the State ranking low in SDG 2. Having a large tourism sector that has been severely dampened by the pandemic perhaps explains the lower-than-expected performance in the interconnected goals of Zero Hunger explained through only 38.6% workforce employed in non-farm activities. On the other hand, faring well on Industry, Innovation and Infrastructure is primarily owing to expenditure on high-cost highway projects and a partnership with the Asian Development Bank to improve pre-existing infrastructure facilities.



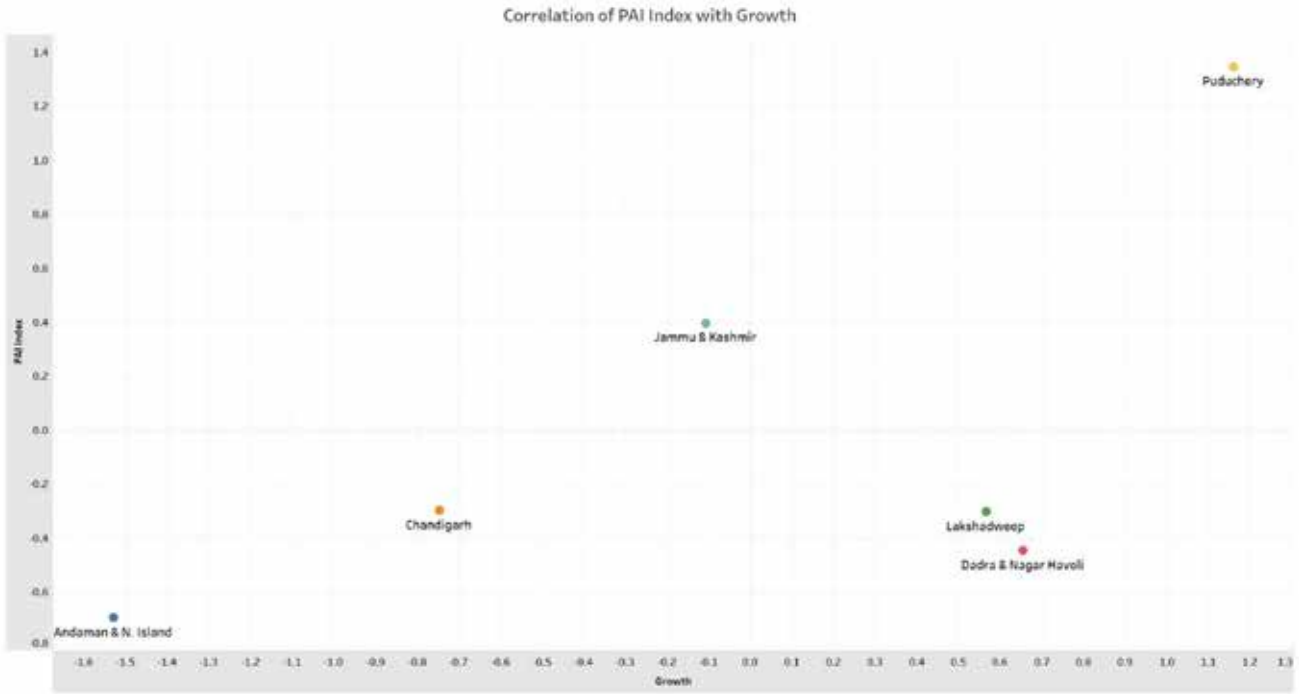
One clear idea that comes through, looking at the graph, is the distance between Sikkim and the rest of the States. The State of Sikkim and Goa are at the top-right corner of the graph, reflective of its high numbers in contrast to the rest of the States. The tail end is strung with majority of the North Eastern States. The wider scatter of the graph, as compared to the Large States, goes to explain the lower correlation coefficient. This in turn shows that in Small States, Growth has not been a very conducive Pillar for the PAI Index with a moderately positive correlation coefficient of 0.443.

For the Union Territories (UTs) due to unavailability of data, SDG 8 indicators under the Government Effectiveness Theme could not be incorporated. The UTs are centrally administrated, however it varies for Puducherry which has a unicameral legislature and elected representatives. The UTs ranking of PAI 2021 is quite surprising if one has to compare it with the scores of PAI 2020. In the Growth Pillar, Puducherry maintains its 1st rank as last year, followed by Dadra Nagar Haveli and Daman and Diu. The poor performers are Chandigarh at 5th rank and Andaman and Nicobar Islands at 6th. Both Chandigarh and Andaman and Nicobar Island have slipped one place compared to the PAI 2020 ranking. In the theme ranking of Government Effectiveness and Regulatory Quality, Jammu and Kashmir tops while Lakshadweep is at the bottom.

The correlation coefficients of themes and SDGs with the Growth Pillar are very weak, indicating that the performance of the overall top performer is not necessarily an outcome of pre-eminent performance at the theme or SDG level.

When one dives deeper into the performance of the Union Territories at the SDG level, a mixed performance of UTs is seen across several SDGs. Unlike, Large States and Small States, one single UT does not emerge as a top performer across various SDG. A surprising performance is seen with Jammu and Kashmir, which has improved from 7th rank to 4th in the Growth Pillar this year. The UT has performed well in terms of immunisation achievement, however still lags behind in Education and Basic Infrastructure. The UT has attained 2nd rank in SDG 8. This is the result of the low impact of the pandemic on the unemployment rate.

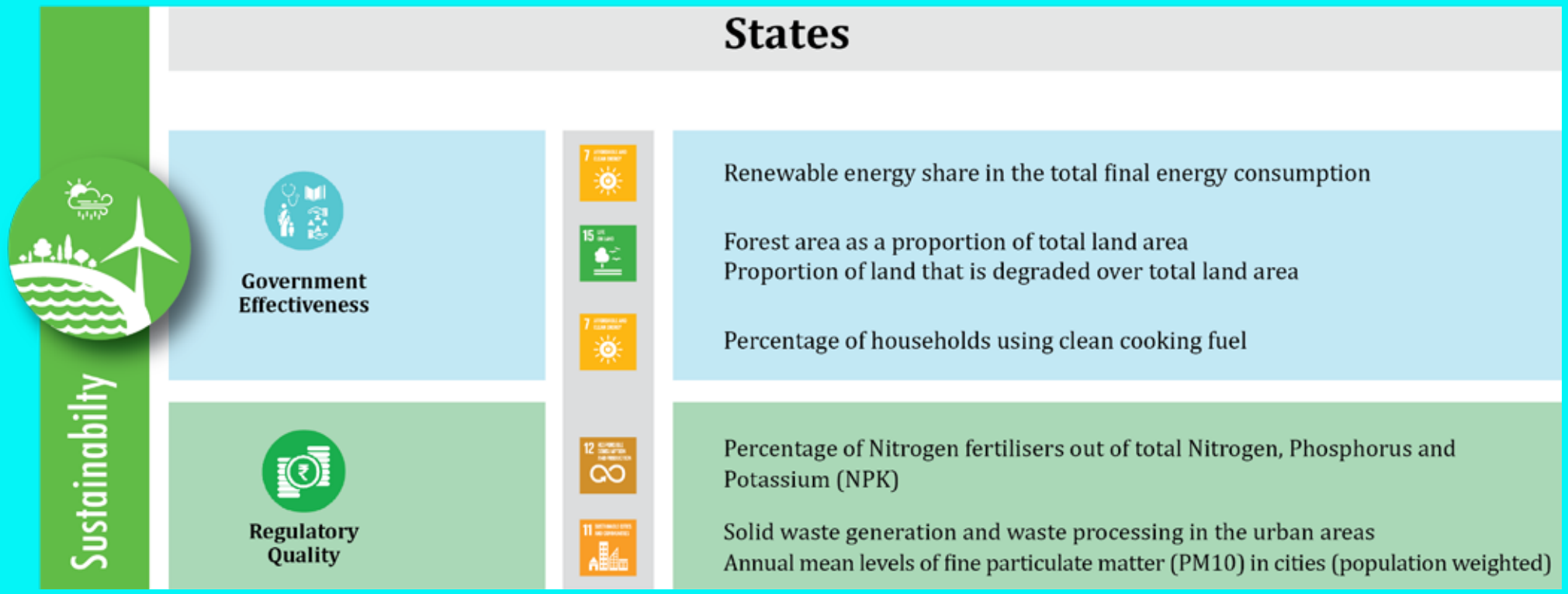
Growth and its Discontents



In conclusion, the States that have done well on human development parameters are also the States that show high performance in the PAI Index. The States that have improved their rankings relative to last year have also improved their financial capital. It has also emerged from the findings of PAI 2021 that structural transformation is a driver of growth, Non-farm Employment has come out to be a significant driver of the performance of States. States have been able to maintain their balance sheets of surplus and deficit despite the repercussions of the pandemic. States that were severely hit by the pandemic, have redirected their resources towards prioritising containment measures and that is reflected in their performance in the COVID-19 Response Index.

[1] *"Swachh Bharat For All? Despite Community Toilets Built, Access Remains An Issue For Slum Dwellers In Delhi"* *https://swachhindia.ndtv.com/swachh-bharat-abhiyan-access-toilets-remains-issue-slums-41639/*

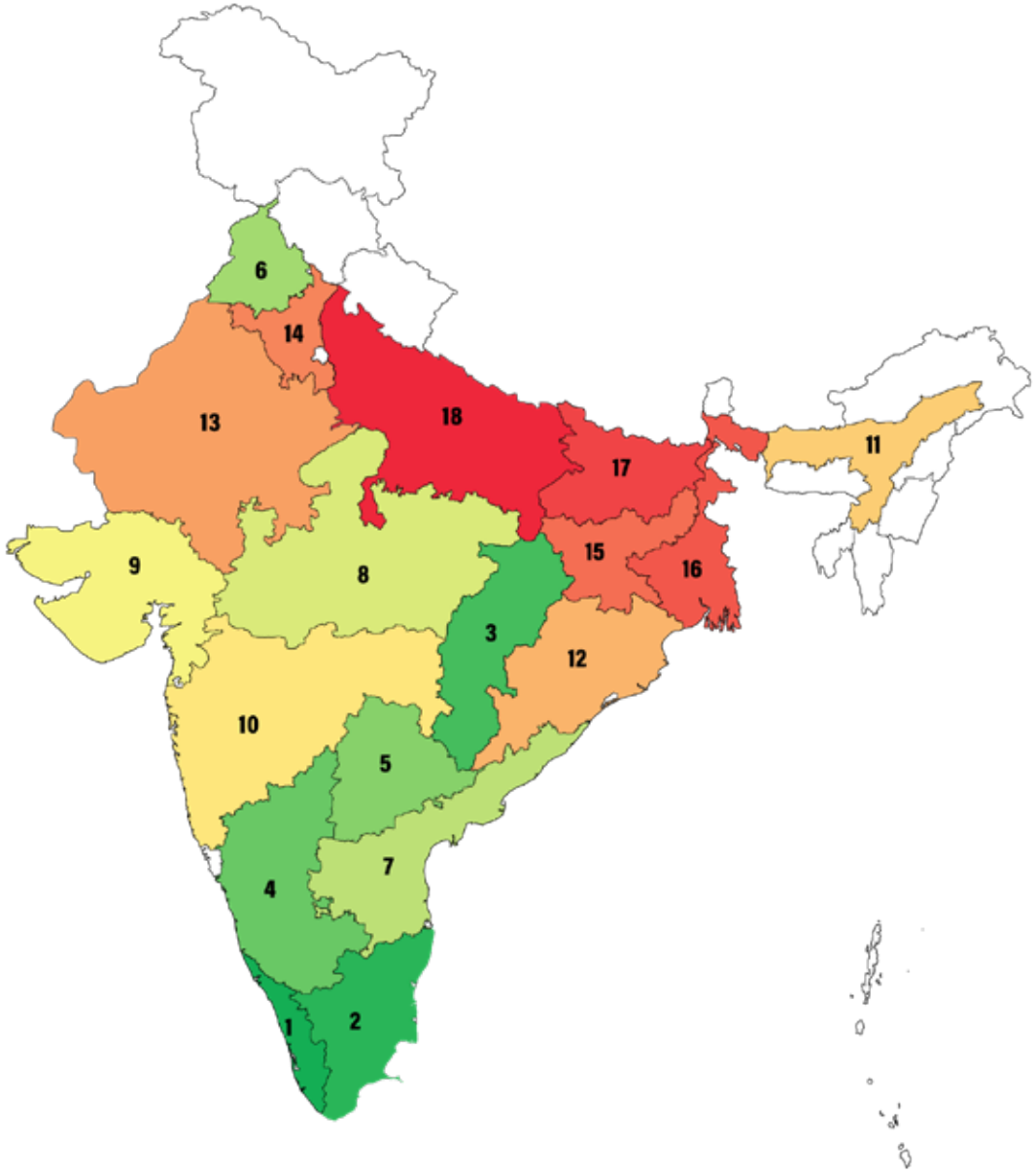
PUBLIC AFFAIRS INDEX
PAI
Governance in the States of India


Sustainability
States
Government Effectiveness
Regulatory Quality
Renewable energy share in the total final energy consumption
Forest area as a proportion of total land area
Proportion of land that is degraded over total land area
Percentage of households using clean cooking fuel
Percentage of Nitrogen fertilisers out of total Nitrogen, Phosphorus and Potassium (NPK)
Solid waste generation and waste processing in the urban areas
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

Union Territories

Theme	SDG	Indicators
Government Effectiveness	7	Renewable energy share in the total final energy consumption
	15	Forest area as a proportion of total land area Proportion of land that is degraded over total land area
	7	Percentage of households using clean cooking fuel
Regulatory Quality	12	Percentage of Nitrogen fertilisers out of total Nitrogen, Phosphorus and Potassium (NPK)
	11	Solid waste generation and waste processing in the urban areas Annual mean levels of fine Particulate Matter (PM10) in cities (population weighted)

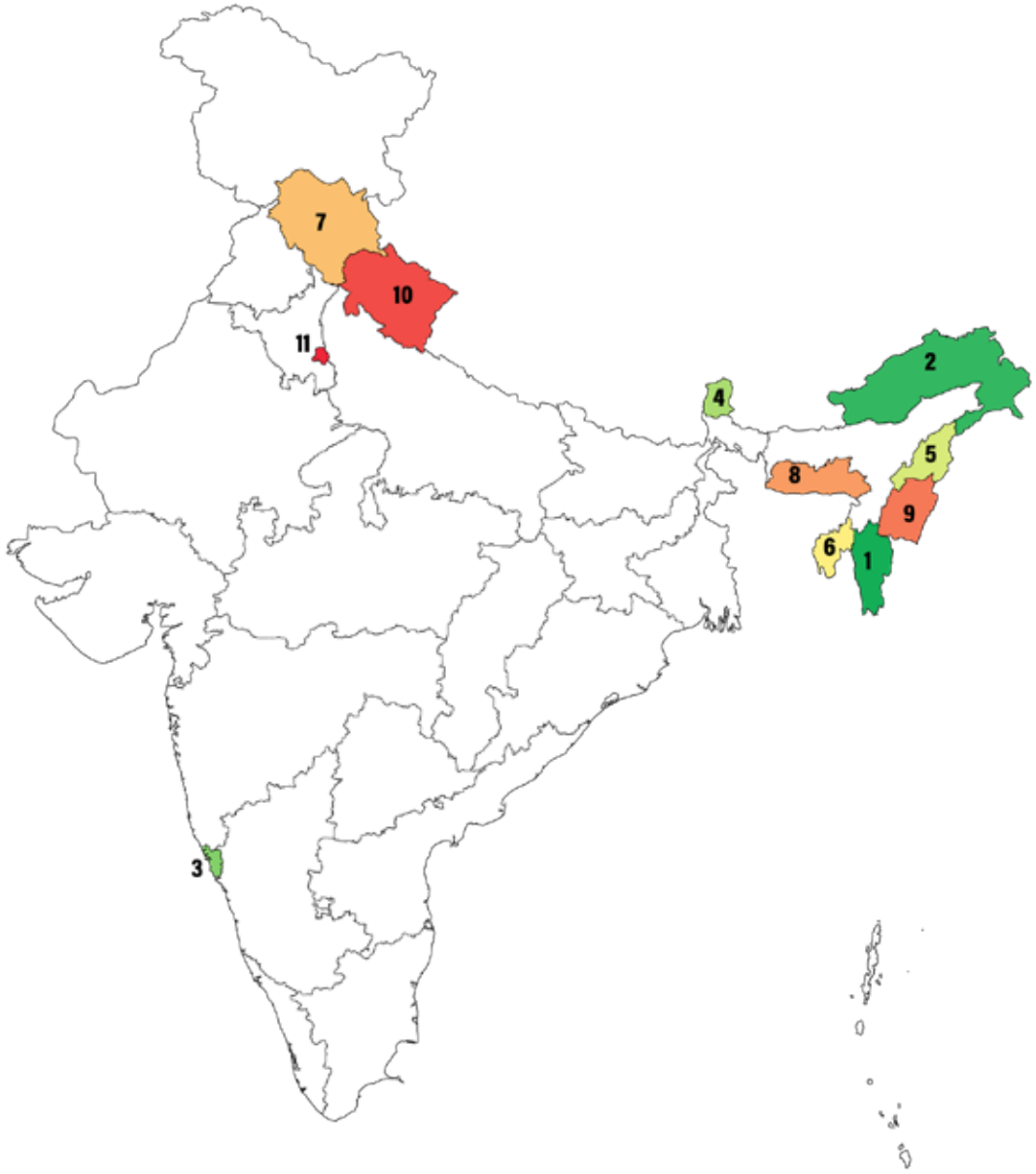
The Pursuit Of Sustainability



Rank	Large States	Index
1	Kerala	2.146
2	Tamil Nadu	1.241
3	Chhattisgarh	0.946
4	Karnataka	0.832
5	Telangana	0.652
6	Punjab	0.614
7	Andhra Pradesh	0.419
8	Madhya Pradesh	0.403
9	Gujarat	0.132
10	Maharashtra	0.128
11	Assam	-0.072
12	Odisha	-0.713
13	Rajasthan	-1.015
14	Haryana	-1.039
15	Jharkhand	-1.122
16	West Bengal	-1.137
17	Bihar	-1.181
18	Uttar Pradesh	-1.234

Highest Index Value — Lowest Index Value

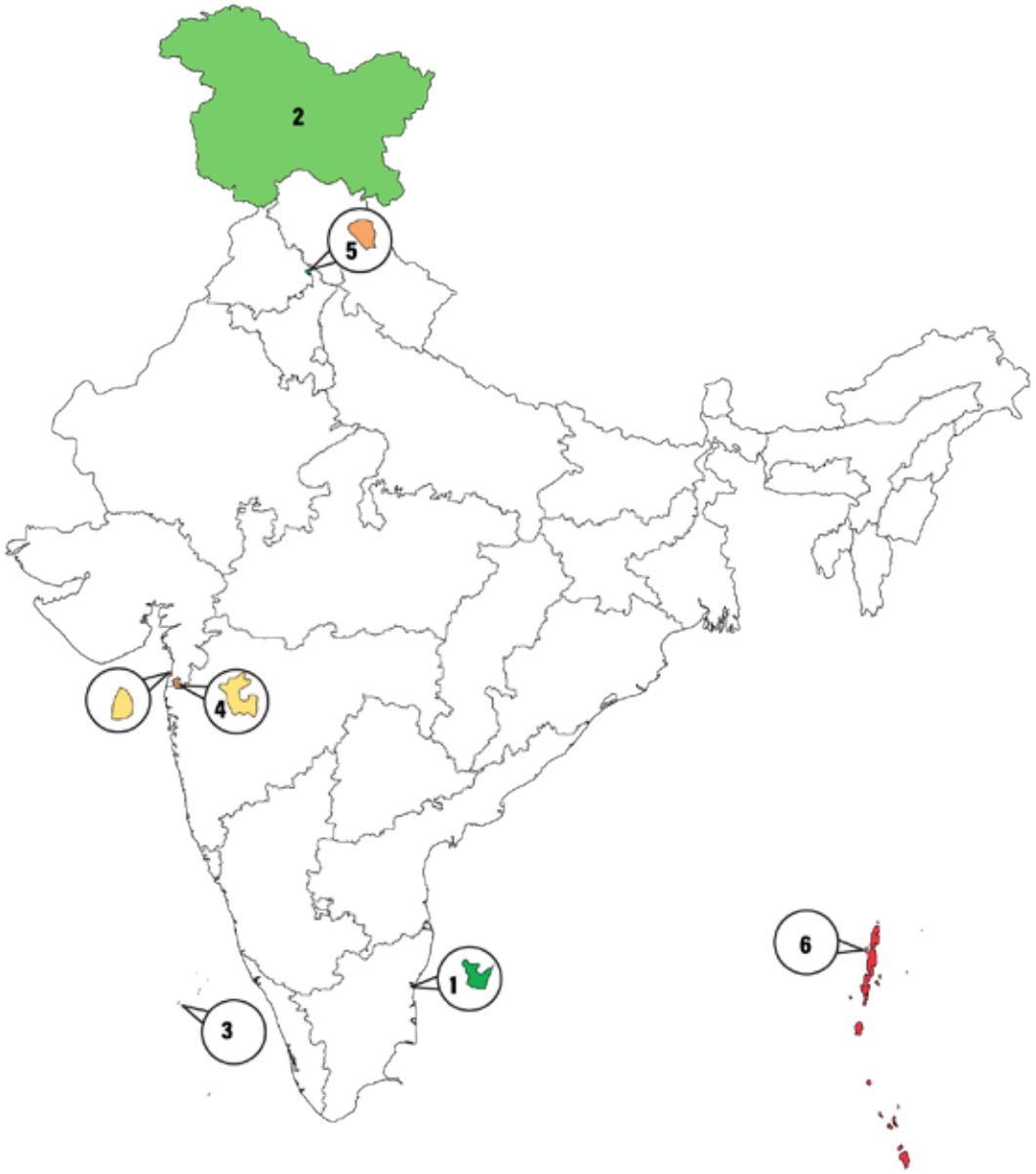
SUSTAINABILITY



Rank	Small States	Index
1	Mizoram	1.525
2	Arunachal Pradesh	1.371
3	Goa	0.836
4	Sikkim	0.369
5	Nagaland	0.242
6	Tripura	-0.095
7	Himachal Pradesh	-0.237
8	Meghalaya	-0.358
9	Manipur	-0.965
10	Uttarakhand	-1.059
11	Delhi	-1.629

Highest Index Value — Lowest Index Value

SUSTAINABILITY



Rank	Union Territory	Index
1	Puduchery	1.693
2	Jammu & Kashmir	0.590
3	Andaman & N. Island	-0.032
4	Dadra & Nagar Haveli	-0.517
5	Chandigarh	-0.776
6	Lakshadweep	-0.957

Highest Index Value — Lowest Index Value

SUSTAINABILITY

" We don't have to engage in grand, heroic actions to participate in change. Small acts, when multiplied by millions of people, can transform the world."

Howard Zinn
American Historian

"If you didn't sign it... that only makes the matter worse. You must have meant some mischief, or else you'd have signed your name like an honest man."

Lewis Carrol
-
Alice's Adventures in Wonderland

Sustainable development is a contested idea best explored through the changing ideas and practices at the intersection of environmentalism and development praxis. PAI 2021 seeks to present a data-based assessment to understand the different actors engaged, from institutions of Public Governance to community-based organisations; the policies and programmes through which sustainable development is being sought; and the outcomes resulting for particular groups and environments in both rural and urban contexts in the States. In doing so, it focuses on the sustainability challenge in the backdrop of the interlinked crises in climate, energy, economy, poverty and inequality. The PAI 2021 indicators chosen across the three Pillars - Growth, Equity and Sustainability - provide a framework to assess, how at the Subnational level those engaged - State and non-state actors - in the development process frame the terms of the discourse. What currently constitutes sustainable development? what it ought to be? and what kinds of instruments - fiscal and regulatory - might best serve the inter-generational imperative of sustainability are questions that the States need to consider from the perspective of Sub-national Governance, are grappling with. A key differentiator separating the States performing well on the Sustainability Pillar are also those where community participation and Civil Society movements influence outcomes of environment policy and its enforcement. PAI 2021 results also show the importance of the role of the application of technology-led solutions as central to a State achieving a balance between Growth and Sustainability.

Poverty and inequality remain key elements in the pursuit of sustainable development, as manifesting in the performance of the States on the Sustainable Development Goals agenda. Intrinsic to the Sustainability Principle is the idea of the universality of development outcomes across time, space and peoples. On the one side are the concerns of the degradation of environment and ecology and the spectre of climate change; and on the other side is the concern with the current State of society marked by unconscionable social and economic inequities. In this backdrop therefore, PAI 2021 examines sustainability as the bridge that connects the present with the future and one that must be crossed within and between generations to eliminate bias and asymmetry; and the degree to which the States - the theatres of development action - have strived to achieve this. The task ahead of the States is to find ways to think global but act local, to solve from the perspective of sustainability, the five great challenges India faces: energy, water, healthcare, education, and agriculture. However, there are particular and distinct issues of sustainable development in the States. For example, some States encompass many '*fragile lands*', such as the major arid and semi-arid zones and forest ecosystems. In these places, agro-climatic factors in combination with poor levels of human development are rendering them particularly susceptible to degradation, including through climate change, making the recovery from natural and economic shocks, such as the COVID-19 pandemic disruption, difficult.

Good Governance, characterised by transparency, accountability and meaningful community participation, plays a critical role in sustainable development. Those in the Government, the Private sector and the Civil Society alike need to reflect on how to frame the terms of the debate in reconciling what appear as conflicting principles: economic growth and therefore the consequent over exploitation of resources; and a sustainable planet that can remain green and support future generations without degradation of the ecology and environment. There are no easy solutions. The pursuit of sustainability only enables sustaining progress made by the States to promote the quality of life. The ***'Declaration of The United Nations Conference on the Human Environment'*** in 1972 was the first conference at an international level that signaled a shift to emphasise the need to devote greater attention to environment. In India, it is mandated by the constitution more generally under Article 21 that says *"no person shall be deprived of his life or personal liberty except according to procedure established by law"*. Article 21 is subject to liberal interpretations where *'Right to environment, free of danger of disease and infection is inherent in it'*, as articulated in the 2014 press release by the Government of India titled ***'Environment Protection under the Constitutional Framework of India'.*** Environment protection was assigned to the authority of the State and with the 42nd Amendment of the Indian Constitution in 1976, the subject was transferred to the Concurrent List, making it the joint responsibility of the States and the Centre.

Over the years, the United Nations has come up with various programmes and framed goals such as Millennium Development Goals, Sustainable Development Goals Agenda 2030, etc. with the prime objective to leave no one behind, not even the environment. As important as does the concept sound philosophically, this is far more of an economic concept. The interlinkages of a safe and green environment with production and productivity are vividly emphasised by the United Nations Environment Programme (UNEP) which uses the term '**Green Economy**'. A Green Economy is essentially categorised as a *'low carbon, resource-efficient and socially inclusive'* economy. Going green is a primary objective that leads to long-term sustainability. For a country like India, where the economy had grown with a negative growth rate, policies boosting industrial growth also ensured employment; whilst the green revolution took care of the food production. With widespread poverty, almost 21 million people living below the poverty line an evident priority becomes providing food on their plates. Therefore, the implementation of achieving the agenda of the green economy gets pushed back in the list of priorities. In India, with a population density of 382 persons per square kilometers (Census 2011), and the continuing weight of population, it becomes a difficult task to convince the masses to "*go green*!", not in an era of ardent capitalism. The Union Budget of India allocated forestry and wildlife sector ₹ 672 crore in 2019-20, which has been reduced to ₹ 586 crore in 2021-22. A significant dip in maintenance of the country's forest reserve and wildlife is a matter of concern with the drastically changing climate that serves as a breeding ground for pathogens with pandemic potential.

The Ministry of Housing and Urban Affairs, Government of India releases the **"Ease of Living Index"** where the Indian cities are ranked on the basis of their livability. Further diving into this concept, there is no surprise that most of the 'A' listed cities like Bengaluru, Ahmedabad, Pune stood amongst the top performers. It is indeed a State's duty to ensure ease of living for its citizens in every aspect. The very concept of developing smart cities was to enable the green economy. The Press Information Bureau of India on June 25, 2021 released details of the funds allocated under the Smart Cities Mission (SCM). The press release quoted '2,665 projects (52% by number) worth ₹45,080 crores (22% by value) have also been fully completed and are operational (as on 23 June, 2021)'. With a high programme success rate, the SCM is turning out to be the most ambitious turnaround in sustainable development infrastructure. The Atal Mission for Rejuvenation & Urban Transformation (AMRUT) is also an addition towards the 'SMART' future that this country is looking forward to. In pure economics of Urbanisation, this phenomenon leads to growth; Urbanisation leads to formation of outgrowths and urban agglomerations which transform the traditional rural architecture into a more productivity driven economic setup.

In PAI 2021, the sustainability concept is further explored by seven indicators under two Themes of Government Effectiveness and Regulatory Quality. Overall Rankings of Large States, Small States and Union Territories on the Sustainability Pillar

The addition of the indicator of percentage utilisation of nitrogenous fertiliser to that of total Nitrogen, Phosphorous and Potassium fertiliser is a new addition in PAI 2021. Nitrogen is an essential component of plant growth, but due to pollution, high number of nitrates can erode nutrients from the soil in the long run; a short-term fix for increasing yield can leave the land barren in the long run, which is why it is considered as a negative indicator in the calculation of the Composite Index.

In the Large States category, the States positioned at 1st and 2nd rank are Kerala and Tamil Nadu, similar to last year. Following Kerala and Tamil Nadu on its pursuit to sustainability is Chhattisgarh improving one place since last year. In line with the last year's sustainability score is the performance of the bottom performers West Bengal at 16th, Bihar at 17th and Uttar Pradesh at 18th rank respectively. Kerala wins the sustainability race by a high margin with a score of 2.146 while Tamil Nadu scores half of that (1.241). West Bengal has however improved its performance by two places, but that isn't enough to leverage it out of the poor performing list. Bihar, however, has slipped three places since last year and Uttar Pradesh has slipped five places since last year with a more negative score of -1.234. The Sustainability Pillar has a correlation coefficient of 0.852, this coefficient indicates that sustainability Pillar catalyses the performance of the States in the overall rankings of PAI 2021. At the theme level, the top performers in Government Effectiveness are Kerala (1st), Tamil Nadu (2nd) and Punjab (3rd) and bottom performing States are Jharkhand (16th), Rajasthan (17th) and Bihar (18th). On Regulatory Quality, Chhattisgarh stands 1st, Kerala 2nd and Telangana 3rd at the top, while the States of Jharkhand, Uttar Pradesh and West Bengal rank 16th, 17th and 18th respectively. Both these themes have a correlation coefficient of 0.877, placing equal importance to the performance in terms of improving rankings in the Pillar.

The themes of Government Effectiveness and Regulatory Quality are expressed through two SDGs each, SDG 7 and 15 which explains Government Effectiveness and SDG 11 and 12 explain Regulatory Quality. Kerala is the overall top performer in the Governance Index and also a top performer in the Sustainability Pillar.

Apart from SDG 11 which has a very high positive correlation coefficient of 0.874, the other SDGs have a moderately positive correlation coefficient ranging from 0.4 to 0.5 with the Sustainability Pillar. This means that the indicators of SDG 11 that are solid waste management and annual mean levels of particulate matter (PM10) are decisive factors for the rankings in SDG 11, bridging to the ranking at the theme and Pillar levels.

It ranks 1st in SDG 15 (Life on Land) and 12 (Responsible Consumption and Production). Kerala has 14.98 Kg/Ha consumption of Nitrogenous fertiliser remarkably low compared to all the Large States (the highest is in Telangana, 164 Kg/Ha; it is also seen in the growth chapter that Telangana has the highest government expenditure on Agriculture and Allied sector compared to the other States). Kerala has been highly dependent on neighbouring States to meet the demands of consumption in the State. The most profitable farming practice in Kerala is Coffee, the State contributes 21% of the annual production of coffee in India second to Karnataka which contributes 71%[1]. According to the NFHS-4 data, compared to a national average of 46%, Kerala has 54% of total households using clean cooking fuel; though this number is not very good there is always room for improvement.

Kerala has 54% forest cover compared to national average of 36%, as discussed earlier in the chapter, the green economy is a very important aspect, going forward, towards ensuring inclusive growth, Kerala seems to be performing well. The green cover of the State also helps it to attain 1st position in terms of addressing air pollution (PM10 levels). However, the State still ranks 5th in terms of solid waste management with 71% waste processing (Chhattisgarh tops in solid waste management with 89% of waste processing to total waste generated).

Tamil Nadu, on the other hand, tops SDG 7 (Affordable and Clean Energy). The State has 73% of the households using clean cooking fuel (NFHS-4). The State struggled to make available clean cooking fuel for the interior parts as mentioned in a study conducted by Manjula, M. and Gopi, G. in 2017, using the National Sample Survey Statistics of 2011[2]. The study also pointed out that there needed to be policy interventions to ensure that every household in Tamil Nadu has access to clean energy.

Tamil Nadu ensured to implement the policy on Biofuels issued by the Ministry of Petroleum and Natural Gas in 2018, even before that the State issued its own policy statement in 2012-13 to ensure access to clean energy.[3]

Following Tamil Nadu is Chhattisgarh which tops SDG 11 (Sustainable Cities and Communities). As mentioned earlier, Chhattisgarh performed well in solid waste management, it also had PM10 value of 67. The State also ranks 2nd in SDG 15, with a forest cover of 43%. This sustained performance places Chhattisgarh at the top on Regulatory Quality.

Uttar Pradesh, Bihar and West Bengal are at the bottom of this Pillar in both the themes. To start the conversation with West Bengal, the depleting forest cover, poor waste management and inadequate access to clean cooking fuel has placed the State towards the bottom.

In West Bengal, only 27.8% have access to clean cooking fuel (NFHS-4), the forest area is only 19.04% and 1.86% of the land is wasteland out of the total land area. In the State of West Bengal only 9.08% of the total waste generated is processed and treated as compared to the national average of 55%.

PM10 level of 113 also does not help the State in it's ranking in the Sustainability Pillar.

Moving on to Bihar, the placement of the State at the bottom is least surprising as the capital of the State Patna came last in the Swachh Survekshan 2020. The State has only 17.8% of the population having access to clean cooking fuel (NFHS-4). Heavily reliant on Agriculture sector, the State uses 138.9 Kg/Ha of Nitrogenous fertilisers for improving the yield of crops, this is also reflected in the percentage of wasteland to total land areas i.e., 8.96%.

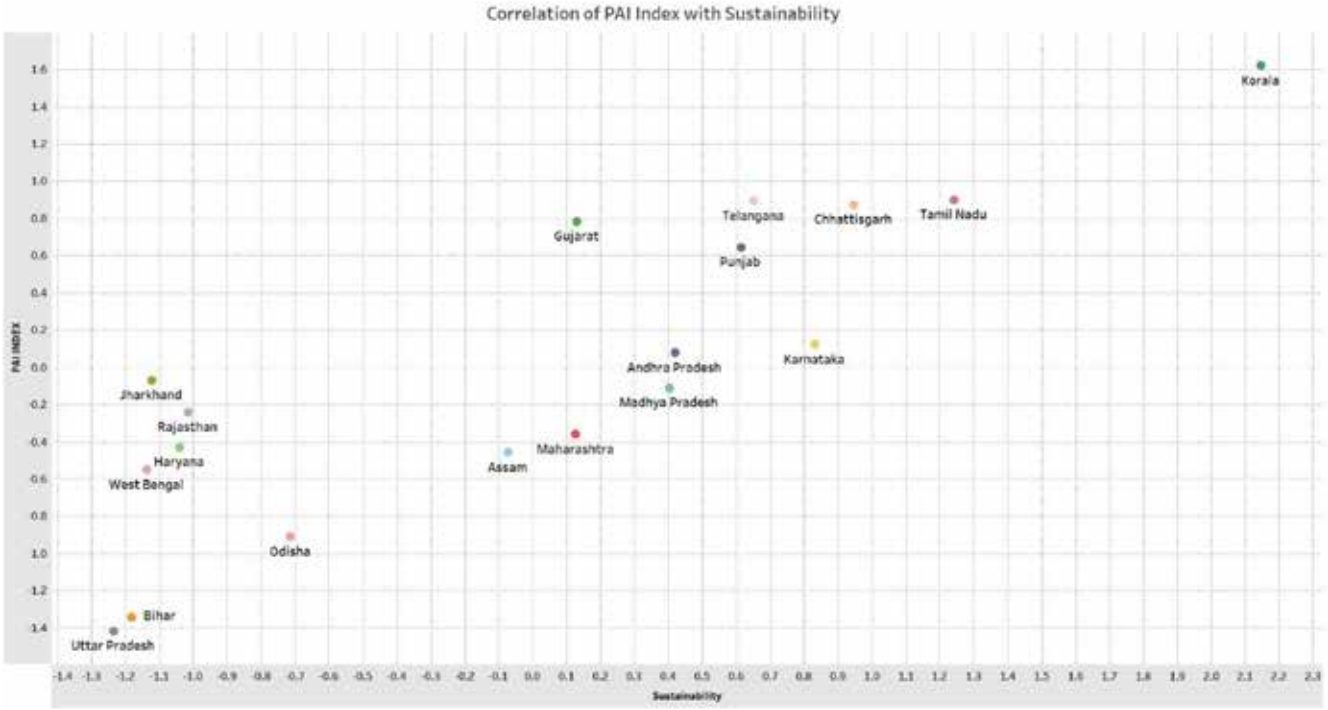
Developing on the human development parameters of health and education, Bihar has neglected the aspect of clean and green State. Ranking last in the Sustainability Pillar is Uttar Pradesh, performing second last in SDG 11, sufficient to drag down its performance significantly as mentioned earlier in the chapter, SDG 11 has the highest positive correlation coefficient with a potential of driving a State's performance significantly. With Annual PM10 levels of 198, Uttar Pradesh's efforts in countering air pollution are much worrisome.

58% of the total waste generated in the State is processed and treated, for a State with population of 20.12 Crores (Census 2011) the waste untreated is 6,600 metric tons which is two times more than the national average of 3,023 metric tons.

Other than the top and bottom performers, special mention is to be made for Madhya Pradesh which has come 3rd in SDG 11, with more than three cities in the State including Indore and Bhopal topping the Ease of Living Index 2020. Punjab has improved it's ranking from 10th last year to 6th this year, improving on solid waste management, addressing air pollution and improved access to clean energy.

Jharkhand is at the bottom in SDG 7, 11 and 12. 14.76% of the total land area is wasteland in Jharkhand and this number is constant since 2008-09 implying that not much has been done by the State to address the issue of waste land and to improve forest cover.

The figure ahead represents the correlation between the PAI Index with the Sustainability Pillar for Large States.



The distance of Kerala from all the other States highlights the fact that in terms of relative ranking the States would have to work at a much faster rate to improve their sustainability quotient to match Kerala.

In the Small States category, the States placed at the top are Mizoram, Arunachal Pradesh and Goa ranking 1st, 2nd and 3rd respectively and the States placed at the bottom are Manipur, Uttarakhand and Delhi ranking 9th, 10th and 11th respectively. Mizoram has improved three places while Arunachal Pradesh has improved remarkably by seven places as compared to their performance in PAI 2020. Goa has slipped two places compared to last year. Manipur has fallen by one place, Uttarakhand improved by one, while Delhi drastically fell from 5th to 11th this year. The correlation coefficient of the Sustainability Pillar is 0.65 which is a moderate positive correlation ship. In the theme-wise ranking, under Government Effectiveness, Arunachal Pradesh ranks 1st, followed by Mizoram and Goa whereas Manipur ranks 9th, Himachal Pradesh 10th and Sikkim 11th. In terms of Regulatory Quality Sikkim ranks 1st, Goa 2nd and Himachal Pradesh 3rd, whereas placed at the bottom are Manipur, Uttarakhand and Delhi rank 9th, 10th and 11th respectively. Himachal Pradesh comes overall 7th in the Sustainability Pillar dragged down by its performance in the theme of Government Effectiveness.

Both these themes have a correlation coefficient of 0.55 which only explains moderate association of the themes to the Pillar. Similarly, the respective SDGs also do not have strong correlations with the Pillar, majority of their coefficients lying between the range of 0.36 to 0.46 respectively. Therefore, it is safe to conclude that the performance of the Small States unlike Large States is not driven by a single SDG.

Mizoram tops SDG 15, followed by Tripura and Arunachal Pradesh. 84.51% of the total area in Mizoram is forest land with 20.4% land as wasteland in 2015-16 as compared to approx. 24% in 2008-09. The State however is amongst the poor performers in SDG 12 with 17.32 Kg/Ha consumption of nitrogenous fertilisers.

Arunachal Pradesh ranks second in overall ranking but, tops Government Effectiveness. It is an outstanding performer in SDG 7 and 12, whereas it stands second last in terms of SDG 11. It is surprising to note that there is 0% waste processed as compared to the 181 metric tons waste generated in the State and increased PM10 levels of 84.

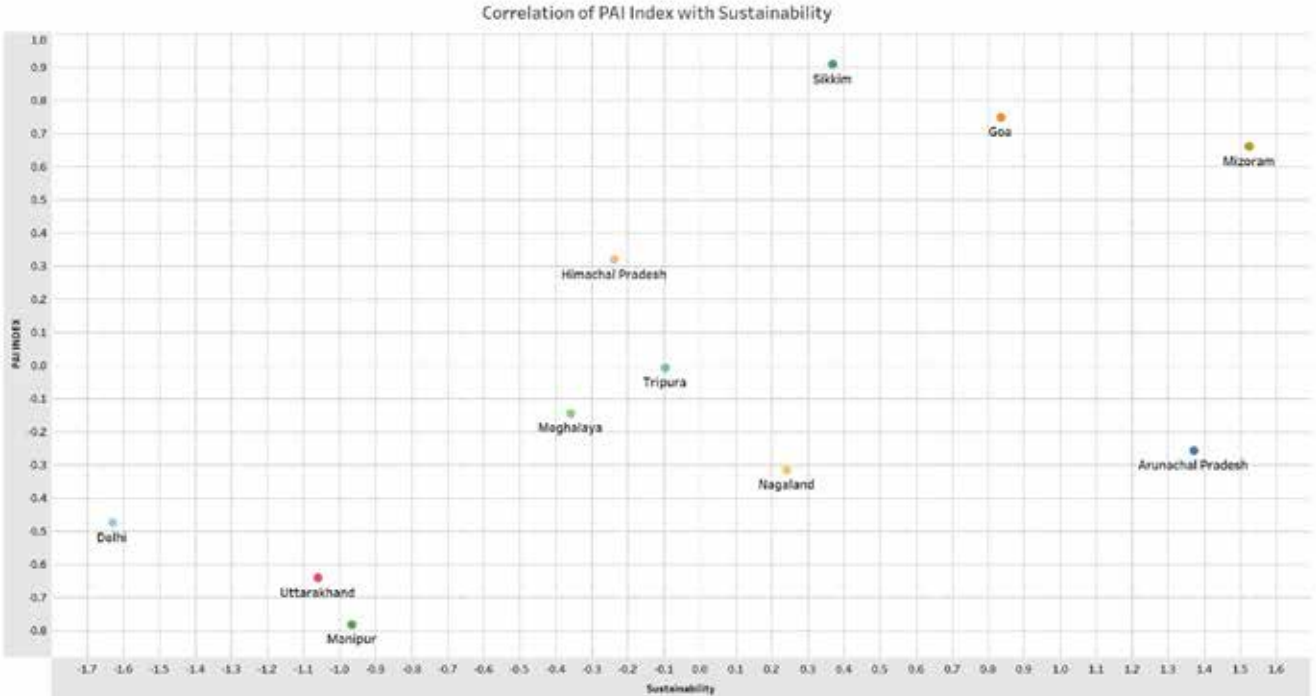
Delhi on the other hand empirically famous for being the most severely polluted city in terms of air pollution has PM 10 levels of 199, two times more than the national average. Being one of the States with a very high population density of 11,297 people per square kilometer, being able to only process 50% of the waste generated raises risks to health and well-being.

Special mention is due to the State of Meghalaya which dipped six places since last year. Meghalaya is a poor performer in SDG 7 and 11. The State only has 24% of the households having access to clean cooking fuel (NFHS-4), and a very poor performance in solid waste management by being able to only process 3.8% of the total waste generated in the State.

The figure below represents the correlation of PAI Index with the Sustainability Pillar for Small States.

Following Arunachal Pradesh is Goa who slipped three places as mentioned earlier. To understand the drop, it is interesting to note that, 45.7% of nitrogenous fertilisers are used in Goa which is very close to the national average of 57%. The State has also seen depletion in its forest cover as a result of which are the increased PM10 levels of 69.

Manipur on the other hand same as last year performs poorly in SDG 7 and 15. 42.1% households in the State have access to clean cooking fuel (NFHS-4). The State used 68.4% nitrogenous fertilisers for improving the yield of farm produce. Coming down to Uttarakhand, it performs towards the tail end of the ranking in both SDG 11 and 12. The State has high air pollution quotient with PM 10 levels of 143, 46% of the waste processed over generated lower than the national average.



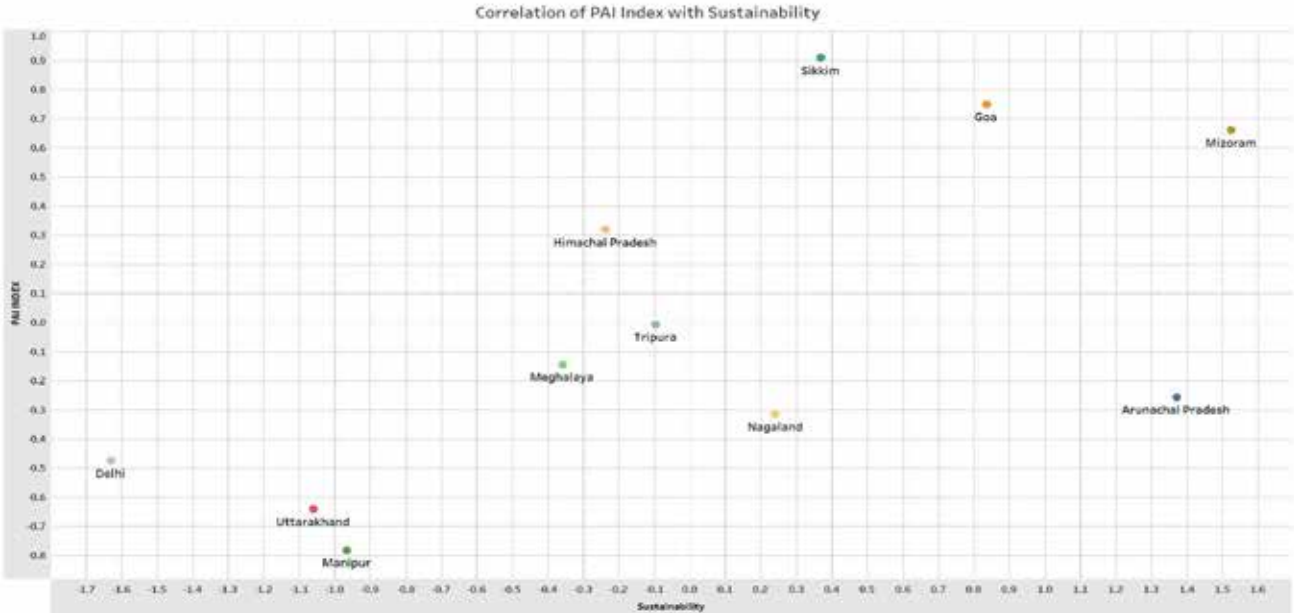
The scatter of the correlation graph shows that the correlation is a weak one, with Mizoram being positively influencing in sustainability and Manipur being the outlier is in the bottom most arena. The correlation coefficients of SDG 7, 15, 11 and 12 are 0.39, 0.37, 0.40 and 0.46 respectively.

This year's Sustainability Pillar's topper in the Union Territory (UT) category is Puducherry acquiring 1st position, followed by a surprising addition of Jammu and Kashmir at 2nd and Andaman and Nicobar Islands at 3rd position who slipped two ranks after topping this Pillar last year. The bottom performer in this Pillar is Lakshadweep. The themes of Government Effectiveness and Regulatory Quality have positive correlations of 0.564 and 0.612 respectively, this indicates that the theme of Regulatory Quality drives the performance for UTs in this Pillar. However, same as the Small States the correlation coefficients of SDGs are not very significant rather are weakly positive ranging from 0.3 to 0.5. In the theme ranking of Government Effectiveness, Dadra Nagar Haveli and Daman and Diu tops, while this UT also ranks 2nd in Regulatory Quality. Chandigarh ranks towards the bottom in this Pillar performing second last in both the themes.

Puducherry's ranking (similar to Kerala in Large State category) 1st comes with a score of 1.692, while the State that follows attains a score of 0.590. Puducherry's relative ranking is much higher than the other Union Territories. The UT tops SDG 12 and 15, but when it comes to SDG 11 performs in the bottom. Puducherry has only processed 13% of the total waste generated. Jammu and Kashmir on the other hand tops the theme of Regulatory Quality, by improving forest cover, but high PM 10 levels of 133.

To now discuss about the surprising fall of Chandigarh, the UT is heavily urbanised, therefore there is not much scope for the UT to actually put to use fertilisers for agricultural practices. However, Chandigarh does have high PM 10 levels than last year of 97 much higher than the national average of 81. The low forest cover places this UT in the poor performing category but it is also important to note that more than 95% of the waste is processed in the UT and 93% of the total households have access to clean cooking fuel. The ranking here for is pulled down by SDG 7 for the UT.

The figure below represents the correlation of PAI Index with the Sustainability Pillar of the UTs.



Graphically, UTs display a scattered trend, from the bottom left to the top right. From PAI 2020, the UTs have spread out increasingly. The UTs are led by Puducherry. It is interesting to note the distance between Puducherry and other UTs is very high prompting Puducherry as an outlier from the lot.

Examining the SDG correlations for a more nuanced look at the UTs; the highest coefficient is with SDG 7 of Clean and Affordable Energy with a score of 0.505. The lower coefficient is with SDG 15 of Life on Land with a coefficient of 0.34. UTs have not been committed to the maintenance of the land and forest

cover that their geographies encompass. However, with the score being 0.604, there has not been drastic land degradation overall. The correlation coefficients of SDG 11 and 12 are 0.417 and 0.409 respectively.

Overall, in unison one can conclude that the Sustainability Pillar does impact significantly in rankings of the States, especially Large States where the correlation coefficients are evidently very highly positive. For States ad UTs to attain holistic development, they need to ensure ease of living through keeping in check the pollution levels and also do not ignore the factor of cleanliness through solid waste management. The States could only achieve the targets of human development by promoting sustainability.

[1] *"One big farm: A detailed look at Kerala's agriculture scenario".* https://www.newindianexpress.com/states/kerala/2019/sep/30/one-big-farm-a-detailed-look-at-keralas-agriculture-scenario-2041074.html

[2] *Manjula, M., Gopi, G. Universal access to clean cooking energy and the need for an inclusive policy: evidence from analysis of cooking fuel use in Odisha and Tamil Nadu. Decision 44, 193–207 (2017).* https://doi.org/10.1007/s40622-017-0159-3

[3] *Energy Department, Policy Note-2012-13, Demand No-14, Govt. of TN* https://cms.tn.gov.in/sites/default/files/documents/energy_7.pdf

Pillars	Indicators
Equity	Prevalence of malnutrition amongst children below 6 years
	Incidence of crimes against SC and ST
	Crimes against children
	Dowry deaths per 10 lakh population
	Rapes per 10 lakh population
Growth	Immunisation achievement
	Droup out rate at Secondary level
	Unemployment Rate
	NDP per capita
	Net Enrolment Rate
Sustainabilty	Percentage of households using clean cooking fuel
	Solid waste generation and waste processing in urban areas

"Development consists of the removal of various types of unfreedoms that leave people with little choice and little opportunity of exercising their reasoned agency. The removal of substantial unfreedoms, it is argued here, is constitutive of development."

Amartya Sen
Development as Freedom

"When individuals blunder, it is unfortunate and their families go down. When rulers fail, it is a national tragedy"

Gurcharan Das
India Unbound

The Development strategies adopted by Indian States have been diverse and the formulae has varied - some focusing on capital-led growth, others on natural resource-based mobilisation of finances and others preferring labour-led development with an emphasis on agriculture and social welfare; many of course combining the opportunities. PAI 2021, adopts an assessment approach that places social transformation as its central category, in order to facilitate understanding of the complexity, inter-connectedness, context and multi-level mediations of development processes, in the context of social change. The current state of development in India does show considerable diversity - demographic and spatial - but it is diversity within increasingly asymmetric relationships of power and inequality. Public Affairs strategy - whether of state, non-state actors or the market players - thus needs to address the hard end of the problem of enhancing productivity inclusiveness. To view the Development process as a linear function would be to miss the wood for the trees. Development is organic, multidimensional and non-linear. The development trajectory encounters several troughs and peaks with changes in various economic, cultural, social and political dynamics in the country. The very idea of designing the 2030 Agenda of Sustainable Development Goals was to provide a framework to innovate, track and improve the current developmental trajectories of countries.

The primary objective of PAI 2021 is to evaluate the quality of governance performance at the sub-national level, establishing the interlinkages between Equity, Growth and Sustainability. But this assessment can often be confounded by the weight of legacy data, without bringing forth the good work done or the rapid pace at which traditionally low performing States might have grown. The manifestation of each of the Pillars is different, therefore simply judging a State as top performer or bottom performer would not give a complete picture unless the States are assessed on recent performance and the rate of growth on '*Key Development Indicators* (KDI)', in the past year. The concept of measuring the year-on-year performance will also serve to motivate the States to introspect how far they have come, how far they still need to go to come abreast of the better performing States; and in which specific sectors. The other objective that the Delta Analysis serves is to indicate the rate at which convergence is occurring between the developed geographies and the less developed geographies, providing some insights into the imperative of addressing regional imbalances.

It is with this in mind that PAI 2021, in its sixth annual edition provides the delta analysis to understand whether and to what degree the States are making progress in terms of Equity, Growth and Sustainability and whether this progress is measurable and impactful in the year-on-year performance assessment. The Delta Analysis method that PAI 2021 adopts is to compare measurements for objects - states - on a defined time interval (Object Delta) and for single object/s on two equal time

intervals (Time Delta). Such comparison allows presentation of the difference between data series (delta) in each of the two possible scenarios. Basis this, the performance of the States has been analysed. The Object Delta analysis that follows presents the differences between the measurements of two different objects over the same time period.

In PAI 2021, 12 indicators across the three pillars of Equity (five indicators), Growth (five indicators) and Sustainability (two indicators). These KDIs are the outcome indicators crucial to assess Human Development. The Performance in the Delta Analysis is then compared to the Overall PAI 2021 Index.

The Table below provides an overview of the indicators used to carve out the Delta Analysis model.

A caveat to the selection of these indicators would be in order: for indicators relating to education, the Performance Grading Index (PGI) was used in the overall governance model, due to unavailability of time series data for PGI, the outcome indicators of Drop-out rate and Net Enrolment Rate were used. The analysis was only performed on Large States and Small States subject to data availability.

Pillars	Indicators
Equity	Prevalence of malnutrition amongst children below 6 years
	Incidence of crimes against SC and ST
	Crimes against children
	Dowry deaths per 10 lakh population
	Rapes per 10 lakh population
Growth	Immunisation achievement
	Drop-out rate at Secondary level
	Unemployment Rate
	NDP per capita
	Net Enrolment Rate
Sustainability	Percentage of households using clean cooking fuel
	Solid waste generation and waste processing in urban areas

Large State	Delta Index	Rank	Small State	Delta Index	Rank
Chhattisgarh	0.925	1	Nagaland	0.999	1
Odisha	0.913	2	Mizoram	0.715	2
Telangana	0.895	3	Tripura	0.429	3
Kerala	0.799	4	Delhi	0.375	4
Bihar	0.485	5	Manipur	0.163	5
Tamil Nadu	0.353	6	Sikkim	0.150	6
West Bengal	0.265	7	Goa	-0.391	7
Karnataka	0.120	8	Himachal Pradesh	-0.539	8
Haryana	0.045	9	Uttarakhand	-0.569	9
Jharkhand	-0.027	10	Arunachal Pradesh	-0.575	10
Rajasthan	-0.270	11	Meghalaya	-0.757	11
Punjab	-0.290	12			
Madhya Pradesh	-0.479	13			
Uttar Pradesh	-0.492	14			
Andhra Pradesh	-0.511	15			
Maharashtra	-0.820	16			
Assam	-0.938	17			
Gujarat	-0.973	18			

The Table above shows the performance of Large States and Small States in the overall rankings of the Delta Index.

In the Large States category Chhattisgarh ranks 1st, followed by Odisha and Telangana, whereas, towards the bottom are Maharashtra at 16th, Assam at 17th and Gujarat at 18th.

It is quite a contrast in their performance as compared to the overall PAI 2021 Index. Gujarat is one state that has seen startling performance ranking 5th in the PAI 2021 Index outperforming traditionally good performing states like Andhra Pradesh and Karnataka, but ranks last in terms of Delta. Similarly, Odisha, is amongst the poor performers in the PAI 2021 Index, but ranks 2nd in Delta rankings. States like Madhya Pradesh, and Uttar Pradesh find themselves at the tail end of the ranking.

In the Small States category, Nagaland tops, followed by Mizoram and Tripura. Towards the tail end of the overall Delta ranking is Uttarakhand (9th), Arunachal Pradesh (10th) and Meghalaya (11th). Nagaland despite being a poor performer in the PAI 2021 Index has come out to be the top performer in Delta, similarly, Mizoram's performance in Delta is also reflected in it's ranking in the PAI 2021 Index.

Delhi and Manipur which rank towards the bottom of the PAI 2021 Index can be seen catching up in terms of Delta. However, Meghalaya's poor performance in Delta is also reflecting in its performance in the overall PAI 2021 Index ranking, where it slipped from 2nd rank to 6th this year. Goa, who is placed as one of the top performers in PAI 2021 Index has a negative score in Delta.

Large State	Delta - Equity	Rank	Small State	Delta- Equity	Rank
Chhattisgarh	1.870	1	Delhi	1.362	1
Odisha	1.614	2	Manipur	1.160	2
Telangana	1.314	3	Nagaland	1.143	3
Bihar	0.823	4	Tripura	0.565	4
Haryana	0.592	5	Meghalaya	0.560	5
Kerala	0.476	6	Arunachal Pradesh	-0.143	6
Tamil Nadu	0.195	7	Sikkim	-0.483	7
Rajasthan	0.168	8	Mizoram	-0.758	8
West Bengal	0.040	9	Uttarakhand	-0.825	9
Andhra Pradesh	-0.141	10	Himachal Pradesh	-1.194	10
Punjab	-0.450	11	Goa	-1.387	11
Madhya Pradesh	-0.509	12			
Karnataka	-0.556	13			
Gujarat	-0.608	14			
Maharashtra	-0.702	15			
Jharkhand	-0.791	16			
Uttar Pradesh	-1.583	17			
Assam	-1.751	18			

The Table above shows the performance of Large States and Small States in the Equity rankings of Delta. In terms of equity, the indicators selected include, prevalence of malnutrition amongst children, rapes and dowry deaths, rate of crimes against Scheduled Caste and Scheduled Tribes and crimes against children because these identified indicators possess time series data.

In the Large States category, Chhattisgarh has emerged as the state with the best delta rate on Equity indicators, this is also reflected in the performance of Chhattisgarh in the Equity Pillar where it ranks 4th. Following Chhattisgarh is Odisha ranking 2nd in Delta-Equity ranking, but ranks 17th in the Equity Pillar of PAI 2021. Telangana ranks 3rd in Delta-Equity ranking even though it is not a top performer in this Pillar in the overall PAI 2021 Index. Jharkhand (16th), Uttar Pradesh (17th) and Assam (18th) rank at the bottom.

While Uttar Pradesh's performance is in line with the PAI 2021 Index, Jharkhand which has shown a comparatively better performance has ranked 3rd from the bottom in terms of Delta.

Chhattisgarh has a negative year-on-year growth rate (CAGR-Compunded Annual Growth Rate) of -0.12, 0.04, -0.04 and -0.10 for the indicators of Crimes against STs and SCs, Crimes against Children, Dowry death and rapes per 10 lakh population. Similarly, Odisha has a negative CAGR of -0.014, -0.05 and -0.26 in prevalence of malnutrition amongst children below six years, Dowry deaths and Rapes per 10 lakh population respectively.

While Telangana's performance is discussed in detail in all the preceding chapters, it is worthwhile to mention that the State has -0.17 and -0.14 CAGR in dowry deaths and rapes per 10 lakh population. On the contrary, the States that have performed poorly have a positive year-on-year growth in the negative indicators of malnutrition, crimes against children and women. The highest of all being Assam's CAGR in crimes against children, 0.298 followed by Bihar with 0.26.

In terms of the Small States, Delhi, Manipur and Nagaland are the top three performers. Delhi and Manipur turning out to be top performers in Delta ranking points to the fact that the States have been taking conscious steps in addressing the Equity related problem in the state. Mizoram this year has turned out to be a significantly improved state.

Nagaland has not seen reporting of cases under crimes against SC and STs for the past six years (2014-2019) and has a negative CAGR of -1 under the indicator of Dowry deaths.

Mizoram has shown a consistently good performance in all the indicators used in the Delta

In the case of Delhi, the national capital has seen improved performance in terms of reduction in malnutrition, a decrease in crimes against children and reduction in dowry deaths. However, there continues to be an increase in the cases of rapes in the capital with a CAGR of 0.22.

Arunachal Pradesh shows poor performance in both Equity Pillar in the PAI 2021 Index, as well as Delta-Equity ranking.

The Table above shows, the performance of the States under the Delta-Growth ranking.

In terms of the Growth Pillar, the indicators that have been considered for the Delta Analysis include the states' immunisation achievement, drop-out rate at Secondary level, unemployment rate and NDP per capita.

Large State	Delta-Growth	Rank	Small State	Delta-Growth	Rank
Telangana	2.931	1	Nagaland	1.869	1
Kerala	0.802	2	Sikkim	1.014	2
West Bengal	0.650	3	Tripura	0.703	3
Assam	0.624	4	Mizoram	0.393	4
Andhra Pradesh	0.519	5	Goa	0.284	5
Chhattisgarh	0.393	6	Arunachal Pradesh	-0.106	6
Karnataka	0.261	7	Delhi	-0.106	7
Odisha	0.242	8	Manipur	-0.642	8
Jharkhand	0.223	9	Himachal Pradesh	-0.832	9
Bihar	0.150	10	Uttarakhand	-0.899	10
Punjab	-0.483	11	Meghalaya	-1.678	11
Uttar Pradesh	-0.604	12			
Rajasthan	-0.746	13			
Haryana	-0.809	14			
Tamil Nadu	-0.811	15			
Madhya Pradesh	-0.929	16			
Maharashtra	-0.995	17			
Gujarat	-1.418	18			

In the case of the large states, Telangana tops both on the rankings in the Growth Pillar of the PAI 2021 Index as well as Delta Analysis. Following Telangana are Kerala and West Bengal. Towards the bottom are Madhya Pradesh (16th), Maharashtra (17th) and Gujarat (18th). In terms of unemployment rate, there is a trend consistent across the States showing an unmistakable rise in the unemployment rate over the period of nine years (2011-2019), the only differentiator being the rate at which it has increased. Following this narrative, West Bengal has the lowest CAGR of 0.03, while traditionally top performing states like Maharashtra and Tamil Nadu have a CAGR of 0.2 and 0.1 respectively.

On the other hand, West Bengal does have least growth in terms of NDP per capita, as is also the case with Bihar. However, Bihar falters in terms of drop-out rates which is a cause of concern for the state, while Odisha has seen significant improvement in terms of drop-out rates.

In the light of the pandemic, the year-long disruption has impacted the performance of states like Maharashtra and Gujarat, the traditionally good performers. It is clear that a part of their growth was lost to the pandemic in terms of social, economic and infrastructural growth.

In the Small States category, Nagaland tops, followed by Sikkim (also reflected in the PAI 2021 ranking).

Himachal Pradesh, Uttarakhand and Meghalaya rank at the bottom with a negative score. Meghalaya, notwithstanding a decent growth in immunisation achievement and low drop-outs has the highest unemployment rate increase over the past nine years (from 7% in 2011-12 to 47% in 2018-19), placing it straight at the bottom of the Delta-Growth ranking (CAGR 0.341) followed by Himachal Pradesh (CAGR 0.281).

On the other hand, Nagaland, given its geographic location and demographics has only seen a 4% increase in the unemployment rate. This can be attributed to the fact that the North-Eastern States are increasingly reliant on tourism and cultivation of cash crops like tea and coffee, having no industrial setup is a setback that the States face.

In the Large States category, Tamil Nadu can be seen at the top, followed by Kerala and Odisha. Towards the tail end are Telangana, Assam and Andhra Pradesh. The rankings of the Delta are also reflecting in the PAI 2021 rankings

Large State	Delta-Sustainability	Rank	Small State	Delta-Sustainability	Rank
Tamil Nadu	1.676	1	Mizoram	2.509	1
Kerala	1.120	2	Himachal Pradesh	0.410	2
Odisha	0.882	3	Tripura	0.019	3
Uttar Pradesh	0.711	4	Uttarakhand	0.017	4
Karnataka	0.656	5	Nagaland	-0.015	5
Chhattisgarh	0.511	6	Manipur	-0.030	6
Jharkhand	0.488	7	Goa	-0.070	7
Bihar	0.482	8	Sikkim	-0.080	8
Haryana	0.351	9	Delhi	-0.131	9
West Bengal	0.105	10	Meghalaya	-1.153	10
Punjab	0.062	11	Arunachal Pradesh	-1.475	11
Madhya Pradesh	0.000	12			
Rajasthan	-0.232	13			
Maharashtra	-0.762	14			
Gujarat	-0.892	15			
Telangana	-1.558	16			
Assam	-1.685	17			
Andhra Pradesh	-1.912	18			

The Table above shows the performance of the States in the Delta- Sustainability ranking.

Interestingly, Uttar Pradesh has ranked 4th in this Pillar, with 50% increase in coverage of population who have access to clean cooking fuel to ensuring proper solid waste management in the state. While there are states that have performed well or poorly, it is important to applaud the performance of Odisha, from struggling in all the three pillars, the State has actually taken initiatives to address the root causes of poor development.

In the Small States category, Mizoram bags the 1st rank with a very high margin, depicting the fact that it's upward performance in the overall PAI 2021 Index is justified. Himachal Pradesh coming 2nd in the Delta-Sustainability ranking suggests that the State has been consciously working towards improving indicators of Sustainability, but it's poor performance in the other two Pillars raises a concern for the State.

Another surprising addition is Tripura, which has never secured a top ranking in the PAI 2021 Index, but is seeing visible growth and improvement over the years

Delhi, Meghalaya and Arunachal Pradesh as discussed in the '*Pursuit of Sustainability*' chapter of PAI 2021, need to focus on waste management and counter pollution and the struggle to achieve sustainability is going to be a long journey.

To conclude, it is evident that some States have performed in line with their rankings with the PAI 2021 Index and its Pillars, while other have turned out as surprise elements. Looking at the ranking this year relative to last year, highlights the fact that the pandemic has undone years of progress for several of the States. States who have faced a setback in their finances, have seen distress manifesting as unemployment, out-migration and livelihood challenges, leaving them with an uphill task to build back better. While some States were able to counter the impact of the pandemic, some had to make a trade-off between lives and livelihoods. To the credit of the States, it must be said that despite the unprecedented difficult times the States have not been deterred from the path of development.


Blue Revolution
National Programme of Mid Day Meal in Schools
Rashtriya Swasthya Bima Yojna
Mission Shakti
Mission VATSALYA (Child Protection Services and Child Welfare Services)
Umbrella ICDS
Infrastructure Facilities for Judiciary
Pradhan Mantri Awas Yojna (PMAY)
Umbrella Programme for Development of Scheduled Tribes
Swachh Bharat Mission (Gramin)
Jal Jeevan Mission (JJM)
Umbrella ICDS
Jobs and Skill Development
Swachh Bharat Mission
Samagra Shiksha Abhiyan
National Health Mission
National Health Mission
White Revolution
Green Revolution
National Social Assistance Progamme
Umbrella ICDS
Jal Jeevan Mission (JJM)
Swachh Bharat Mission
Environment, Forestry and Wildlife
Umbrella ICDS
Umbrella Programme for Development of Minorities
Border Area Development Programme
Mission Shakti
Rashtriya Swasthya Bima Yojna
Samagra Shiksha Abhiyan
Umbrella Programme for Development of Other Vulnerable Groups
White Revolution
Green Revolution
National Health Mission
Mission Shakti
Rashtriya Pashudhan Vikash Yojana
Green Revolution
Green Revolution
Mahatma Gandhi National Rural Employment Guarantee Scheme
Mission for Protection and Empowerment for Women
Green Revolution
Shyama Prasad Mukherjee Rurban Mission
Mission Shakti
Prime Minister Formalisation of Micro Food Processing Enterprises Scheme(PM-FME)
Blue Revolution
Umbrella Scheme for Development of Schedule Castes
Pradhan Mantri Krishi Sinchai Yojna
Rashtriya Gram Swaraj Abhiyan(RGSA)
Integrated Child Development Services Scheme
Pradhan Mantri Gram Sadak Yojna
Blue Revolution
Modernisation of Police Forces
Urban Rejuvenation Mission: AMRUT and Smart Cities Mission

"Between the idea
And the reality
Between the motion
And the act
Falls the Shadow"

T.S Eliot
The Hollow Men

"If you don't know where you are going, any road will take you there"

Lewis Carrol

The primary purpose of the Public Affairs Index (PAI) is to rank the States on the basis of the quality and adequacy of Governance and provide evidence-based insights to the geography and sector-specific interventions that are necessary and can help improve development outcomes. Governance can be broadly defined as *"the process of decision-making and the process by which decisions are implemented (or not implemented)"* (UNESCAP)[1]. The ranking of the States on their Governance in PAI is divided using the Sustainable Development Goals (SDG) issued by the United Nations (UN) as the pillars and further into themes drawn from the World Governance Index (WGI).

Development as a term can be understood in various contexts and no one single definition can capture its enormous real-world implications. However, for this specific context, it can be conceptualised as growth; that is, achievement of a new and improved stage in a constantly changing environment. This change could be in the form of a change in economic, social, cultural, scientific or other means.

The concept of development perceived at an aggregate level, like the Centre or the State, is an average of all developmental activities within its political economy. This average often shrouds the gap between the best and worst developed social, cultural and geographical fragments within it. This gap will henceforth be referred as the 'Development Gap'. The imperative of bridging this gap is what gives a sense of urgency to the need for sustainable development. One among the multitudes of ways in which sustainable development can be understood is as a guarantee for adequate regard to the vulnerable sections of the society that uninterrupted development may often disregard. This disregard can and does widen the Development Gap.

While dealing with vulnerability, it becomes equally important to identify the multidimensional nature of it; not merely in the different demographics like caste, class and gender; but also, its compounding nature. For example, premising on the implications of class, caste and gender within India's socio-cultural composition, a poor female belonging to a minority caste group is at a triple jeopardy in comparison to a rich male from a traditionally privileged caste group. Therefore, it becomes important for governments to ensure equitable access to resources and opportunity within the population, with special focus on the vulnerable within vulnerable sections.

In India, like in most other republics, the Constitution acts as the legal instrument that guarantees the Fundamental Rights (Article 14 -32) to its citizens. Through Fundamental Rights, that address equality, freedom and rights against exploitation, one can argue that one of the most prominent agendas of the Constitution is to protect and safeguard the life and liberty of the vulnerable sections in the society. In addition to the Fundamental Rights, Directive Principles of State Policy (DPSP) (Article 36–51) acts as a guidance note for the State to work on its human development agenda. States and the Centre use national policies and schemes to employ the agenda enshrined in the Constitution. The Constitution also clearly demarks the responsibilities of the States and the Centre using the State List, Union List and Concurrent List (Seventh Schedule of the Constitution).

In addition to this, government policies can be understood as one of the structural remedies to address this Development Gap. Policies adopted by the government are measures by which the government tries to influence the political economy within its jurisdiction. Policies can be understood as broad objectives that the State promises to address. For example, the National Water Policy (2012)[2] outlines the need to *"take cognisance of the existing situation, to propose a framework for creation of a system of laws and institutions and for a plan of action with a unified national perspective".* One of the objectives in the policy is to provide access to safe drinking water to all regions.

Theodore J. Lowi classified public policies as serving four major purposes – distributive, redistributive, regulatory and constituent (1972)[3]. Policies that cover the broad objective of addressing the Developmental Gap would fall under the category of redistributive policies. While policies envision a grand goal to achieve an aspirational level of equitable development, schemes can be understood as the systemic and actionable plan for achieving the goals outlined in the policy. For example, the Jal Jeevan Mission is a Centrally Sponsored scheme with a vision that *"Every rural household has drinking water supply in adequate quantity of prescribed quality on regular and long-term basis at affordable service delivery charges leading to improvement in living standards of rural communities."* The scheme provides an actionable plan to the '*accessibility to safe drinking water*' goal of the National Water Policy and makes the State accountable for its implementation.

While the Governance model in PAI evaluates the States and ranks them based on Governance, the scheme analysis tries to complement the model by trying to understand the developmental activities undertaken by State governments in the form of schemes and its contribution to the performance of the States. This analysis adds an additional dimension to measuring the performance of States in terms of Governance.

There are Central and State schemes. State schemes are envisioned and implemented by individual States within their territory. Central schemes are developmental schemes envisioned by the Centre and implemented across the territory of the country. There are two types of Central schemes – Central Sector schemes and Centrally Sponsored schemes. Centrally Sponsored schemes are funded in a fixed fund sharing pattern between the State and the Centre while the Central Sector Schemes are fully sponsored by the Centre. The schemes selected for the Scheme Analysis are all Centrally Sponsored schemes. As its implementation is the shared responsibility of the Centre and the State, Centrally Sponsored schemes suit this analysis best because of the nature and geographical coverage of its implementation.

In the 2019-20 Union Budget, Rs. 309552.68 crores (actual) were spent for Centrally Sponsored schemes, Rs. 387899.80 crores in 2020-21(Revised Estimates) and Rs.381304.55 crores were budgeted for 2021-22 (Budget Estimates).

The Centrally Sponsored schemes funds occupy above 30% of the Union Budget annually; thereby providing much needed support to all States to invest in their developmental activities.

The selection of the schemes for the analysis was broadly based on the extent of coverage of schemes in terms of the proportion of population covered and the number of years the scheme has been active. In addition to the aforementioned, the Basic Needs Approach to Development was a template used to narrow down the exhaustive list to a select five. The Basic Needs Approach, fundamentally, focuses on ensuring access to the basic needs of survival to all citizens. It was introduced in the World Employment Conference, 1976 at the International Labour Organisation (ILO); and was based on the Minimum Needs Approach proposed by the Planning Commission under the direction of Pitamber Pant in 1962. Basic Needs Approach was a predecessor to the Human-rights Approach to Development. According to ILO, satisfaction of basic needs has two elements: meeting the minimum requirements of a family for private consumption and access to essential services or items of social consumption. A summarised understanding of items under the Basic Needs Approach would include access to Nutrition, Health, Shelter, Employment and Education.

Health, Nutrition, Education and Employment are also of pragmatic importance to the development of humankind. Historically, these entities have been identified as Directive Principles of State Policies (DPSP); Right to Education later being identified as a Fundamental Right in 2009. India has consistently been investing in a multitude of schemes covering all these pragmatic themes. For this analysis, the prominent schemes under these themes have been identified.

Out of the 35 Centrally Sponsored schemes enlisted in the FY 2021-22 Union Budget, this analysis looks at the performance of the following five schemes:

1. Mahatma Gandhi National Rural Employment Guarantee Scheme **(MGNREGS)**
2. National Health Mission **(NHM)**
3. National Education Mission or Samagra Shiksha Abhiyan **(SmSA)**
4. National Programme of Mid-Day Meal in Schools **(MDMS)**
5. Umbrella Integrated Child Development Services **(ICDS)**.

While the Targeted Public Distribution System is the most extensive network assuring nutritional availability to all citizens, it is a Central Sector scheme and therefore not included in this analysis. The original selection of schemes included the Pradhan Mantri Awas Yojana – Urban (PMAY-U); but was later not included due to lack of parity in the extent of urban territories within each State. This combined with unavailability of data owing to the comparatively recent launch of the scheme lead to dropping the scheme from the Scheme Analysis.

For the purpose of the analysis, the States have been categorised into **90:10** division States and **60:40** division States. **90:10** division States are those States that have Central share of **90%** and State share of **10%**; while the **60:40** division States are those States that have a Central share of **60%** and State share of **40%**.

The 60:40 division States are Andhra Pradesh, Bihar, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Puducherry, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal. The 90:10 division States are Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Jammu and Kashmir, Himachal Pradesh and Uttarakhand.

The UTs have not been ranked in this analysis as the Centrally Sponsored schemes are 100% Sponsored by the Centre in UTs.

The performance of the States has been analysed of the themes of Access, Coverage, Availability and Utilisation.

Access measures the ease of access that beneficiaries have in accessing the benefits of the schemes; i.e., the ease with which applicants can enjoy the benefits of the scheme. This is important because, a long and complicated application process would deter individuals from seeking benefits of the schemes; thereby, failing to actualise the intended goal and objective for the same. The framework of analysis also includes a theme of Coverage. This theme broadly attempts to access the extent of actual coverage of beneficiaries of the schemes as against the ideal population that should have been covered by the schemes. Coverage also tries to examines the extent of inclusion of the weaker sections of the society within the beneficiaries of each scheme; i.e., the previously mentioned vulnerable of vulnerable population. For example, proportion of Scheduled Caste, Scheduled Tribe and women beneficiaries. Another theme covered in the analysis is Availability. This theme tries to quantify the availability of resources based on the number of beneficiaries actively covered in the scheme. The last theme in the analysis is Utilisation, it analyses the extent of utilisation of funds and resources allocated particularly for the implementation of the scheme.

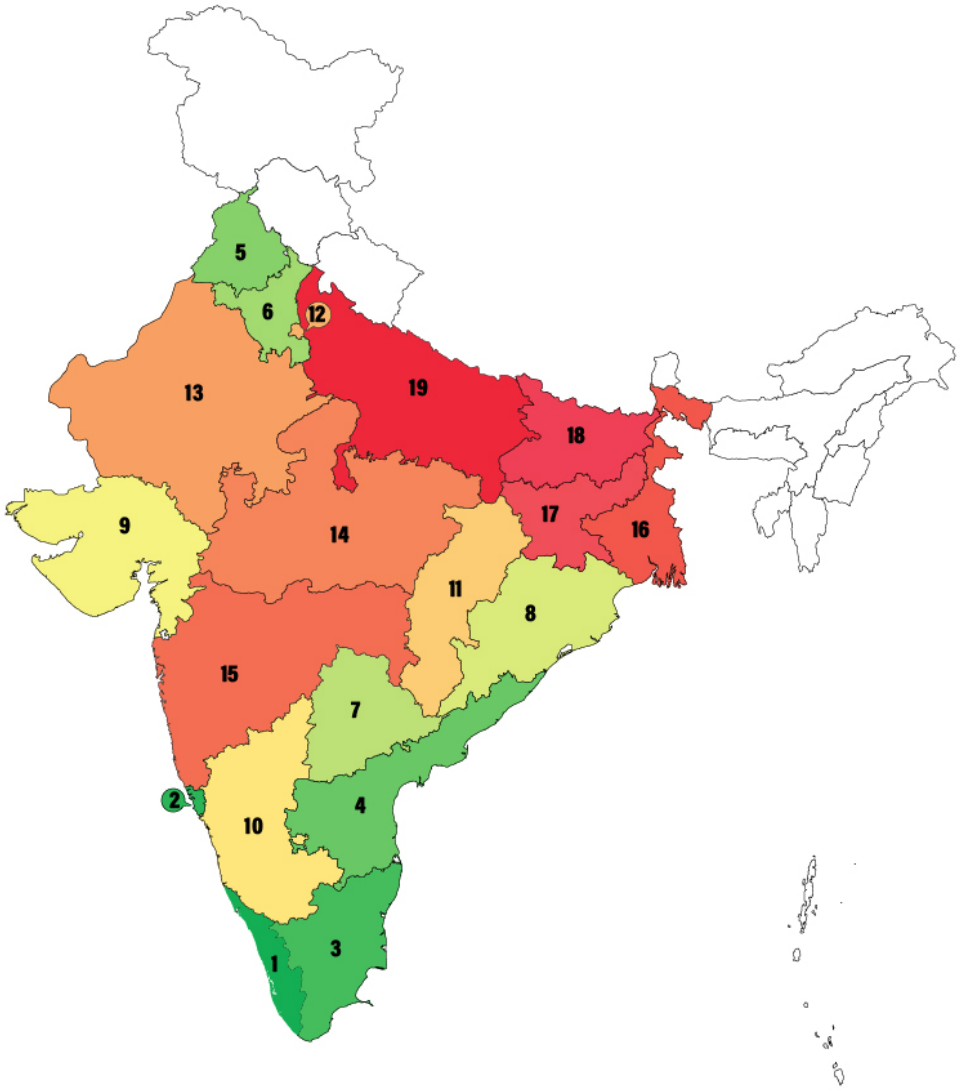
Ideally, performance of the States in the developmental schemes should reflect in their performance in the Governance Model. The following sections explain in detail the performance of States in the five selected schemes, the interdependencies of the themes on the overall scheme ranks, interesting findings, correlation between performance of the States in schemes and Governance Model and concludes with specific recommendations that would significantly improve performance.

The Scheme Analysis, with an exception for the ICDS, has adopted a time-series based model using four years' data in the case of NHM and MDMS and five years' data in the case of MGNREGS and SmSA. The time series data has been compiled using a rolling median method elaborately explained in the technical note of Annexure I.

Based loosely on a life cycle approach, the Scheme Analysis is structured starting with Health (NHM and ICDS); uses MDMS as the transition leading to Education (SmSA); and, finally concluding with Employment (MGNREGS).

NHM INDEX

NHM

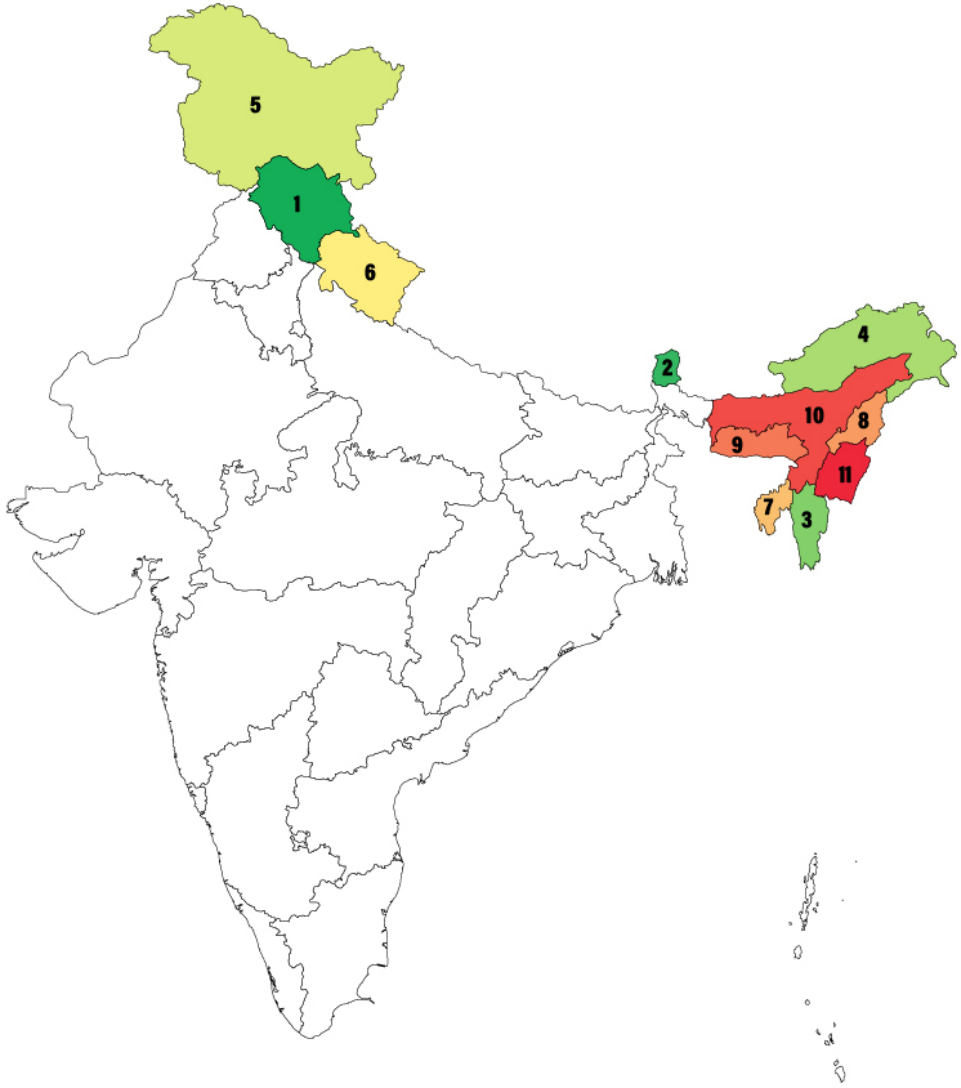


Rank	Large States	Index
1	Kerala	1.499
2	Goa	1.170
3	Tamil Nadu	0.892
4	Andhra Pradesh	0.493
5	Punjab	0.438
6	Haryana	0.311
7	Telangana	0.205
8	Odisha	0.056
9	Gujarat	-0.041
10	Karnataka	-0.046
11	Chhattisgarh	-0.081
12	Delhi	-0.158
13	Rajasthan	-0.178
14	Madhya Pradesh	-0.466
15	Maharashtra	-0.482
16	West Bengal	-0.700
17	Jharkhand	-0.719
18	Bihar	-1.046
19	Uttar Pradesh	-1.146

Highest Index Value — Lowest Index Value

Scheme Index Overall Ranking 60:40

NHM



Rank	Small States	Index
1	Himachal Pradesh	0.840
2	Sikkim	0.664
3	Mizoram	0.354
4	Arunachal Pradesh	0.326
5	Jammu & Kashmir	0.161
6	Uttarakhand	0.029
7	Tripura	-0.277
8	Nagaland	-0.350
9	Meghalaya	-0.379
10	Assam	-0.388
11	Manipur	-0.980

Highest Index Value — Lowest Index Value

Scheme Index Overall Ranking **90:10**

National Health Mission

The National Health Mission (NHM) is a health management initiative undertaken by the Government of India by integrating multiple health programmes and policies. The National Health Policy (2017) envisions the goal of *"...attainment of the highest possible level of health and wellbeing for all at all ages, through a preventive and promotive health care orientation in all developmental policies, and universal access to good quality health care services without anyone having to face financial hardship as a consequence. This would be achieved through increasing access, improving quality and lowering the cost of healthcare delivery."* NHM acts as the systemic and actionable plan for achieving the goals outlined in the policy. The Scheme envisages the specific goal of *"achievement oaf universal access to equitable, affordable & quality healthcare services that are accountable and responsive to people's needs."* The Scheme provides an actionable plan to the National Health Policy and makes the State accountable for its implementation.

The Mission finds its roots in the erstwhile National Rural Health Mission (NRHM) institutionalised as a flagship programme by the United Progressive Alliance (UPA) government on 12th April 2005. NRHM was ideated as an architectural reconstruction of the Health Management System(HMS) in India. In 2013, the introduction of the National Urban Health Mission (NUHM) increased the scope of NRHM to involve the urban population as well. This was then envisioned as NHM with two wings – the newly introduced NRHM and the former NUHM.

The NHM has an intended goal choice of universal access to equitable, affordable & quality health care services that are accountable and responsive to people's needs, specially accounting for vulnerable sections of the society, as well. The main programmatic components, as enlisted in the NHM official website includes Health Systems Strengthening, Infrastructure Maintenance, Reproductive-Maternal-Neonatal-Child and Adolescent Health (RMNCH+A), Communicable Diseases Prevention Programmes and Non-Communicable Disease Control Programmes.

The Communicable Diseases Prevention Programme has four components: National Vector Borne Disease Control Programme (NVBDCP), Revised National Tuberculosis Control Programme (RNTCP), National Leprosy Eradication Programme (NLEP) and Integrated Disease Surveillance Programme (IDSP). The Non-Communicable Diseases Control Programme has ten components: National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS), National Programme for Control of Blindness and Visual Impairment (NPCBVI), National Mental Health Programme (NMHP), National Programme for Healthcare of Elderly (NPHCE), National Programme for the Prevention and Control of Deafness (NPPCD), National Tobacco Control Programme (NTCP), National Oral Health Programme (NOHP), National Programme for Palliative Care (NPPC), National Programme for Prevention and Management of Burn Injuries (NPPMBI) and other Non-Communicable Disease Control Programmes.

All the programmes are funded using the six financing components; most of which are flexi-pool meaning that these funds are flexible and theme-wise heads of expenditure are not strictly specified. The six components are – NRHM-RCH Flexi-pool, NUHM Flexi-pool, Flexible pool for Communicable disease, Flexible pool for Non-Communicable Diseases (NCD), including Injury and Trauma, Infrastructure Maintenance, and Family Welfare Central Sector component. The overarching scope of the mission, the widespread impact on health facilities and the extent of coverage of beneficiaries makes this the most prominent health scheme in the country.

In this chapter, NHM has been analysed along the themes of Access, Coverage, Availability and Utilisation using indicators of health outcomes in a way where the overarching objectives of the mission is covered. A detailed analysis of the findings follows:

Themes	Indicators
Access	Number of Primary Health Centres per population
	Number of Sub centres per population
	Number of people attending NCD clinics
Coverage	Targets & Achievement of Maternity and Child Health Activities (Immunisation) in India
	Proportion of deaths due to communicable diseases to total number of deaths
Availability	Expenditure on Health: Per Capita, as share of Total Expenditure and as share of GSDP
	Proportion of Health Human Resources in Community Health Centres, Primary Health Centres and Sub centres
Utilisation	Percentage utilisation of the scheme fund available

Table 1: NHM Indicator Framework

In the 60:40 division States, the top three performers are Kerala, Goa and Tamil Nadu and, the bottom three performers are Uttar Pradesh, Jharkhand and Bihar.

Among the top three performers, Kerala shows consistent top performance in themes of Access (3rd), Coverage (3rd), Availability (3rd) and Utilisation (1st). Goa, on the other hand consistently stood second in Access, Coverage and Availability; however, ranked 14 out of the total 19 in Utilisation. Utilisation measures the percentage utilisation of the scheme fund allocated for the State. Correlation analysis conducted between the overall Index and the theme indices showed that while Utilistion has a moderate positive correlation to the Index (correlation coefficient – 0.67), Access (correlation coefficient – 0.74) and Coverage (correlation coefficient – 0.81) with strong positive correlation has higher contribution to the overall performance of the State. This means that of all themes that contribute to the Index, Coverage and Access influences the overall Index the most. In the case of Tamil Nadu, consistent good performance is seen in terms of Access (1st), Coverage (4th) and Utilisation (3rd); but the State showed poor performance in the theme of Availability (12th). The moderate strength of the correlation of the theme (correlation coefficient – 0.58) with the Index is lower in comparison to the strength of correlations of the other themes with the Index. This explains why the poor performance in the theme has not significantly pulled down the performance of the State in the overall Index.

The NHM framework that was used to evaluate the performance of the States has primarily looked at outcome indicators. This means that the health outcomes, while possibly being an impact of performance in NHM, could also be due to other State initiatives for advancement of health infrastructure and outcomes. For example, Kerala has adopted a mission mode approach to development with four missions – Haritha Keralam, Aardhram, LIFE and Education. The objectives of Aardhram Mission specifically focus on transformation of PHCs, improved health human resource, improved infrastructural facilities, etc. These objectives link back to the NHM framework used for this analysis. Similarly, the Tamil Nadu State government implements the Tamil Nadu Health Systems Projects which has subprojects that focus on health system reforms, improving health insurance coverage, etc. The outcomes of these projects lead back to the indicators used in this analysis.

In the 90:10 division States, the top three performers were Himachal Pradesh, Sikkim and Mizoram; and, the bottom three performers are Manipur, Assam and Meghalaya. The top performers in the NHM Index were in the top 50th percentile in the Governance model as well. While the performance in NHM and Governance analysis were not starkly different, the results were not as similar to what was in the 60:40 division States. The correlation analysis undertaken between the 90:10 division States Index and indicators from the Governance Model did not show strong correlations. All coefficients were 0.5 and below except in the case of child sex ratio (correlation coefficient was -0.56). While data shows moderate negative correlation, this finding is inconsistent with general trends between health outcomes and improved sex ratio.

Himachal Pradesh exhibits top performance in three out of the four themes analysed; 2nd in Access, 3rd in Coverage and 1st in Utilisation. The State ranked 8th in Availability out of the total 11 States in the 90:10 division States category. Correlation analysis between the themes and the overall Index showed that Availability has relatively least influence on the overall Index with a correlation coefficient of 0.42. The strongest correlation was between Access and the overall Index (correlation coefficient – 0.74). The top three States simultaneously performed well in the theme of Access; Himachal Pradesh came 2nd, Sikkim stood 5th and Mizoram stood 3rd. The bottom three performers in the overall Index showed simultaneous poor performance in the theme of Access, thereby influencing the overall rank. Arunachal Pradesh was the top performer in Access; but stood 4th in the overall rank. This can be explained by it poor performance in Utilisation (10th) and Coverage (8th).

The analysis of the performance of Manipur in the various themes showed consistent poor performance in Access (11th), Coverage (10th) and Utilisation (11th). An interesting finding was that the State showed decent performance in the theme of Availability (5th). The indicators that were used to analyse availability were per capita expenditure on health as a percentage of GSDP and Proportion of health human resources. This could be understood as an indication to better performance of the State in health outcomes in the future as the institutional arrangements have already received adequate attention. The current poor performance of the State might not be

significant in relative comparison to other States, but may have been an improvement from the State's own performance in the past.

To test this hypothesis, the growth rate of performance in the State in the per capita expenditure by State over the past four years was analysed; there seems to be a steady increasing trend.

Year	2015	2016	2017	2018
Expenditure on Health: Per Capita, as share of Total Expenditure and as share of GSDP	1337	1658	2450	2061

Table 2: Expenditure on Health - Trend in Manipur

The findings from the Index shows that good performance in Access is the most influential factor in overall scheme performance. This is an indication for the States to improve and/or increase the number of Primary Health Centres and Sub centres and increase awareness on NCD in the State. While the pandemic has brought much required attention to health infrastructure in the country, the other area that needs special focus is NCD. Several studies have already identified NCD as the looming epidemic for the country. This analysis has further added significance to this argument. The NHM framework has specifically looked at the number of people who attend NCD clinics in the country. Data sourced from National Health Profile show a steady increase in the number of people who attended NCD clinics (*Figure 1*).

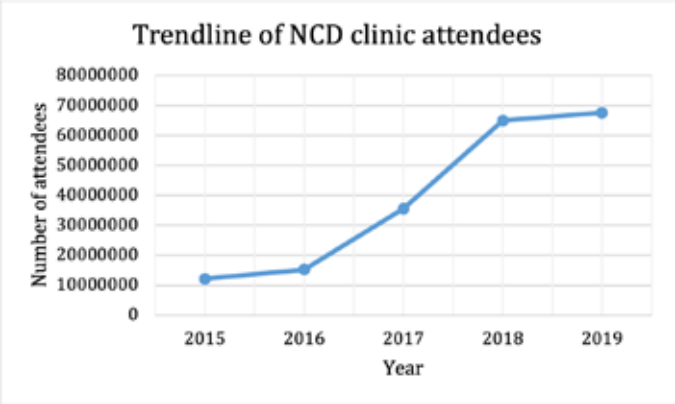


Figure 1: Trend line of NCD Attendees

The overall improving trend could be an indication of increased awareness among the population on NCD. Improving these numbers can only occur through widespread awareness campaigns and other ICT measures. This could be achieved by improving the effective implementation of National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS). Among the 60:40 division States, the States that ranked top three in the overall Index were also the States that ranked top three in the indicator measuring people who attended NCD clinics; i.e., Kerala, Goa and Tamil Nadu. Similarly, among the 90:10 division States, the top four performers in the NCD indicator were also the top four in the overall Index; Mizoram, Arunachal Pradesh, Sikkim and Himachal Pradesh. This shows that attention to NCD boosts the overall performance of States in terms of health. Poor performing States could improve their performance by focusing on improving awareness of NCD; thereby increasing early detection and preventive measures.

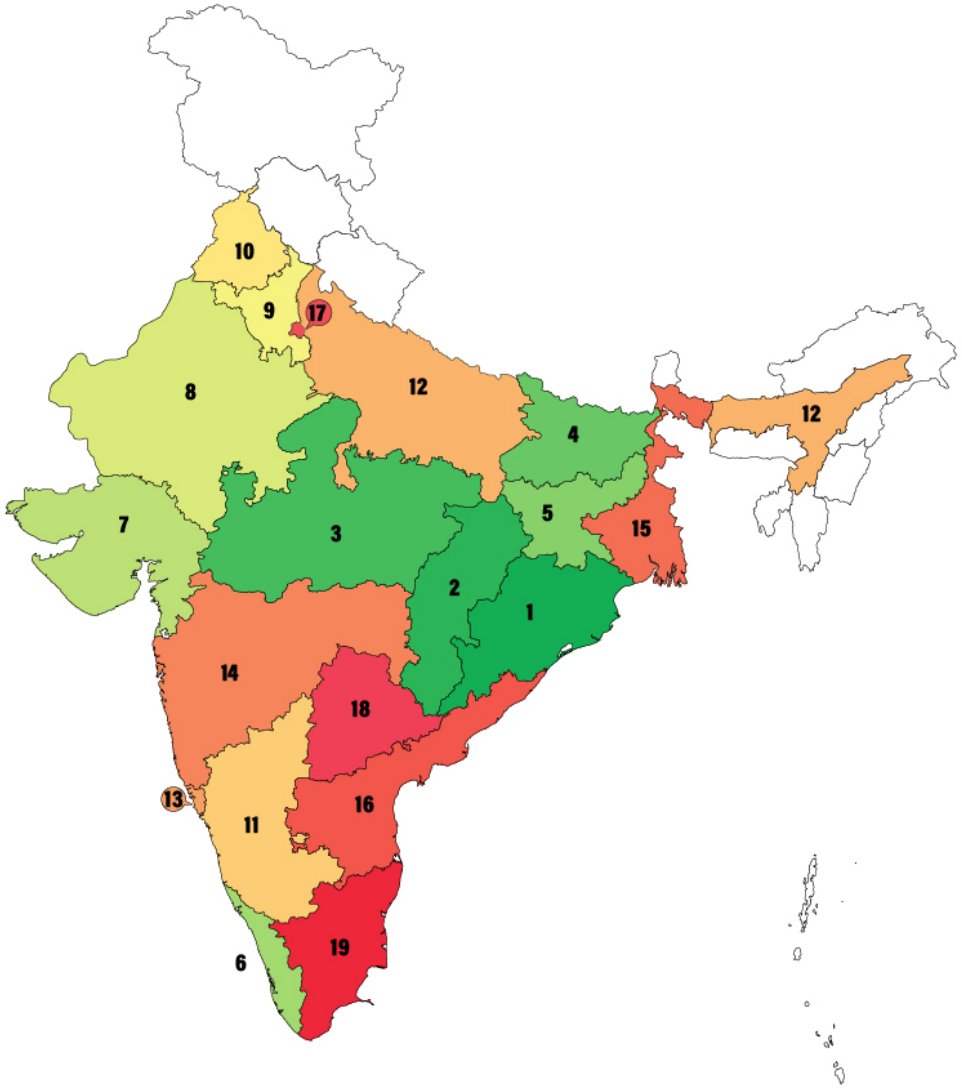
Another interesting finding is that the top performance of the States in the NHM framework is commensurate with the ranks of those States in the Governance model. Of the top three performers in 60:40 division States, Kerala and Tamil Nadu occupy first and second ranks, respectively, in the Large States category; and Goa is the best performer in the Small States category. Similar trends can also be observed in the case of poor performers in NHM. Uttar Pradesh and Bihar are the bottom two performers in the Large States category in the Governance model. Jharkhand did not appear in the bottom three but the performance was not the 50% either. It stood 11th out of the 18 States ranked in the Large States category. Kerala and Tamil Nadu also showed top performance under SDG 3 (Good Health and Well-being) under the theme of Government Effectiveness. This could be an indication to how improvements in health outcomes significantly affect the State's performance in Governance. This is also indicative of the priority the health sector should be receiving administratively and financially; more so when located within the rollout of a pandemic.

In order to strengthen this argument further, correlation analysis was carried out between the NHM Index and indicators from the Governance Model. The findings showed moderate positive correlations with Health Worker Density (correlation coefficient – 0.505) and Immunisation (correlation coefficient – 0.541) and strong positive

correlation with Institutional Delivery (correlation coefficient – 0.809). These correlations make perfect sense when located within the objectives of the NHM. These findings strengthen the idea that investment and attention to health indicators significantly contribute to improving the quality of governance of the States. Health is a State subject according to the Constitution (Seventh Schedule); this means that advancements in the theme of health is solely accredited to State interventions; therefore, health should ideally be a priority for State administrations. Health could even be identified as the theme that should gain a '*Mission Mode*' approach in all States.

ICDS INDEX

ICDS

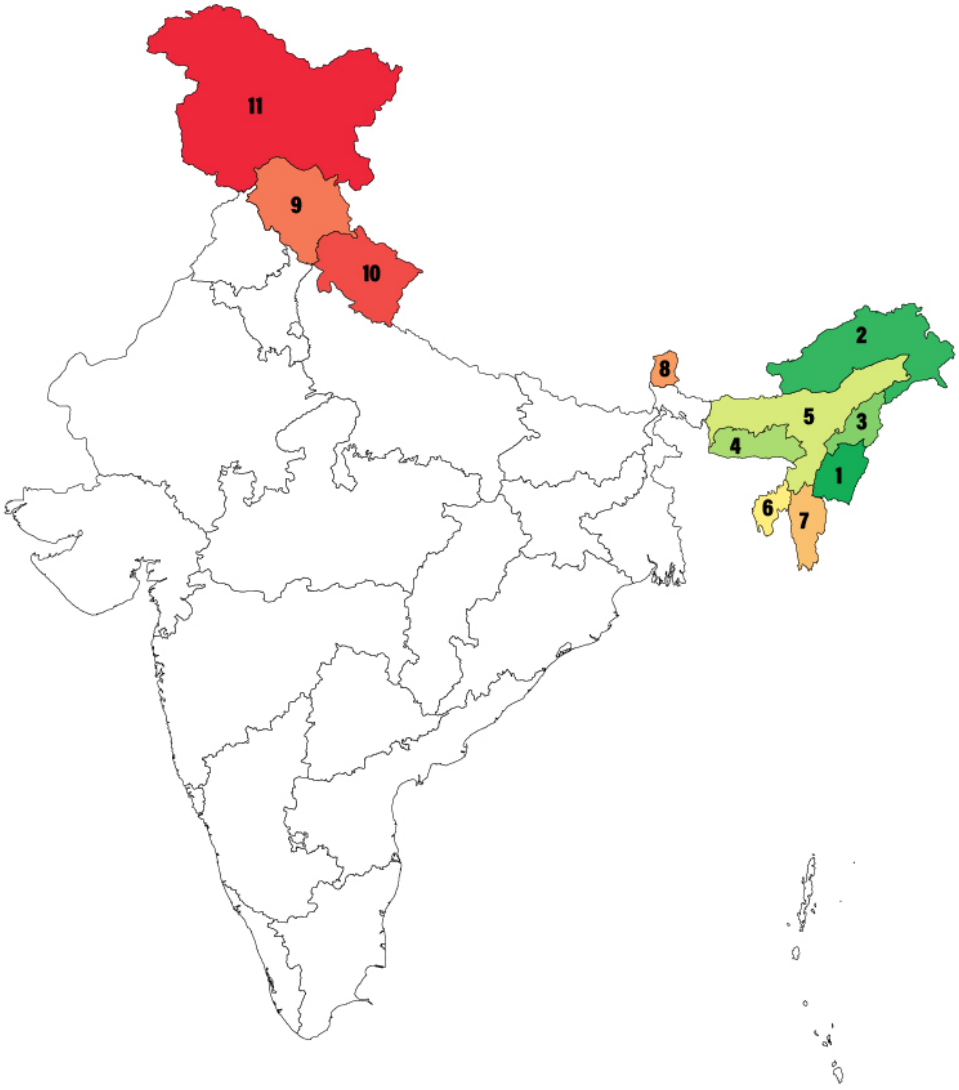


Rank	Large States	Index
1	Odisha	1.285
2	Chhattisgarh	1.191
3	Madhya Pradesh	0.884
4	Bihar	0.316
5	Jharkhand	0.276
6	Kerala	0.240
7	Gujarat	0.221
8	Rajasthan	0.136
9	Haryana	-0.018
10	Punjab	-0.023
11	Karnataka	-0.090
12	Uttar Pradesh	-0.313
13	Goa	-0.358
14	Maharashtra	-0.362
15	West Bengal	-0.483
16	Andhra Pradesh	-0.490
17	Delhi	-0.504
18	Telangana	-0.790
19	Tamil Nadu	-1.119

Highest Index Value — Lowest Index Value

Scheme Index Overall Ranking **60:40**

ICDS



Rank	Small States	Index
1	Manipur	1.237
2	Arunachal Pradesh	0.906
3	Nagaland	0.712
4	Meghalaya	0.298
5	Assam	0.011
6	Tripura	-0.141
7	Mizoram	-0.196
8	Sikkim	-0.454
9	Himachal Pradesh	-0.493
10	Uttrakhand	-0.643
11	Jammu & Kashmir	-1.238

Highest Index Value — Lowest Index Value

Scheme Index Overall Ranking **90:10**

Integrated Child Development Services

Malnutrition has been a predicament for India for a very long time. Despite a steady declining trend over the years, the decline rate has slowed down over the past few years; this is an indication for the country to adopt different methods suitable to the changing political economy (Claeson et al., 2000)[5]. Despite steady decline, India ranks 94 out of the 107 countries that were ranked in the Global Hunger Index (2020). Malnutrition has been widely recognised as a function of poverty. The impact of nutritional intake of different genders, in addition to poverty, places women at a higher risk of malnutrition in comparison to men (Asian Development Bank, 2017)[6]. Children born to undernourished women have a high probability of being malnourished; thereby increasing the risk of infant and maternal mortality. Realising the risk associated with malnutrition; the Indian government launched the Integrated Child Development Services (ICDS) scheme. As one of the oldest Centrally Sponsored schemes, ICDS, launched in 1975, targets to reduce nutritional deficiencies among newborns children, adolescent girls, pregnant women and lactating mothers. Additionally, it attempts to facilitate a child's educational journey by introducing early childhood education (ECE). The recent National Education Policy has helped foster higher attention towards the need for early childhood education (2020)[7].

The stipulated subprojects under the Umbrella ICDS include supplementary nutrition, pre-school non-formal education, nutrition & health education, immunisation, health check-up and referral services. One of the most important aspects for the implementation of the ICDS services are the Anganwadi Workers (AWW) and Helpers (AWH). Most benefits of the scheme are rolled out from the Anganwadi Centre (AWC). The scheme functions and functionaries come under the jurisdiction of Ministry of Women and Child Development.

In this analysis of ICDS, the framework used is tabulated below:

Themes	Indicator
Access	Total Number of Anganwadis operating per 1000 population
Coverage	Coverage of Pregnant Women and Lactating mothers as per the ICDS scheme
	Beneficiaries covered in the Pre-school education
Availability	Actual Availability of Anganwadi Workers and Helpers against sanctioned number
Utilisation	Percentage utilisation of the scheme fund available

Table 3: ICDS Indicator Framework

Despite being one of the oldest Centrally Sponsored schemes in India, the scheme does not have an efficiently managed data system.

This was the hardest out of all the schemes to source data for. The latest data point updated on the official website is 2015. Malnutrition and anemia continue to be an area that does not show satisfactory improvement. The extent of monitoring and evaluation, in the absence of regularly recorded data, would be of poor quality. Introducing and mandating the use of technology to improve maintenance of records should be considered as the starting point for successful implementation of the scheme.

Among the 60:40 division States, Orissa, Chhattisgarh and Madhya Pradesh are the top three performers and Tamil Nadu, Telangana and Delhi appear as the bottom three performers.

Correlation analysis run between the themes and the overall Index show that the themes of Access (correlation coefficient – 0.82) and Coverage (correlation coefficient – 0.61) show strong positive correlation to the overall Index. The theme of Availability (correlation coefficient – 0.55) and Utilisation (correlation coefficient – 0.48) show moderate positive correlation. This means that the performance of the State in the theme of Access and Coverage influences the overall Index the most.

In line with the findings from the correlation analysis, the top performers in the overall Index appeared as the top three in Access and top four in Coverage. The other State that appeared in the top three under Coverage is West Bengal. However, the overall performance of the State was brought down to the 15th rank owing to its poor performance in Availability (18th) and Utilisation (19th).

Availability captures the number of AWW and AWH as per the sanctioned number. As mentioned earlier, since AWW and AWH act as the facilitators of the scheme benefits at the last mile, the States should focus on improving the strength of their last mile agents to improve scheme implementation.

Among the 90:10 division States, the top three performers are Manipur, Arunachal Pradesh and Nagaland; and, the bottom three performers are Jammu & Kashmir, Uttarakhand and Himachal Pradesh.

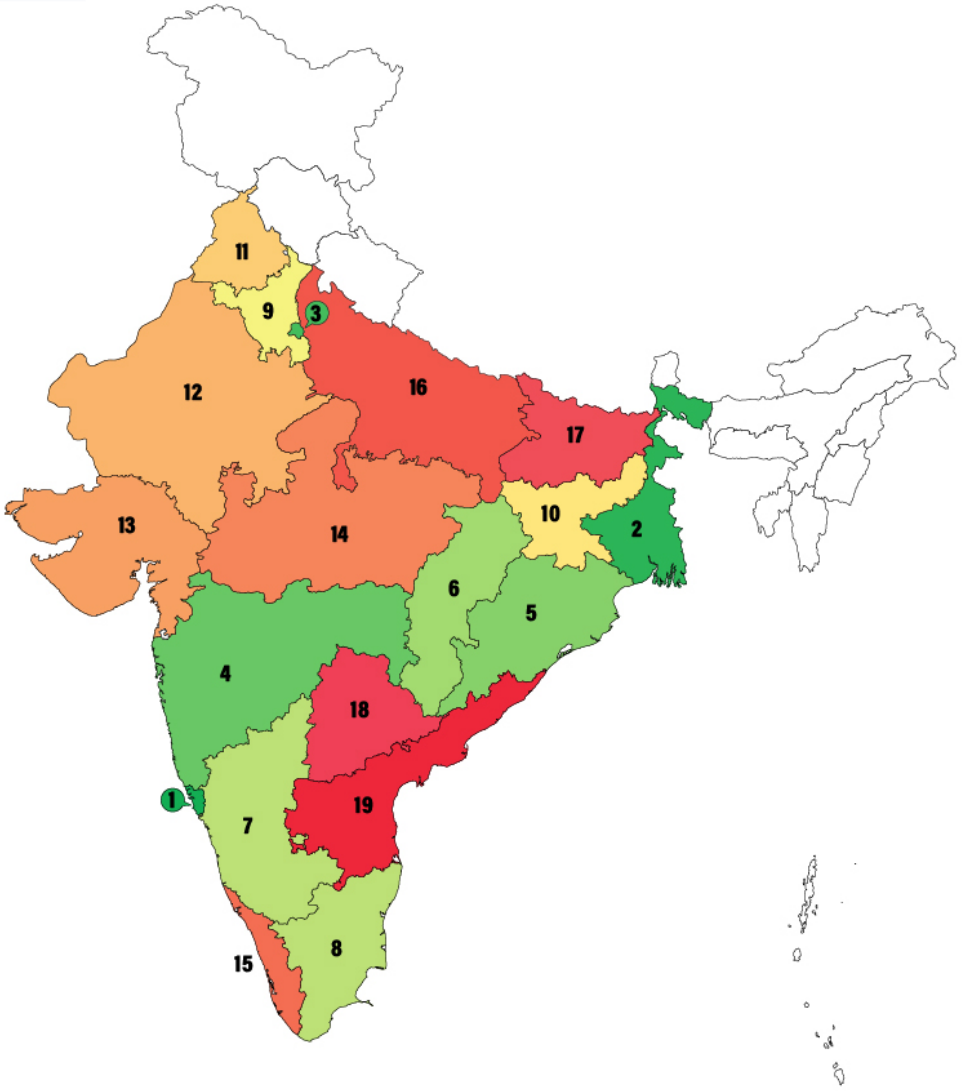
Correlation analysis run between the themes and the overall Index for the 90:10 division States show that the themes of Utilisation (correlation coefficient – 0.87), Coverage (correlation coefficient – 0.75) and Availability (correlation coefficient – 0.63) show strong positive correlation to the overall Index. The theme of Access (correlation coefficient – 0.48) indicate a moderate positive correlation. This means that the performance of the State in the theme of Utilisation, Coverage and Accessibility influences the overall Index the most. Unlike what was observed in the case of 60:40 division States, Utilisation holds the strongest influence.

In line with the findings from correlation analysis, the top three performers in 90:10 division States are also top three performers in the theme of Utilisation. Similarly, the bottom three performers in the overall Index appear in the bottom four in Utilisation. Tripura, the second last, in the theme of Utilisation has managed to leverage its comparative better performance in the other themes to improve its overall rank; 4th in Access, 5th in Coverage.

ICDS acts as the gateway to the analysis of the health sector in India. The National Health Mission is an umbrella health scheme in India that looks into improving the health outcomes of the State. The mission tries to streamline the multiple health schemes in India; in effect unifying the efforts towards a shared vision.

MDMS INDEX

MDMS

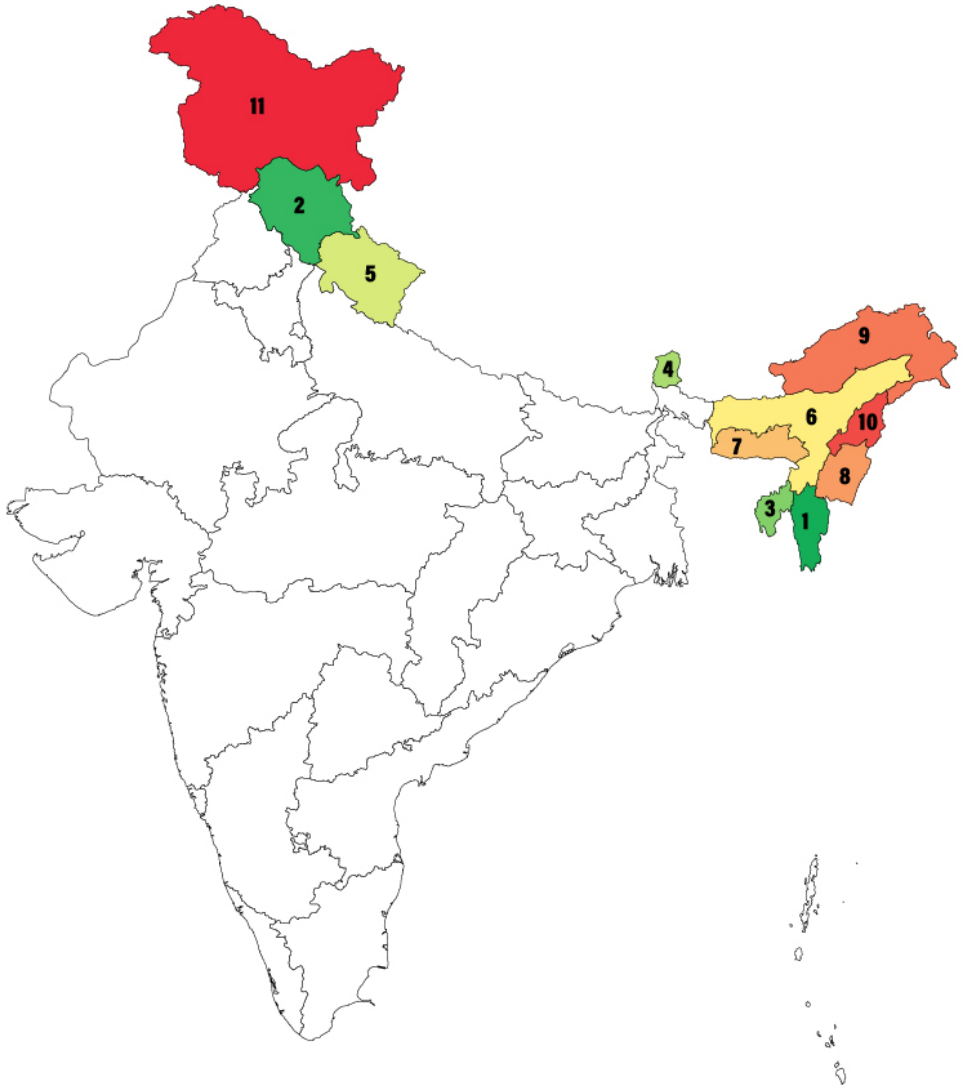


Rank	Large States	Index
1	Goa	1.444
2	West Bengal	0.510
3	Delhi	0.389
4	Maharashtra	0.283
5	Odisha	0.280
6	Chhattisgarh	0.213
7	Karnataka	0.162
8	Tamil Nadu	0.117
9	Haryana	0.116
10	Jharkhand	-0.002
11	Punjab	-0.080
12	Rajasthan	-0.101
13	Gujarat	-0.107
14	Madhya Pradesh	-0.202
15	Kerala	-0.334
16	Uttar Pradesh	-0.425
17	Bihar	-0.610
18	Telangana	-0.621
19	Andhra Pradesh	-1.033

Highest Index Value — Lowest Index Value

Scheme Index Overall Ranking **60:40**

MDMS



Rank	Small States	Index
1	Mizoram	0.722
2	Himachal Pradesh	0.715
3	Tripura	0.593
4	Sikkim	0.573
5	Uttarakhand	0.067
6	Assam	-0.067
7	Meghalaya	-0.323
8	Manipur	-0.329
9	Arunachal Pradesh	-0.346
10	Nagaland	-0.451
11	Jammu & Kashmir	-1.155

Highest Index Value — Lowest Index Value

Scheme Index Overall Ranking **90:10**

Mid-Day Meal Scheme

While ICDS deals with the nutritional needs of newborns children, adolescent girls, pregnant women and lactating mothers, MDMS addresses the nutritional needs of school going kids. The United Nations World Food Programme (UNWFP) champions and addresses the need for developing and under developing nations to invest in providing nourishment to children along with education. In simple terms, *"sick children cannot attend school and hungry children cannot learn."* UNWFP provides international recognition to the contribution of provision of school meals in improving school attendance and educational; using ground realities from various countries as supporting evidence. States in India recognised the importance of such a programme even before it became a Centrally Sponsored scheme. The Madras Municipal Corporation in 1925 was the first to rollout the Mid-Day Meal Programme (MDMP). MDMP was adopted by States like Kerala, Gujarat and Puducherry as self-funded projects. By 1991, it had extended to 12 States as State funded programme. In 1995, this became the foundation for establishment of the National Programme of Nutritional Support to Primary Education (NP-NSPE), or the Mid-Day Meal Scheme (MDMS). As per the scheme guidelines, the primary objectives of NP-NSPE aims to address reduce hunger and improve education among the children in India.

Studies have identified MDMS as a contributor in achieving desired outcomes of increasing enrolment, eradicating hunger and reducing dropout rates in schools according to several studies. "It is an incontrovertible fact that school meal programmes exert a positive influence on enrolment and attendance in schools." (MDMS Guidelines, 2005) A study done by professor Amartya Sen's Pratichi Research Team in West-Bengal shows that MDMS has increased the enrolment and attendance of children in schools. The increase has been more rapid with respect to girls and children belonging to SC, ST categories. Another study done by National Institute of Public Cooperation & Child Development, Indore, has reported that MDMS has played a crucial role in reducing dropout, especially among girls in Madhya Pradesh and the overall academic performance of children has also improved. A study also shows that the benefits of nutrition received through MDMS has seen long lasting impact; children born to mothers who were beneficiaries of the scheme showed better height-for-age in comparison to children born to mothers who were not beneficiaries of the scheme (Chakrabarti, S., Scott, S.P., Alderman, H. et al., 2021)[8].

The aims and objectives of the MDMS has been implemented by through two models – Centralised and Decentralised. A Centralised model refers to a system in which a few service providers produce and distribute meals to the schools and are known to operate as NGOs such as the Naandi Foundation and ISKCON's Akshay Patra. In the Decentralised model, the meals are made in or near the school by SHGs, Village Education Committees, Mother/ Parent Teacher Associations, etc. The Centralised model is lauded for its efficiency, deriving from its minimising of labour costs, increased use of mechanisation and consequent minimal human contact with food implying lower chances of the contamination of food, minimum utilisation of space, as well as economies of scale. On the other hand, advocates of the Decentralised model note that while it may prove to be challenging to implement in the short run, the long-term benefits in terms of social, political and economic gains must be recognised. The proponents of the Decentralised model note that the model allows for a significant level of employment generation for women, especially benefiting women from marginalised communities. The Decentralised model has also been advocated for its contribution in providing local employment, engaging Community Based Organisations and improved participatory governance.

The framework designed for the analysis of MDMS looks at outcome indicators like dropout rates, gross enrolment rates, allocation of food grains from Centre, extent of coverage of beneficiaries of the scheme, per capita utilisation and percentage utilisation. The framework is detailed in the table below followed by a detailed analysis of the findings.

Themes	Indicator
Access	Proportion of food grains allocated to each State to the number of children availing benefits under the scheme in the State
Coverage	Dropout in Primary and Upper Primary in government schools
	Gross Enrolment Rate in government elementary school
	Proportion of students receiving benefits under MDMS to total students enrolled in schools
Availability	Per capita expenditure
Utilisation	Percentage utilisation of the scheme fund available

Table 4 : MDMS Indicator Framework

Among the 60:40 division States, Goa, West Bengal and Delhi appear as the top three performers and Andhra Pradesh, Telangana and Bihar appear as the bottom three performers. Out of the top three performers, Delhi and Goa exhibits low dropout rates; 3.6% and 2.3% respectively. Among the poor performers, Bihar, with dropout rate of 26.9% appears in the bottom three performers; third to Haryana (77.8%) and Jharkhand (28.3%). Dropout rates is an indicator under Coverage along with Gross Enrolment Ratio (GER) at elementary level and number of students covered by MDMS as a proportion of all students enroled in schools in the State. Delhi, West Bengal and Goa were the top three performers in Coverage consistent with their performance in the overall Index. Among the bottom three performers in Coverage, only Andhra Pradesh appeared in the bottom three in the overall Index as well.

Telangana's worst performance in the Access, despite average performance in Coverage (11th), Availability (11th) and Utilisation (9th), pushed its overall rank to 18 out of the 19 States in the category. Andhra Pradesh, on the other hand, has shown consistent poor performance in Access (18th), Coverage (17th) and Utilisation (18th), with the exceptional better performance in Availability (8th). Availability captures the performance of States in per capita expenditure. Andhra Pradesh has the worst GER at elementary level; as this is one of the primary objectives of the scheme, the State may have to readjust their measures to focus on improving GER; the low dropout rates in the State would ensure that once the child enters the education system, the probability of their continued education is higher.

Haryana's performance is peculiar, in that, its best performance under Utilisation has been neutralised by its worst performance in Coverage. The State has the highest dropout rate of 77.8% and shows average performance in elementary level GER (9th rank with 98.3%). This could be an indication of the State's inability to ensure continued participation of children in the education system. According to census 2011, the literacy rate of the State, 75.55%, is just above the State average of 74.04%. This coupled with high dropouts is a matter of grave concern for the State.

The only theme in which Bihar does not feature in the bottom three performers is Access. This theme looks at the average allocation of food grains per beneficiary. This could mean that each student has access to adequate nutritional intake; however, this could also be the result of low enrolment in the education system. As MDMS does not extend its coverage to private (unaided) schools, the enrolment in private schools in the State was also examined.

In Bihar, only 13.2% of all enrolment is in private school and 80.4% students are enroled in Government schools; therefore, the low enrolment in government schools is not a function of high enrolment in private schools, either. This is an indication for the State to concentrate efforts in improving participation in education system in Bihar to address the poor literacy rate concomitant with poor enrolment and high dropout rates (UDISE, 2019)[9].

Among the 90:10 division States, Mizoram, Himachal Pradesh and Tripura were the top three performers and Jammu & Kashmir, Nagaland and Arunachal Pradesh were the bottom three performers. Out of the top three performers, Himachal Pradesh and Tripura also showed low dropout rates; 1.3% and 7.8% respectively. Among the poor performers, Nagaland and Arunachal Pradesh also had high dropout rates; 35.5% and 34.9% respectively. Nagaland had a low GER at elementary level.

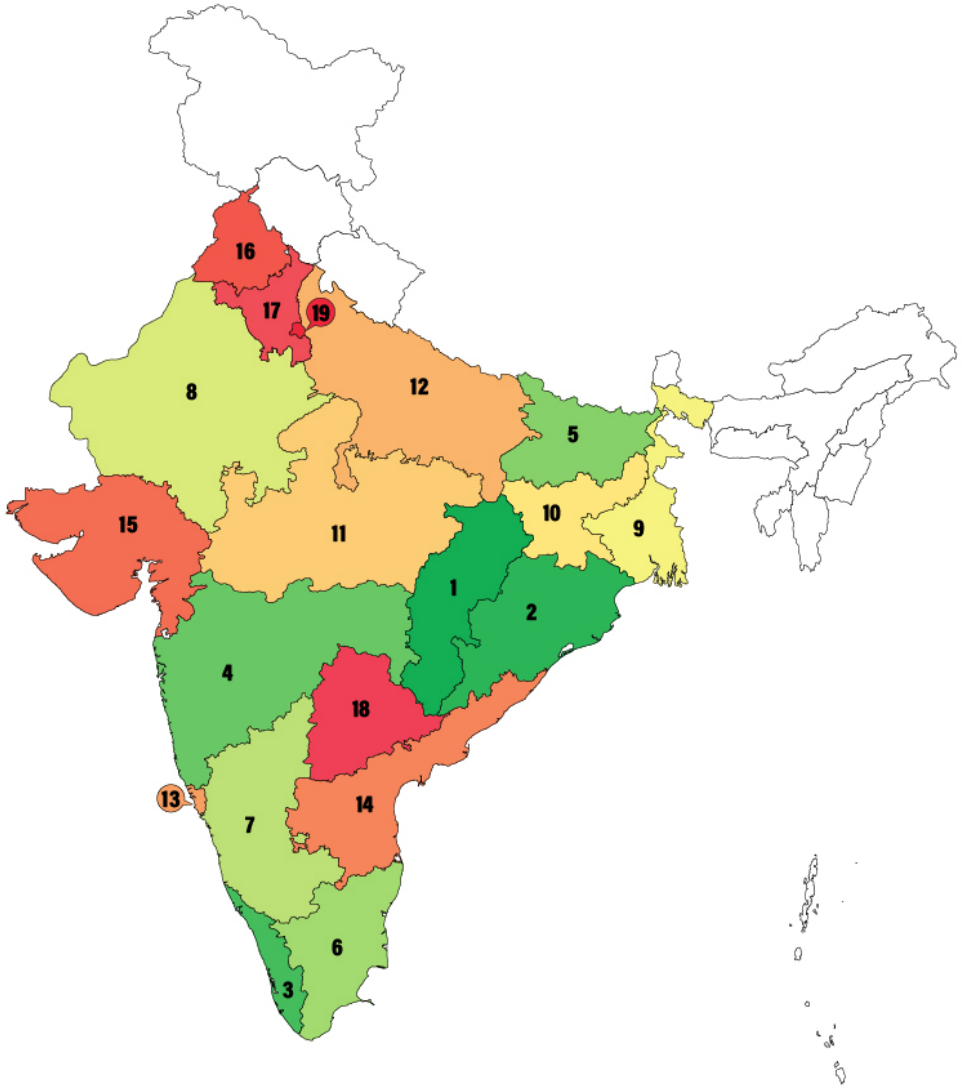
Arunachal Pradesh and Nagaland are the two States that show poor overall performance despite appearing 3rd and 1st, respectively, under Utilisation. This could be an indication that the States not utilising the funds in the right place. Both these States show poor performance in dropouts and GER; similar to the performance of Bihar in the 60:40 division States. Since the performance of these States in Availability is close to the average performance of all States, the probability of high dropouts and low enrolment being due to low nutritional intake among students is quite low. This could be an indication of a deeper issue w.r.t to education outcomes in the State. This would be brought into light in the Scheme Analysis of Samagra Shiksha Abhiyan (SmSA).

States like Tripura and Sikkim's performance in Availability has been lower than its performance in other themes. This could be considerably tugging down at the overall performance of the State in MDMS. Availability looks at the per capita availability of food grains. This means that all student beneficiaries might not be getting adequate nutrition. These States should evaluate their allocation from the Centre based on the number of students enroled in the schools covered by MDMS and make the required readjustments.

SmSA INDEX

SAMAGRA SHIKSHA ABHIYAN

SmSA



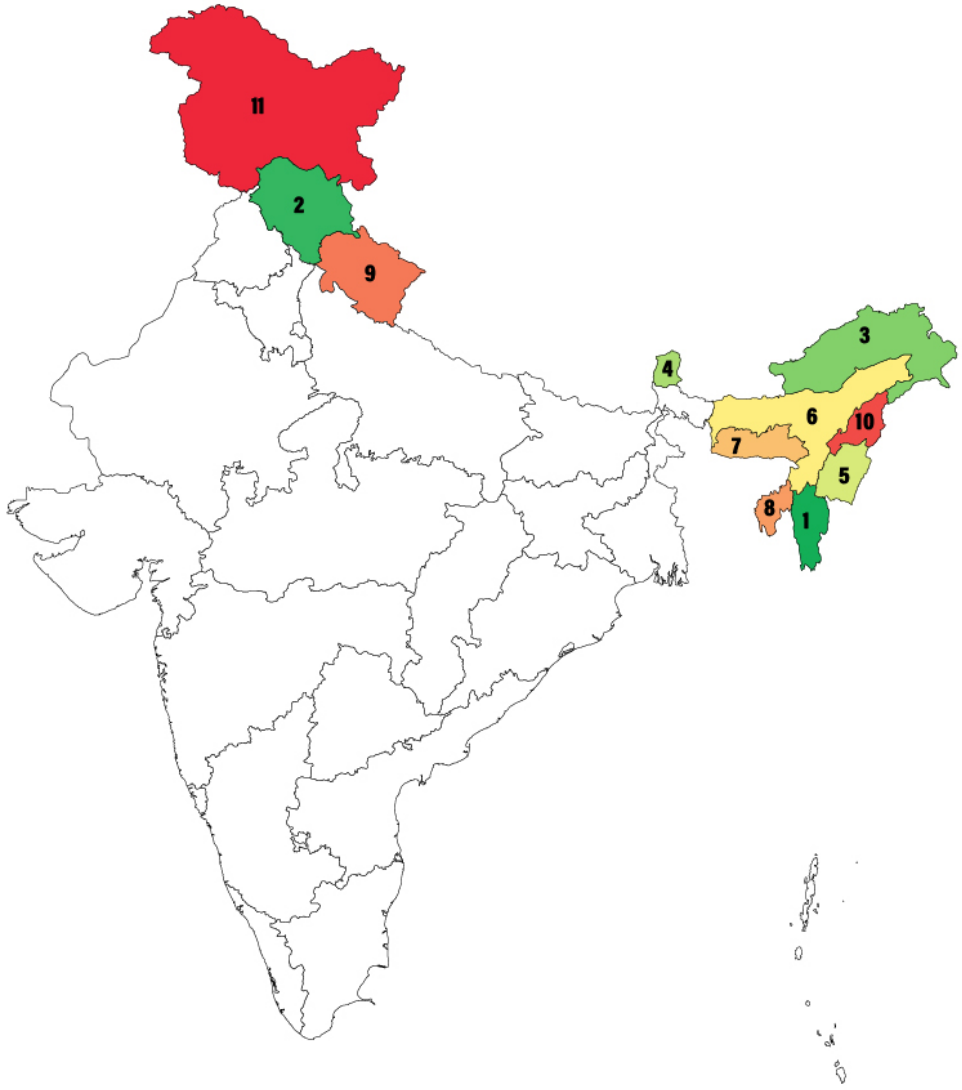
Rank	Large States	Index
1	Chhattisgarh	0.907
2	Odisha	0.639
3	Kerala	0.574
4	Maharashtra	0.444
5	Bihar	0.242
6	Tamil Nadu	0.234
7	Karnataka	0.222
8	Rajasthan	0.129
9	West Bengal	0.068
10	Jharkhand	-0.044
11	Madhya Pradesh	-0.139
12	Uttar Pradesh	-0.222
13	Goa	-0.254
14	Andhra Pradesh	-0.312
15	Gujarat	-0.326
16	Punjab	-0.390
17	Haryana	-0.427
18	Telangana	-0.570
19	Delhi	-0.775

Highest Index Value — Lowest Index Value

Scheme Index Overall Ranking **60:40**

SAMAGRA SHIKSHA ABHIYAN

SmSA



Rank	Small States	Index
1	Mizoram	0.840
2	Himachal Pradesh	0.591
3	Arunachal Pradesh	0.556
4	Sikkim	0.198
5	Manipur	0.026
6	Assam	-0.037
7	Meghalaya	-0.166
8	Tripura	-0.257
9	Uttarakhand	-0.484
10	Nagaland	-0.609
11	Jammu & Kashmir	-0.658

Highest Index Value — Lowest Index Value

Scheme Index Overall Ranking **90:10**

Samagra Shiksha Abhiyan

Education has been recurrently identified as the natural predecessor to development by various studies and international organisations working on developmental research. India, has identified education as a Fundamental Right (Article 21(a)); where, every child in the age of 6 to 14 years has the fundamental right to free and compulsory elementary education. Several State and Central government schemes have been put in place to advance this envisaged goal of the Constitution. The largest among them all, in terms of coverage and intent, would be the National Education Mission, otherwise known as Samagra Shiksha Abhiyan (SmSA) introduced in 2018. SmSA is an amalgamation of three formerly existing schemes – Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE). SSA addresses elementary education, RMSA addresses secondary education and TE focuses on improving the quality of teaching staff and teacher training institutes.

The analysis of the scheme follows the framework tabulated below:

Themes	Indicators
Access	Ratio of number of schools with ramp access to the total number of schools
	Pupil Teacher Ratio
Coverage	Proportion of SC students enrolled as a proportion of total SC population in the age group 6-17
	Proportion of ST students enrolled as a proportion of total ST population in the age group 6-17
	Proportion of girls enrolled as a proportion of total enrolled population in the age group 6-17
	Net Enrolment Rate
Availability	Per capita expenditure of SSA and RMSA
Utilisation	Percentage utilisation of the scheme fund available

Table 5 : SmSA Indicator Framework

Based on data sourced from the World Bank, a steady improvement in enrolment rates in elementary education is observed since independence in India. With the steady increase in enrolment, the concentrated effort should then be recalibrated and expanded to inclusive growth. Inclusion of Scheduled Castes, Scheduled Tribes and girls is one of the objectives of Samagra Shiksha Abhiyan. All these factors have been analysed under the theme of Coverage in the Index. West Bengal, Bihar and Tamil Nadu were the top three States amongst the 60:40 division States; while Haryana, Punjab and Rajasthan appeared as the bottom three performers. In the case of 90:10 division States, Mizoram, Assam and Tripura were the top three performers and, Nagaland, Jammu & Kashmir and Uttarakhand featured as the bottom three.

The Pupil Teacher Ratio (PTR), however, could not keep up with the growth in enrolment rates. In the SmSA Index, among 60:40 division States, the States with PTR less than 21 are Haryana, Punjab, Goa and Kerala; Uttar Pradesh, Bihar and Jharkhand showed PTR more than 40. Among the 90:10 division States, the average PTR was much lower than the 60:40 category States; all the States had PTR below 20. It is possible that during the initial years of implementation of SSA, as high importance was accorded to attaining good PTR; to supplement the same, teachers who did not possess the required qualification were hired. With the enforcement of Right to Education (RTE) in 2009, all untrained and underqualified teachers were given until 2015 to achieve the required qualification, the cutoff year was later extended to 2019. However, a story run by The Print shows that 29.5% of all elementary school teachers in government schools remain untrained (Sharma, 2018)[10] .

PTR comes under the theme of Access in the SmSA Index, the other indicator under the same theme is percentage of schools with ramp access. In the 60:40 division States, Maharashtra, Gujarat and Delhi were the top three; and Andhra Pradesh, Telangana and Goa were in the bottom three. In the case of 90:10 division States, Himachal Pradesh, Assam and Tripura were top three and Sikkim, Arunachal Pradesh and Jammu & Kashmir were in the bottom three. According to Census 2011, Maharashtra that came in 1st houses 11% of the total People with Disabilities (PwD) population, Gujarat, that came in 2nd, houses 4% and Delhi, that came in 3rd, houses 0.87%. The percentage of total PwD population in Andhra Pradesh and Telangana was 8% and Goa was 0.1%. The high percentage share of the total PwD population of Andhra Pradesh and Telangana and the low percentage share of schools with ramps makes an interesting observation. This should be something that the States should focus on to improve their performance in Samagra Shiksha Abhiyan.

The gap in the number of teachers coupled with a lack of efficiency of the government in addressing the same, has also lead to the mushrooming of private teacher training institutes; majority of which are unrecognised by National Council for Teacher Education (Mythili, 2018). This means that achieving good PTR does not necessarily mean improved quality of education. Bearing this in mind, the additional attention that teacher training institutions has received under the RTE

and its addition to the National Education Policy, 2020 is a welcoming move.

Along with improvements in enrolment, a significant shift can also be observed in transitions from public education system to private institutes. The Time Series data sourced from UDISE reports show that enrolment percentage in recognised private unaided schools has increased from 26.9% in 2012-13 to 35.4% 2019-20. This increment becomes even more significant when the total enrolment does not follow trend; 254275128 in 2012-13 to 250971683 in 2019-20 (*Figure 2*). As public education aims at coverage, privatisation is often perceived as efficiency (Mythili, 2018)[11]. Hence, this shift can be understood as a demand for improvement in quality in the public education system. The findings from ASER Index (2016)[12] show that high enrolment in schools is not contributing to improvement in reading outcomes and arithmetic ability (data presented in figure below). The standards for learning outcomes are measured based on the expected ability of children studying in the particular grade.

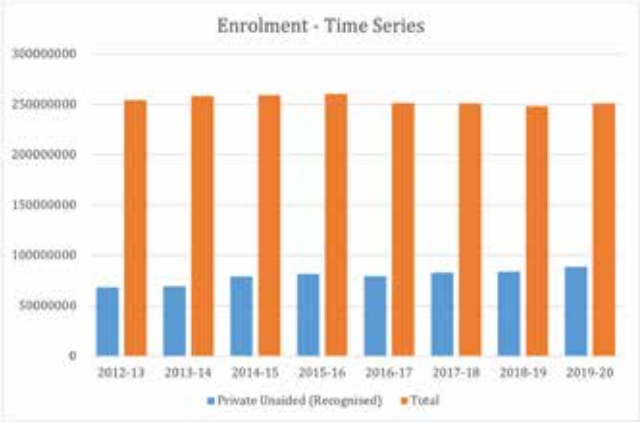


Figure 2: Trends in Enrolment

Source: Author Construction using Data Sourced from UDISE reports

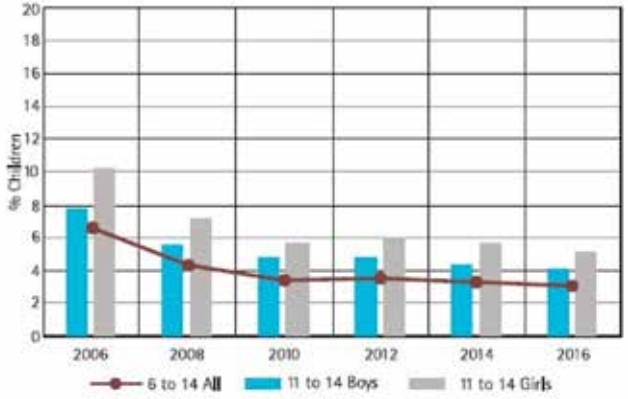


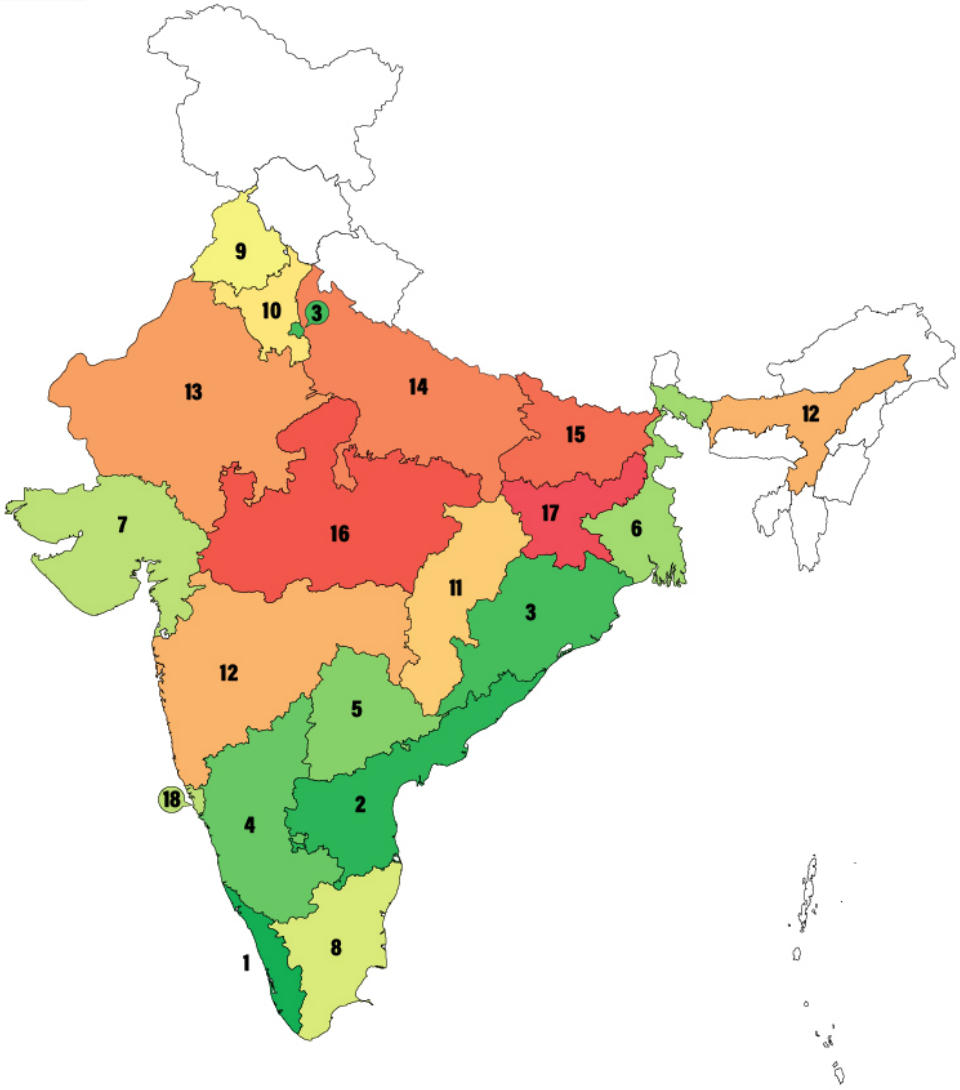
Figure 3: Trends in Learning Outcomes

Source: The Wire's Construction using Data Sourced from ASER Reports

Correlation analysis shows that Utilisation is the highest contributor to the overall Index. The indicator under Utilisation measures the extent of funds utilised under RMSA and SSA. This could be because education inherently requires expenditure on material and immaterial goods like school books, school infrastructure and salary of staff. The current requirement of the States shows that there is a necessity for States to shift their focus from facilitating entry into the system to improving learning outcomes of students (*Figure 3*). The point of departure to achieve the same is to attain adequate and qualified human resources in educational institutions. This would contribute to improved learning outcomes in the long run and encourage students to remain in the education system; eventually leading to creating citizens who can contribute significantly to the development of the country.

MGNREGS INDEX

MGNREGS

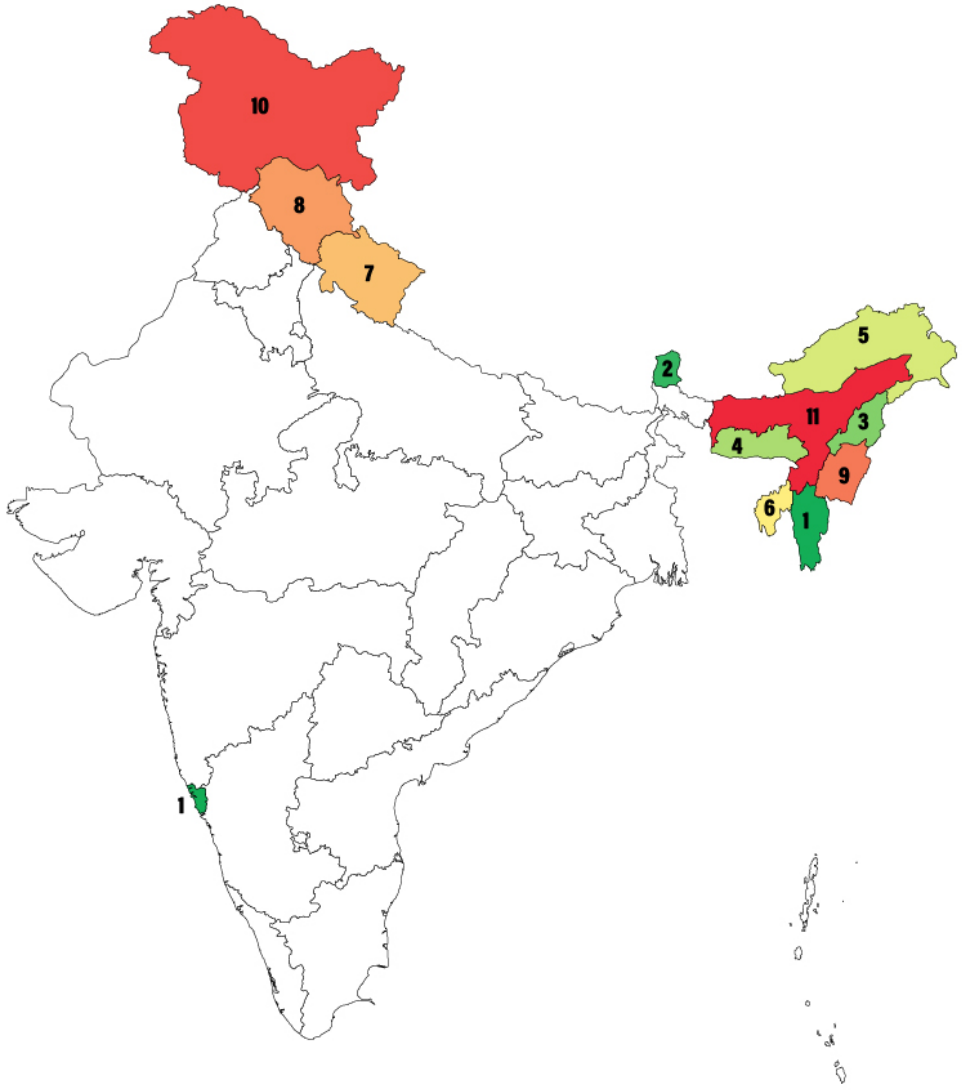


Rank	Large States	Index
1	Kerala	0.649
2	Andhra Pradesh	0.510
3	Odisha	0.366
4	Karnataka	0.327
5	Telangana	0.289
6	West Bengal	0.286
7	Gujarat	0.236
8	Tamil Nadu	0.229
9	Punjab	0.197
10	Haryana	0.151
11	Chhattisgarh	-0.044
12	Maharashtra	-0.125
13	Rajasthan	-0.146
14	Uttar Pradesh	-0.159
15	Bihar	-0.495
16	Madhya Pradesh	-0.502
17	Jharkhand	-0.590
18	Goa	-1.179

Highest Index Value — Lowest Index Value

Scheme Index Overall Ranking **60:40**

MGNREGS



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4	Meghalaya	0.479
5	Arunachal Pradesh	0.037
6	Tripura	-0.095
7	Uttarakhand	-0.126
8	Himachal Pradesh	-0.250
9	Manipur	-0.346
10	Jammu & Kashmir	-0.661
11	Assam	-1.186

Highest Index Value — Lowest Index Value

Scheme Index Overall Ranking **90:10**

Mahatma Gandhi National Rural Employment Guarantee Scheme

India does not have a social security of an unemployment allowance similar to those adopted in other countries. The State, however, does have an Employment Guarantee Act that operates as a security net for those who are unemployed in rural India.

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is an Indian legislation that mandates social security to the unemployed. It draws inspiration from Maharashtra's Employment Guarantee Scheme (EGS) which was originally envisaged as a drought-relief measure during the 1972-73 famine in the State. It was subsequently transformed into the Employment Guarantee Act in 1977; thereby, providing institutional and legal recognition to implementation of Right to Work for the first time.

Drawing on the rich experience of the implementation of EGS and other wage-employment programmes like the National Rural Employment Programme (1980), the United Progressive Alliance government lead by Manmohan Singh passed the National Rural Employment Guarantee Act (NREGA) in 2005. In 2009, NREGA was renamed as Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). Drawing from the legal framework of MGNREGA, the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) was envisioned.

With 14.66 crore active workers in 2020-21, MGNREGS is one of the largest public workfare programme in the world. MGNREGS is currently implemented in every rural district in India. Its implementation was rolled out in a phased manner during its inception. Phase I targeted the 200 most backward districts in the country, Phase II extended the programme's reach to 130 more districts, and Phase III covered the rest of the 645 rural districts in India (FAQs on Operational Guidelines, 2014).

The purported aim of the scheme is to ensure a minimum level of livelihood security for rural households by legally enshrining the right to demand 100 days of manual and unskilled employment. This was outlined in the Gazette document of NREGA (2005): *"...to provide for the enhancement of livelihood security of the households in rural areas of the country by providing at least one hundred days of guaranteed wage employment in every financial year to every household whose adult members volunteer to do unskilled manual work..."*

According to the goals outlined in the Operational Guidelines (2008) of the scheme, MGNREGS is ideated as a tool that promotes inclusive growth in rural India. The guidelines reiterate MGNREGS's Stated goal of providing a robust safety net for vulnerable segments of the population by ensuring a fall-back employment source in the absence of other opportunities, thus guaranteeing livelihood security. Other proposed objectives include: proactive social inclusion of women, Scheduled Castes and Scheduled Tribes; creation of a variety of publicly and privately-owned assets like water conservation structures, irrigation facilities, roads and drought-proofing mechanisms and fortifying the Panchayati Raj Institutions (PRIs) for the deepening of democracy and the entrenchment of transparency and accountability in rural governance (MoRD 2012 and 2014).

In order to implement the proposed objectives, convergence with other schemes and other line departments have been carried out by the States. According to the official website, the States have displayed convergence with line departments including Agriculture, Animal Husbandry, Irrigation, Horticulture, Forestry, Fishery, Drinking Water & Sanitation, PWD and Women & Child. Convergence has also been extended across schemes like Pradhan Mantri Awas Yojana – Grameen (PMAY-G), Pradhan Mantri Grameen Sadak Yojana (PMGSY), National Rural Livelihoods Mission, Jal Jeevan, etc. There has also been convergence of various schemes with MGNREGS at respective State levels such as Ambedkar Gram Vikas Yojana to expand its coverage through synergy and simultaneously facilitate asset creation (MoRD, GoI).

One aspect that sets aside MGNREGS from other schemes is that the selection of beneficiaries are entirely demand driven (Operational Guidelines, 2012). Every individual with a job card demanding for work should be mandatorily provided employment within 15 days. In the case of failure to provide employment, the individual who demanded for work is eligible for an unemployment allowance.

The pandemic has brought several unforeseen and critical challenges in its institutional delivery. The sudden reverse migration of labour force from cities to rural areas increased the demand for jobs in the MGNREGS; budgetary and bureaucratic/ implementation challenges posed due to prolonged lockdown and cash strapped rural population (Food and Agriculture Organization of the United Nations, 2021). The scheme analysis of MGNREGS follows the framework detailed below:

Themes	Indicators
Access	Proportion of number of applicants who received job cards versus number of applicants who applied for job cards
Coverage	Proportion of Scheduled Caste persondays to that of total persondays generated
	Proportion of Scheduled Tribe persondays to that of total persondays generated
	Proportion of female active workers to total active workers
Availability	Percentage of people who demanded employment to whom employment was provided
Utilisation	Percentage utilisation of the scheme fund available
	Ratio of average wage received to notified wage

Table 6: MGNREGS Indicator Framework

Among the 60:40 division States, the top three performers are Kerala, Andhra Pradesh and Odisha and the bottom three performers are Madhya Pradesh, Jharkhand and Goa. A very prominent finding from the 60:40 division States is that all States except Kerala that came in the top six under the theme of Utilisation fall in the bottom 50 percentile in the overall performance in MGNREGS. Utilisation looks into the percentage of funds utilised as well as average wage given by the States. Despite good performance in the theme of Utilisation, States like Uttar Pradesh, Bihar and Jharkhand show poor performance in terms of Access, Coverage and Availability. In order to strengthen this finding further, a correlation analysis was conducted between the themes and the overall Index. The findings showed that there is no significant correlation between Utilisation and the overall rank (correlation coefficient – 0.33) in the 60:40 division States. Another finding from the correlation analysis of 60:40 division States was that the theme of Access showed strong positive correlation with the overall Index (correlation coefficient – 0.83).

Evidently, the top three States in the overall rank – Kerala, Andhra Pradesh and Odisha – showed good performance in the theme of Access as well. Kerala, Andhra Pradesh and Odisha stood 3rd, 1st and 6th respectively in the theme of Access. On the other hand, Kerala stands at the first position under the theme of utilisation. Along with this, the State also exhibited good performance in Access, as well as, Availability; 3rd and 4th ranks respectively. Among the top performing States, while unemployment rates of Andhra Pradesh (7.5%) and Odisha (3.5%) are below the national rural unemployment rate (8.8%), the unemployment rate of Kerala (15.8%) is much higher than the national and national rural unemployment rates as of June 2021 (CMIE, 2021)[13] .

In addition to this, Kerala has consistently shown low Labour Force Participation Rates (LFPR). One of the chapters in the India Migration Report, 2020 explores the impact of emigration on the Female Labour Force Participation in Kerala (FLFPR) (Rajan, S.I. (Ed.)., 2020)[14]. The impact of high migration rates in Kerala seems to reflect a declining trend in LFPR and FLFPR. The chapter discusses the declining trend in FLFPR and LFPR in Kerala and how both the rates have fallen below the national average. Despite high professional level literacy among females in Kerala, the same does not translate into high FLFPR. The study conducted in the chapter concludes that the FLFPR of the women left behind in households of emigrants are very low (Menon & Bhagat, 2020)[15]. This is also reflected in the performance of the State in the theme of Coverage. This theme assesses the coverage of SC, ST and female beneficiaries as a proportion of total beneficiaries in the State. Kerala stands at the 13th position out of the total 18 in coverage. Punjab, Telangana and Gujarat were the top three performers in this theme while Uttar Pradesh, Madhya Pradesh and Goa were the bottom three performers.

Jharkhand, Bihar and Chhattisgarh are the bottom three States in terms of performance in the theme of Availability. This implies that the number of applicants who got jobs as a proportion of the total number of applicants were lowest in these three States. Poor performance of these States in Availability is also reflected in the overall ranks of the States in MGNREGS; Jharkhand ranked 17th, Bihar ranked 15th and Chhattisgarh ranked 11th.

The poor performance in Availability can be further explained using the high Unemployment Rates of these States as well. The Unemployment Rates as of June 2021, according to Centre for Monitoring Indian Economy (CMIE) data, is 12.8%

for Jharkhand and 10.5% for Bihar; both of which are higher than the National Rural Unemployment Rate of 8.8% and National Unemployment Rate of 9.2% calculated using the 30 day moving average for the month of June 2021. In addition to this, the LFPR for Bihar was 36.67% and Uttar Pradesh was 35.16% during January-April 2021 (Statistical profiles: Unemployment in India, 2021). Both these rates are lower than rural India's LFPR of 41.8% for the same period.

Goa is the worst performing State in the overall rank, Access, Coverage And Utilisation. Contrary to its poor performance across other themes and the overall rank, the State shows best performance under the theme of Availability. Unlike other schemes, MGNREGS places high importance on demand for work. The selection of beneficiaries of this scheme is based on demand for employment made from the demand side and therefore does not have issues relating to bias in selection as everyone who demands employment should be provided with the benefits under the scheme.

Goa has provided employment to only 97.6% of the people who demanded jobs under MGNREGS; thereby pushing it to the last rank. The poor performance of the State in MGNREGS is also reflected in its unemployment rate (17.7%) as of June, 2021; which is higher than the national average. In addition to MGNREGS, the State implements its own scheme called Chief Minister's Rozgar Yojana which aims to provide employment and entrepreneurship assistance to educated and unemployed youth in the State. This along with a high focus of implementation of MGNREGS would probably help in tackling the high unemployment rates of the State.

The good performance of Kerala in MGNREGS is also reflected in the performance of the State in the Governance Model; Kerala ranked first in the Governance Model, as well as, in MGNREGS. The same trend was not observed in the case of Andhra Pradesh and Odisha; however, the good performance in MGNREGS was reflected in the performance of Odisha in the pillar of SDG 1 (No Poverty) under the theme of Voice and Accountability under Equity where Odisha came second in place.

In the 90:10 division States, the top three performers are Mizoram, Sikkim and Nagaland and the bottom three performers are Manipur and Assam. The poor performance of the bottom three performers in MGNREGS is in agreement to their poor performance in the governance model, as well. Assam ranked 14th out of the 19 Large States and Manipur ranked 11th out of the 11 in the Small States category.

Correlation analysis between the theme performance and the overall ranks were carried out for the 90:10 division States as well. The analysis showed strong positive correlation between the themes of Access and overall rank (correlation coefficient – 0.79) and Availability and overall rank (correlation coefficient – 0.80). Comparable to the findings from analysis of the 60:40 division States, the theme of Utilisation did not show any significant correlation in the overall Index (correlation coefficient – 0.26) in the 90:10 division States.

Nagaland ranked 3rd in the overall rank and was a consistent member of the top three performers in the themes of Access (3rd), Coverage (1st) and Availability (2nd). The trend of good performance of Nagaland does not, however, extend to the theme of Utilisation where it stood 10th out of the total 11 States ranked in the category. This reinforces the earlier stated idea of how high fund utilisation not necessarily contributing to good overall performance of the State.

The trend of poor performance in Utilisation not owning to good overall rank is also seen in the case of Tripura. Tripura is the worst performer in the theme of Utilisation; contrary to its good performance in Access (2nd) and Availability (5th). Tripura, however, ranked 4th from the bottom on Coverage; bringing down its overall rank to six. Despite fairly good performance under themes of Access (4th) and Availability (4th), Manipur has fallen to the bottom three owing to being the worst performer in Coverage (11th). This could be an implication of lack of attention that the State provides to involvement of vulnerable categories in their developmental activities.

A correlation analysis between the MGNREGS Index and indicators from the Governance Model showed strong negative correlation of -0.63 (60:40 division States) with the indicator of rural indebtedness from the Governance Model. According to Census

2011, around 58% of the rural population is dependent on manual labour; out of which, around 30% are landless agricultural labourers. The seasonal nature of agriculture creates a gap of Seasonal Unemployment. It is possible that this gap is being addressed by the creation of employment opportunities owing to implementation of MGNREGS. In order to further this argument, the particular example of Bihar can be considered. Bihar has high rural indebtedness and a low ranking in the implementation of MGNREGS. According to the Agricultural Statistics at a Glance report, 39.2% of the total rural working population of India are agricultural workers; in the case of Bihar, it is 56.8%. This means that one of the causes of high Rural Unemployment Rate in the State could be Seasonal Unemployment among agricultural workers. The lack of employment, therefore income, leads to high rural indebtedness. This means that MGNREGS could be identified as the scheme to systemically reduce Rural Indebtedness by acting as a livelihood security net for the unemployed and/or seasonally unemployed.

The findings from the analysis of the MGNREGS shows that mere utilisation of funds does not imply good performance in their overall ranks. The indicator that contributes highest to good performance is in the themes of Access and Availability. The access to schemes for vulnerable of vulnerable population is what the States should improve attention to. Policy makers need to keep in mind that the diversity within the beneficiaries, acceptance rate of applications, ease of access in application procedures, etc. should be paid more attention to. MGNREGS could act as a very prominent tool to reducing the steadily increasing rates of Rural Unemployment; even during the unpredictability associated with the economy owing to the pandemic.

A zoomed out view of the Scheme Analysis shows that the performance of the States in the Governance Model can be explained using their performance in the Centrally Sponsored schemes. Kerala, top performer among Large States in the Governance model, has consistently appeared in the top six in SmSA, NHM, ICDS and MGNREGS, as well. The only scheme where Kerala showed poor performance was MDMS; this could be explained by looking at the higher enrolment in aided and private schools than in government schools. MDMS is one scheme in which most States showing good performance in Governance Model were poor performers and vice versa. As MDMS mostly covers government schools, the extent of coverage is affected by the higher enrolment in private schools in better performing States.

Uttar Pradesh and Bihar, bottom performers under large States in the governance model, appear consistently as bottom five performers in MDMS, MGNREGS and NHM. This is also reflected in their performance in SDG 4 (Quality Education) under the theme of Government Effectiveness under Growth, SDG 3 (Good Health and Wellbeing) under the theme of Government Effectiveness pillared under Equity.

On the other hand, Odisha, worst performer in the Governance Model, showed top performance in SmSA, ICDS and MGNREGS. This could be considered as a good effort invested by the State in order to improve its performance in the Governance Model. The performance of the State in SDG 4 (Quality Education) under Government Effectiveness under Growth and SDG 1 (No Poverty) under Government Effectiveness under Equity is not among the bottom three. This could be seen as a sign of improvement in the performance of the State owning to good implementation of the schemes.

Similar to the Large States, Mizoram, one of the top performers among the Small States in the Governance Model, appeared repetitively as top performer in MDMS, SmSA, MGNREGS and NHM. Jammu and Kashmir is a consistently poor performer in all scheme analyses other than NHM. This cannot be compared to its performance as it falls under UTs in the Governance Model where it is positioned at the second place. However, among the UTs, Jammu and Kashmir scores lowest in the theme of growth and this could be a result of poor performance in schemes that generally contribute to development.

[1] Sheng, Y. K. (n.d.). What is good governance? United Nations Economic and Social Commission for Asia and the Pacific. https://www.unescap.org/sites/default/files/good-governance.pdf

[2] National Water Policy (2012). Department of Water Resources, Government of India. (2012). http://www.mowr.gov.in/sites/default/files/NWP2012Eng6495132651_1.pdf.

[3] Lowi, T. (1972). Four Systems of Policy, Politics, and Choice. Public Administration Review, 32(4), 298-310. doi:10.2307/974990

[4] Jal Jeevan Mission - https://jaljeevanmission.gov.in/
Claeson, M., Bos, E. R., Mawji, T., & Pathmanathan, I. (2000). Reducing child mortality in India in the new millennium. Bulletin of the World Health Organization. https://scielosp.org/article/bwho/2000.v78n10/1192-1199/en/.

[5] Asian Development Bank. (2017, November 15). Gender equality and food security - women's empowerment as a tool against hunger. Asian Development Bank. https://www.adb.org/publications/gender-equality-and-food-security-womens-empowerment-tool-against-hunger

[6] National Education Policy. Government of India. (2020). https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf

[7] Chakrabarti, S., Scott, S.P., Alderman, H. et al. Intergenerational nutrition benefits of India's national school feeding program. Nat Commun 12, 4248 (2021). https://doi.org/10.1038/s41467-021-24433-w

[8] Unified District Information System for Education, 2019

[9] Sharma, K. (2018). In elementary govt schools, a third of teachers don't have the required teaching degree. The Print. https://theprint.in/india/governance/in-elementary-govt-schools-a-third-of-teachers-dont-have-the-required-teaching-degree/67805/

[10] N, Mythili. (2018). Does Privatising the Public Interest Guarantee School Quality in India? Looking through the Lens of Teacher Education. SAGE Journals. https://journals.sagepub.com/toc/ipa/64/4

[11] Annual Status of Education Report, 2016

[12] Centre for Monitoring Indian Economy, 2021

[13] Rajan, S. I. (2020, November 27). India migration report 2020: Kerala model of Migration SURVEYS: S. I. Taylor & Francis. https://www.taylorfrancis.com/books/edit/10.4324/9781003109747/india-migration-report-2020-irudaya-rajan

[13] Menon, R. R., & Bhagat, R. B. (2020). Emigration and its effect on the labour force participation of women in the left-behind household. India Migration Report 2020, 162–176. https://doi.org/10.4324/9781003109747-9

Preparedness Response	Containment Response
Percentage deficit of doctors per million population against normative standards	Number of COVID-19 testing laboratories per million population
Percentage deficit of hospital beds per million population against normative standards	Number of COVID-19 cases per million population
Percentage allocation of state budget to health	Number of COVID-19 tests conducted per million population
	Number of COVID-19 death per million population

"However, as bad as things were, the worst was yet to come, for germs would kill more people than bullets. By the time that last fever broke and the last quarantine sign came down, the world had lost 3-5% of its population."

Charles River Editors,
The 1918 Spanish Flu Pandemic

"It's no use going back to yesterday, because I was a different person then."

Lewis Carrol
Alice in Wonderland

Regardless of the Cassandras and the doomsday prophets, it is fair to say that India's national response to the COVID-19 pandemic was notable and nimble-footed. India was quick to close its international borders, imposing a nation-wide lockdown that the WHO described as *'tough and timely'*, and sought to coordinate the containment, testing and enforcing COVID-appropriate behaviour across the diverse, differently endowed, and geographically dispersed States of India that together hold over 1.3 billion people. The Preparedness and Containment varied from State to State but there is little doubt that the states of India deserve substantial credit for the success of the country's COVID-19 response. The obverse is perhaps true for all States: the low rates of testing, less than optimal reporting and data management, capacity, resource and operational constraints; and in no small measure the problem of misinformation combined to limit the outcomes that the States targeted to achieve. It is in this backdrop that PAI 2021 seeks to measure the performance on the pandemic response at the Sub-national level. This is sought to be done by ranking the States on the COVID-19 Response Index. Besides helping to assess the performance of the states, the COVID-19 Response Index serves a long term objective: to draw attention to the need to mainstream public health and recognise the imperative to significantly enhance capacities in the public healthcare systems across the states of India, especially in primary care and at the district level. India's public healthcare system is chronically underfunded - just 1.28% of GDP - leaving primary and preventive care debilitated. The longer term implications of the pandemic should compel us to turn the health care system on its head and strengthen the primary care system, if nothing because it is the only recourse that the vast majority of the poor, the disadvantaged and the vulnerable have.

The last few decades have witnessed the emergence of several zoonotic diseases such as the Severe Acute Respiratory Syndrome (SARS), Middle-East Respiratory Syndrome (MERS) and the present outbreak of the COVID-19, all of which are responsible for causing some form of Acute Respiratory Tract Infections (ARTIs). The first case of pneumonia of unknown cause was identified in Wuhan, China in December 2019 and has emerged as a severe pandemic claiming millions of lives across the globe. India reported its first case on January 30, 2020 in Kerala when a student returned from Wuhan, China. The cases have risen steadily and have presented severe challenges to the public healthcare systems in India. With a population of almost 1.4 billion people, India has become the epicentre of almost 30 million cumulative cases, second only to the United States of America among all countries across the globe. The adversity of such catastrophic events are more in less developed countries like India, with an inadequate health system despite possessing good technical skills and superior institutions for research.

The pandemic has also continued to highlight the fault lines in our public healthcare systems which have gone unnoticed for decades. COVID-19 has brought to the fore long neglected issues - economic, social, cultural and political and has highlighted

where the State truly stands in achieving the SDG 2030 agenda of Leaving No One Behind. Despite health being a State subject, the COVID-19 pandemic had highlighted the over dependence of State Governments on the Central Government which acts as the primary actor in implementing policies and programmes.

This Chapter aims to study the performance of Indian states on their response to the pandemic ever since the first case was reported till March 31, 2021 grouped into two thematic areas - Preparedness and Containment.

India's Stand in the Fight Against COVID-19

The best time to prepare for an epidemic is way before it begins. To actualise this, healthcare investments should prioritise equity in delivery of services. A robust public healthcare system mounts a system-wide approach to tackling pandemic. Unfortunately, in India, the weak public healthcare system with huge variations between States possesses serious challenges for containing the virus spread and the rankings indicate the same. Under Preparedness Response there are three indicators measuring the public healthcare systems preparedness to the pandemic, under Containment Response; four indicators measuring the early identification of cases by growing their test capacity and reducing mortality.

At the time of writing this chapter, India, which accounts for about 18% of the world population, has reported 16% of the total number of cases and 10% of the reported total number of deaths worldwide related to COVID-19. The poor public health infrastructure, high population density, high burden of non-communicable diseases and existing socio-economic vulnerabilities placed India at a high risk for catastrophic events related to COVID-19.

The Case Fatality Rate (CFR) of COVID-19 has been found to be much higher than the earlier severe acute respiratory syndrome pandemics. This high infection rate and mortality has posed serious repercussions to the public healthcare systems across the globe. Effective strategies to control the spread of COVID-19 is by keeping the case load under control by identifying, testing, isolating, treating and tracing the infected persons alongside their contacts. These proven ways might not completely eradicate the spread but flatten the curve and resume life at a normal pace.

The Government of India, in a bid to curb the spread of COVID-19, imposed a nationwide lockdown on March 24, 2020. The sudden impositions of movement restrictions resulted in the slowing down of economic activities and loss of lives and livelihoods. An obvious reason which one might think for this sudden lockdown was the public healthcare systems' preparedness to tackle the pandemic. The results indicate that the States which have had better public healthcare systems preparedness have emerged as front-runners in the overall response. As indicated in the previous versions of PAI, India faces a serious challenge in terms of adequacy of public healthcare infrastructure with shortage of human resources as well as public healthcare infrastructure. India ranks 145 out of 195 countries ranked as part of the 2016 Healthcare Access and Quality (HAQ) Index published by the Lancet Journal funded by the Bill and Melinda Gates Foundation. India also has a poor doctor population ratio at one doctor per 1465 persons which is lower than the World Health Organization (WHO) norms of one doctor per 1000 persons. As per the data from National Health Profile 2020, the population of 1.4 billion is being served by 1.4 lakh government allopathic doctors. Considering the severity of the pandemic and the fact that countries with the best public healthcare infrastructure facilities have struggled to contain the virus, it was essential to impose strict lockdown measures. However, the government's lockdown policies have come under criticism from several activists and economists who have argued that the short notice of the lockdown left marginalised communities in a limbo.

Methodology

The COVID-19 Response Index uses the Principal Component Analysis (PCA) approach. The COVID-19 Response Index is generated from seven indicators under two Themes; Preparedness and Containment, all of which are measured on a continuous scale. The Preparedness Theme is based on the idea that the '*pandemic anticipation and preparedness is a continuous process of planning, exercising, revising*

and translating into action national and Sub-national pandemic preparedness and response plans' (Enriquez, 2020)[1]. The Theme of Containment on the other hand includes containment strategies such as early detection of cases through reliable testing standards, isolation, quarantine, and adequate treatment (Walensky and Rochelle, 2020)[2]. The indicators under each of these Themes are mentioned below:

Preparedness Response	Containment Response
• Percentage deficit of doctors per million population against normative standards • Percentage deficit of hospital beds per million population against normative standards • Percentage allocation of state budget to health.	• Number of COVID-19 testing laboratories per million population • Number of COVID-19 cases per million population • Number of COVID-19 tests conducted per million population • Number of COVID-19 deaths per million population.

Raw data for each of the indicators were collected from Government data sources and were converted into scaled scores (using normalized Z scores) that appropriately align with the directionality of the indicator. This methodology reduces the bias in the calculation of the Composite Index introduced by the spread of the data or large variance in the data. Indicators pertaining to preparedness were collected from National Health Profile 2020 and State Government budget reports while the indicators pertaining to containment were collected from an online database covid19india.org, an open Application Program Interface. This platform is a volunteer-driven, crowd-sourced database for COVID-19 statistics in India that integrates data from the health ministry, States etc. into one single platform.

Performance of Large States

There are 18 Large States which have been ranked in the COVID-19 Response Index.

The findings from, and subsequent ranking of the Large States, are to some extent comparable to the findings of the Governance Index, given a positive Correlation coefficient of 0.54 between the Indices scores.

However, careful inquiry of this result provides some notable findings. Among the 18 Large states in India, the top five States with the highest COVID-19 Response Index scores are Kerala, Tamil Nadu, Andhra Pradesh, Assam, and Karnataka, while the bottom five States are Jharkhand, Uttar Pradesh, Madhya Pradesh, Bihar and Maharashtra respectively. While Kerala has the highest score in both the Index rankings, not all States have a similar trend. Tamil Nadu has a similar 2nd rank in both the Indices.

For Kerala and Tamil Nadu the rankings have improved due to their combined performance in the Theme of Preparedness, as well as Containment.

Kerala, Tamil Nadu and Andhra Pradesh are influenced due to the very low shortage of doctors and hospital beds as compared to normative standards. Further, in terms of Containment, these States also have a substantial number of testing labs leading to adequate case detection and isolation.

For the bottom five States, Bihar and Uttar Pradesh are the two States which are common with the Governance Index where they rank 17th and 18th, while their rankings are 17th and 15th respectively on the COVID-19 Response Index. Bihar and Uttar Pradesh have a poor performance due to their severe lack in Preparedness as well as Containment measures.

There are also some important observations that are worth mentioning. While Assam has a rank of 14th in the Governance Index, it performs substantially well in the COVID-19 Index with a rank of 4th.

Assam's high ranking in the COVID-19 Response Index, is due to its positively strong performance in the Theme of Preparedness.

Assam has a comparatively high percentage of allocation in the health infrastructure of the State. On an average, the State has allocated around 6.66 percent of the total State budget to health in the last five years. This is considerably higher than any other Large State in the country. The State that follows Assam in this allocation is Chhattisgarh which has allocated 5.46 percent of the total State budget to health.

Telangana, on the other hand, has a rather unusual performance in the COVID-19 Response Index. While it ranks the highest in the theme of Containment, it ranks the lowest in Preparedness. This rather contradicting result is due to two main factors.

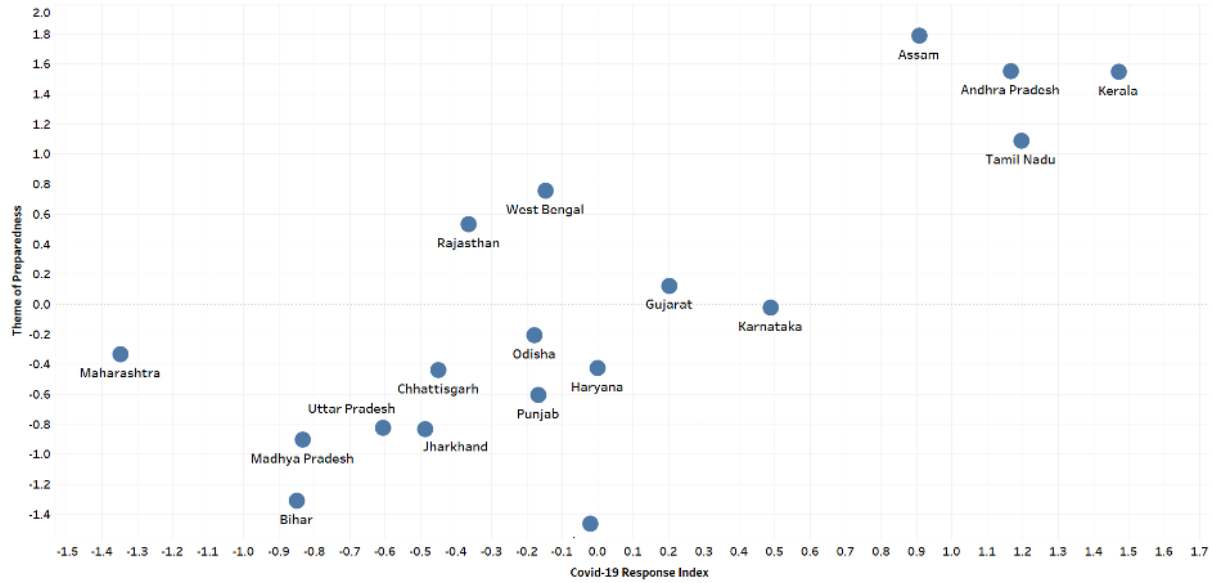
Telangana has a substantially high deficit in the number of doctors (96.8%) and hospital beds (97.4%) as compared to normative standards.

Only Bihar has a marginally higher deficit compared to Telangana at 97.4% shortage of doctors. The government in Telangana also has a very poor allocation of the State budget for the public healthcare infrastructure, which is the lowest only after Haryana and Punjab. Only 3.98% of the State budget of Telangana is spent on health, and this, along with the other factors, leads to its poor performance in the Theme of Preparedness. With regard to the Containment measures, Telangana has a consistently strong performance across all the indicators concerned under the theme. While it has a moderately high number of testing laboratories per million people (1.6 testing labs), it has a low caseload of COVID-19 cases as compared to other States like Maharashtra, Kerala, Andhra Pradesh and Karnataka. Telangana also has a low death rate per million population which stands at just around three deaths, which is significantly lower compared to Maharashtra and Karnataka where the figures are around 52 and 36 deaths, respectively.

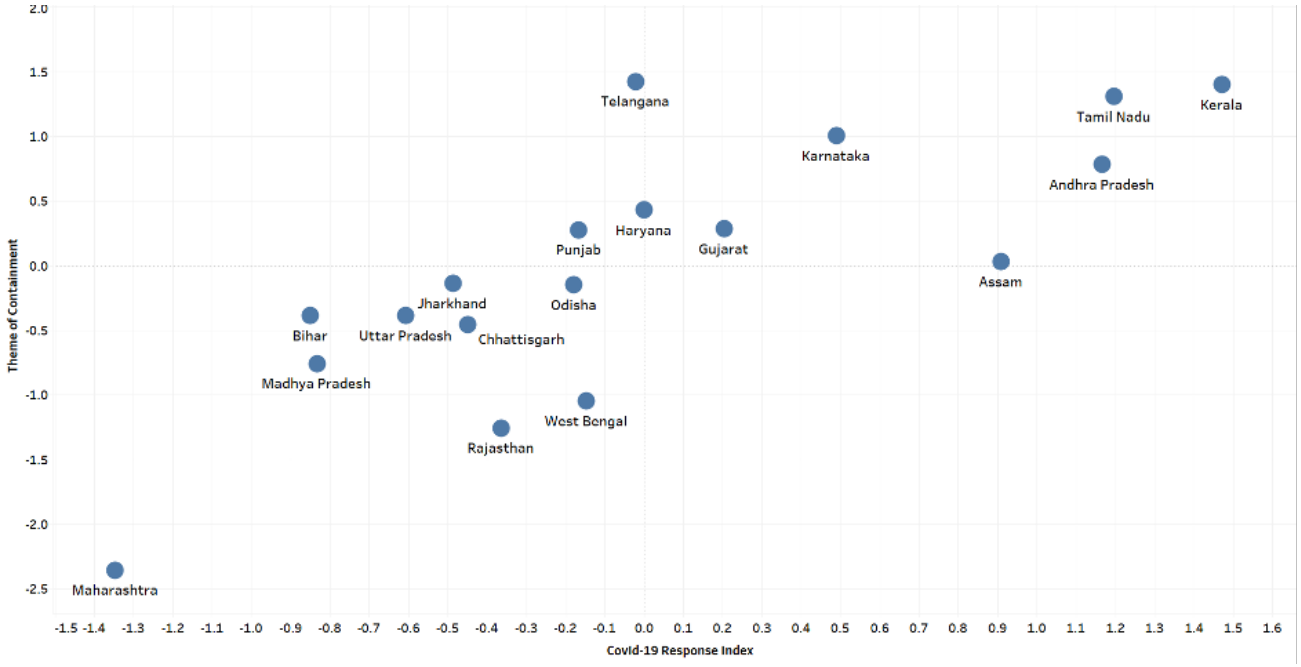
Interestingly, the States in Southern India are the top performers in the COVID-19 Response Index.

All four States in the region; Kerala, Tamil Nadu, Karnataka, and Andhra Pradesh, are among the top five performers in the Index. While Kerala, Tamil Nadu and Andhra Pradesh are the top three States, due to their consistent performance in both the themes, Karnataka ranks 5th due to its moderately good performance in the Theme of Preparedness. Despite having a low allocation to the health infrastructure at 4.24%, Karnataka's performance is influenced primarily due to the low deficit of hospital beds in the State; as compared to other States, Karnataka has a deficit of only 79%.

Figures below indicate that Large States, such as Assam, Tamil Nadu, Andhra Pradesh and Kerala have a comparatively high rank in the COVID-19 Response Index due to their strong performance in the theme of Preparedness which also means that the public healthcare infrastructure in terms of access to government institutions, doctors etc. is better and more complaint towards the prescribed normative standards.



COVID-19 Response Index



The evident trend that has been observed in the COVID-19 Response Index is the ranking of States which have a relatively poor economic and financial status. These are States which have a low per-capita Gross State Domestic Product (GSDP), such as Bihar, Jharkhand, Uttar Pradesh, and Madhya Pradesh.

Data from the Ministry of Statistics and Programme Implementation (MOSPI) mentions the collective contribution of these States in India's GDP stands at only around 17.06% for FY 2019-20. All these States have a considerably poor performance in the COVID-19 Response Index, as well as in the Themes of Preparedness. This is due to the poor State of the public healthcare infrastructure which has been predominant for several decades due to the weak pattern of development.

These States have performed comparatively well in the theme of Containment, however, that may be due to the cyclical nature of the problem of poor health infrastructure, leading to low detection of COVID-19 cases, low caseloads, and subsequently, lower death records.

Performance of Small States

The Small States considered for the COVID-19 Response Index comprises the Seven North-eastern States, along with Delhi, Goa, Himachal Pradesh and Uttarakhand, i.e., a total of 11 States.

These States do not have any relation to their rankings in the Governance Index, and some States perform rather contrarily.

Delhi and Goa are the States which are most evident with a dissimilar performance in the Governance Index.

While Goa ranks 2nd in the Governance Index, it ranks last in the COVID-19 Response Index. This poor ranking of Goa is contributed largely by its weak performance in the Containment measures, though it has performed substantially well in the theme of Preparedness where it ranks 3rd among the other Small States.

Goa has the highest caseload of COVID-19 cases per million population at around 3049 cases. Goa also has a very high death rate at 43 deaths per million, where it is 2nd only to Delhi. Due to a comparatively high number of testing laboratories, the testing and case detection rates are very high in Goa, which lead to a high caseload and a subsequently higher death rate.

The above-mentioned are the contributing factors to its performance in the Theme of Containment. Contrary to this, Goa is a good performer in the Theme of Preparedness, where it ranks 3rd among the 11 Small States. This is due to its high allocation of the State budget towards the public healthcare infrastructure. On an average, the State has allocated around 6.32% of the total State budget to health in the last five years. Goa also has a comparatively lower deficit in terms of the number of doctors (56.8%) and hospital beds (61%) compared to the normative standards. Only Delhi and Sikkim have a lower deficit compared to Goa. Goa's poor performance in the COVID-19 Response Index is majorly due to its extremely poor ranking in the Theme of Containment, which leads to an overall poor performance.

In the case of Delhi, where it ranks 9th in the Governance Index, it is the best performer in the COVID-19 Response Index.

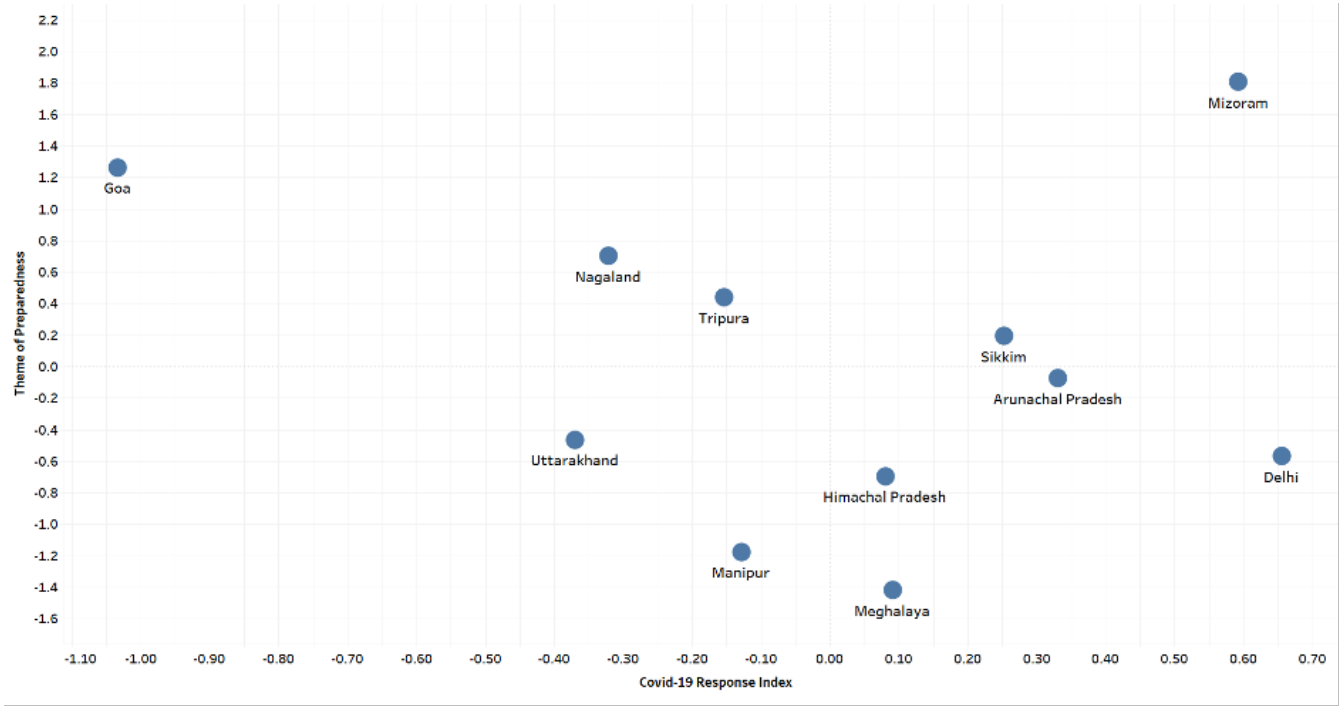
Delhi is a top performer due to its strong performance in Preparedness, however, Delhi has a poor Containment standard where it ranks 10th among 11 Small States.

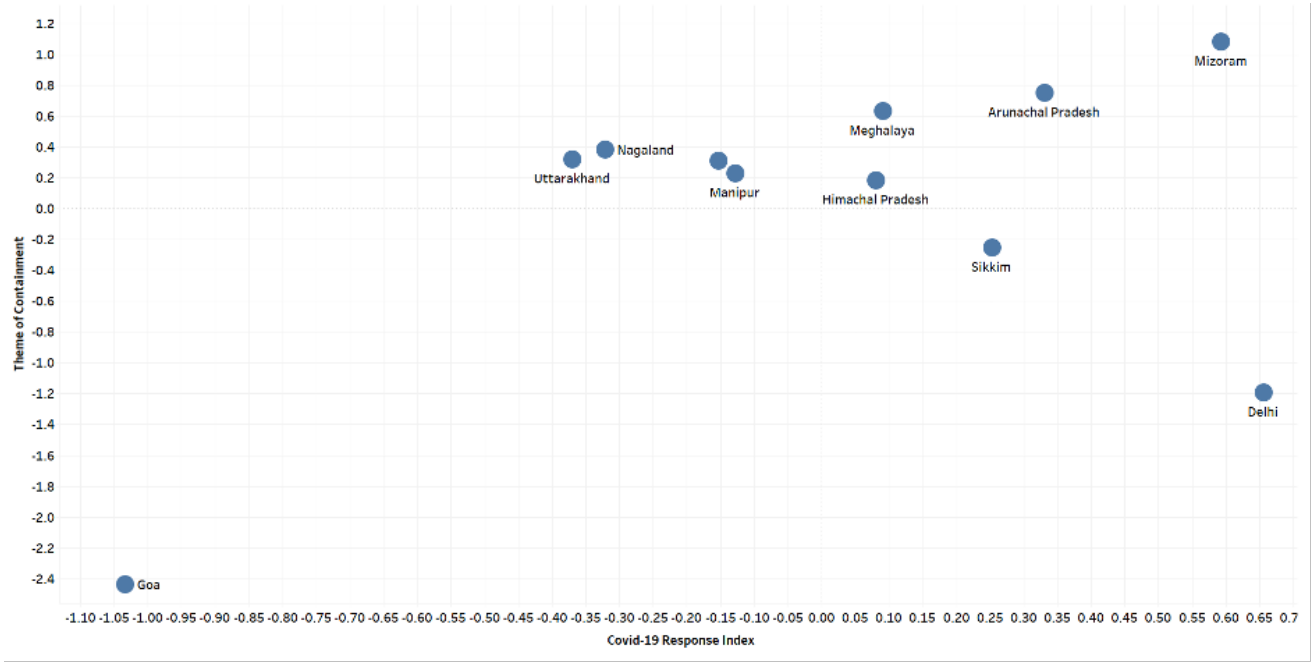
Along with a very low deficit in terms of doctors at only 25%, the Government of Delhi has a huge expenditure contribution to health from its budget.

Delhi allocates approximately 11.42% of its budget to health, which is the highest of all Large as well as Small States in India. This pushes its rank to the top in terms of Preparedness. Delhi's poor performance in Containment is due to its high caseload, and the subsequently high number of deaths in the city.

Figure below indicate that among the Small States, Mizoram has a comparatively high rank in the COVID-19 Response Index, 2nd rank, due to its strong performance in both the Themes. It justifies the ranking of Goa among the Small States, as it has an extremely poor performance in the Theme of Containment.

Some important observations can be further highlighted for the States of Sikkim, Nagaland, and Uttarakhand. While Sikkim is a good performer in terms of Preparedness, it performs poor in its Containment measures. On the contrary, Nagaland and Uttarakhand have better Containment performance as compared to Preparedness. This is due to two major reasons. While there is a marginal difference, Sikkim (5.96%) has a higher allocation on health from its State budget as compared to Nagaland





(5.22%) and Uttarakhand (5%). This leads to the performance in the theme of Preparedness. Nagaland has comparatively lower cases per one million population, and a low death rate leading to a good performance in the theme of Containment. It is however, important to mention that Nagaland has the lowest testing rate per one million population in the 11 Small States considered.

COVID-19 War rooms in the Management of COVID-19 in Kerala

The Central Government data sources have increasingly suggested that the caseload increments in Kerala have been much higher than the national increment. It is imperative to note that the number of COVID-19 cases reported per day depends upon the prevailing surveillance systems, better testing and contact tracing mechanisms adopted by the state. A notable mention to the top performer in the rankings was the setting up of the centralised COVID-19 war rooms across the state which relies on state of the art technology to make a difference in the containment of the pandemic. The State, having learnt from its experience from the Nipah virus, left no stone unturned in its management of the COVID-19 pandemic. In the initial stages of the pandemic, when not many cases were registered, the State linked all medical colleges, hospitals and other public healthcare centres with the war room. The war-rooms across the State had charted out plans to tackle the spread of the virus through frequent meetings and coordinating all activities pertaining to the containment efforts in the State. The war room has different units ranging from surveillance to offering teleconsultation services to shifting of patients to COVID-19 care centres to providing oxygen and ventilator support etc. These proactive measures start once a person tests positive. Following this, the local health workers coordinate with them and offer support depending upon the requirement of the patient. For example, if the person requires a hospital bed, the war room is contacted and based upon the availability of beds, the shift is made. These measures have ensured that the patients in need of oxygen support or a hospital bed do not have to run around or contact people from multiple sources to find beds etc. This centralised process has solved the problem of uneven distribution of COVID-19 cases to hospitals and also has streamlined the process easing discomfort of those affected.

The war room, the first of which was set up in the State's capital Thiruvananthapuram, has been buzzing with activities ever since January 24, 2020, six days before the first case was reported

in the State which in fact was the first case in India. A team of experts and volunteers work round the clock spread across 18 committees, each one of them having specific tasks and is constantly working in order to combat the spread of virus in the State. If the Thiruvananthapuram war room was the first in the State, the Ernakulum one has the most modern war room which has the ability to capture real time data through an open source software called Corona Safe Network developed by a group of IT professionals. The proactive response of the state by a system of local officials, volunteers and a team of medical officials is filling the gaps and steering its battle in the management of the pandemic.

[1] *Enriquez, K. (2020). Preventative Measures and Practices That Can Keep People Healthy During a Pandemic.*

[2] *Walensky, R. P., & Del Rio, C. (2020). From mitigation to containment of the COVID-19 pandemic: putting the SARS-CoV-2 genie back in the bottle. Jama, 323(19), 1889-1890.*

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PAI
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Equity
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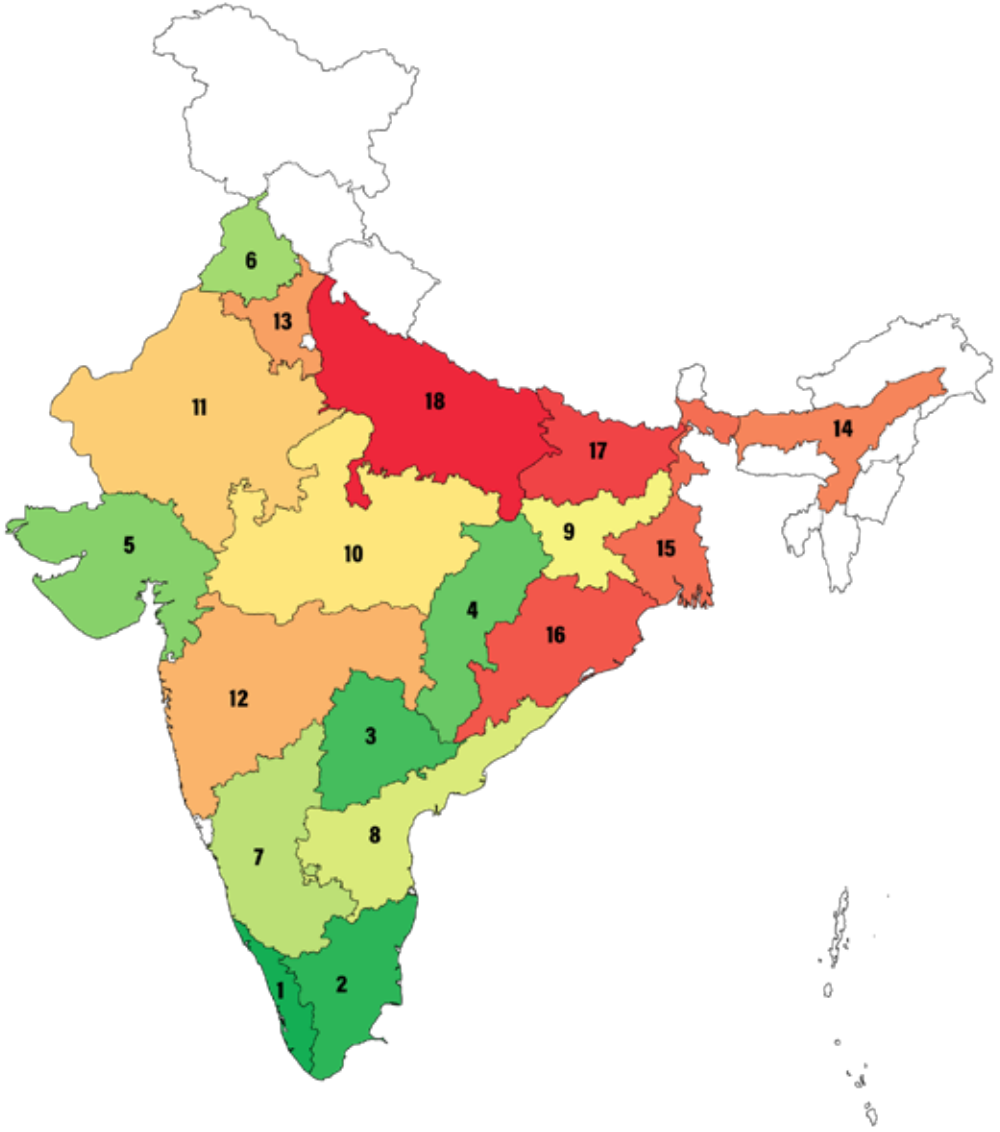
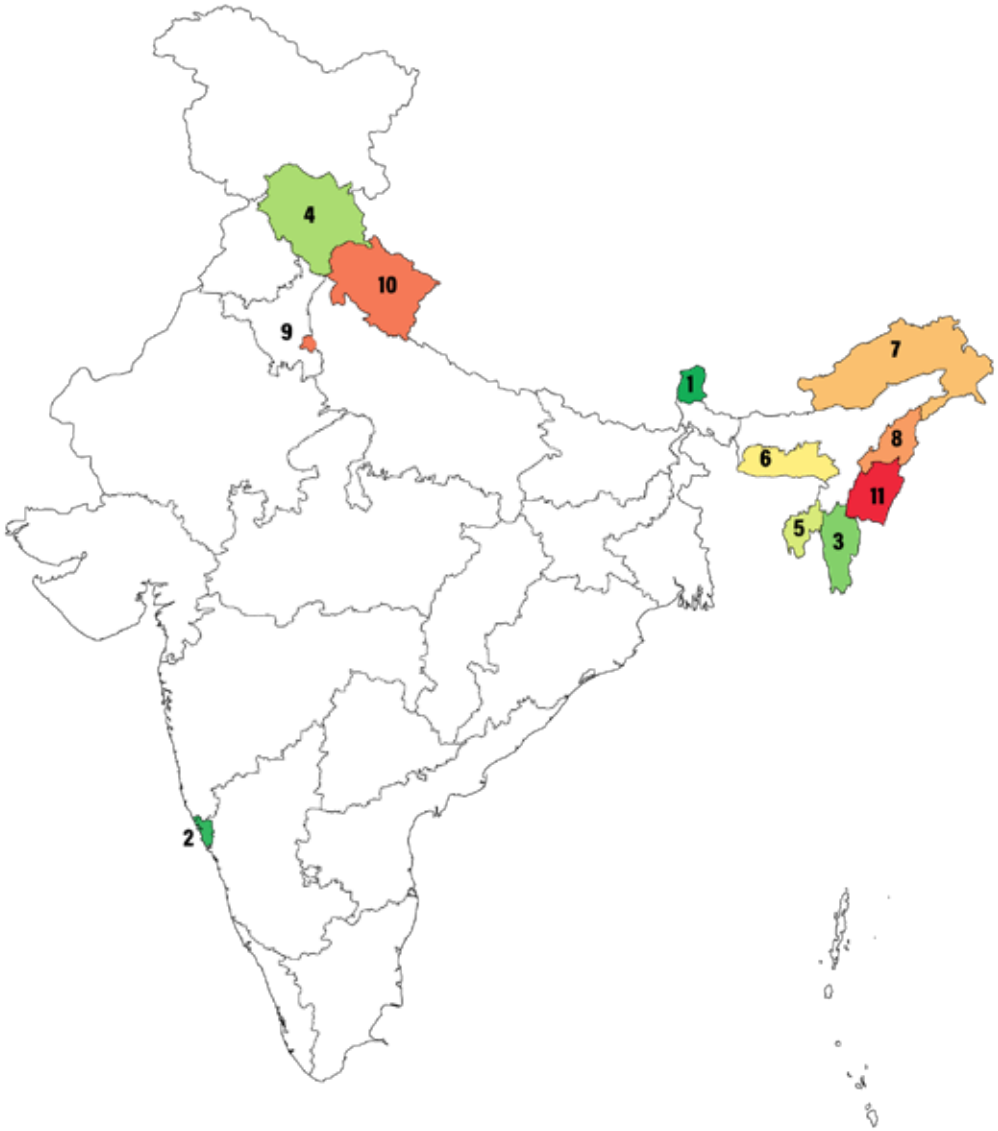
The Epilogue - Cluster Analysis



Rank	Large States	Index
1	Kerala	1.618
2	Tamil Nadu	0.897
3	Telangana	0.891
4	Chhattisgarh	0.872
5	Gujarat	0.782
6	Punjab	0.643
7	Karnataka	0.121
8	Andhra Pradesh	0.077
9	Jharkhand	-0.071
10	Madhya Pradesh	-0.113
11	Rajasthan	-0.243
12	Maharashtra	-0.360
13	Haryana	-0.431
14	Assam	-0.459
15	West Bengal	-0.553
16	Odisha	-0.910
17	Bihar	-1.343
18	Uttar Pradesh	-1.418

Highest Index Value — Lowest Index Value

OVERALL RANKINGS

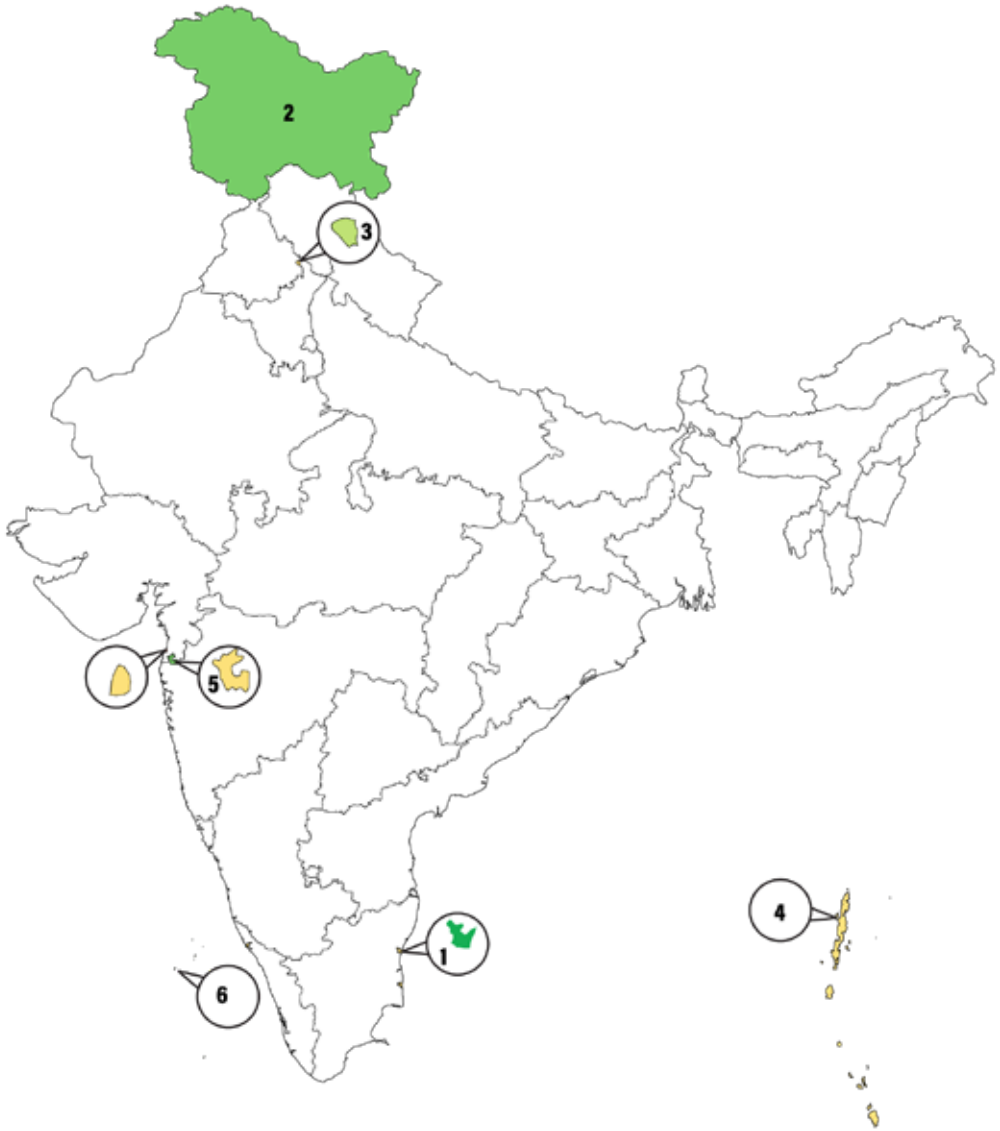


Rank	Small States	Index
1	Sikkim	0.907
2	Goa	0.748
3	Mizoram	0.659
4	Himachal Pradesh	0.318
5	Tripura	-0.009
6	Meghalaya	-0.146
7	Arunachal Pradesh	-0.258
8	Nagaland	-0.317
9	Delhi	-0.476
10	Uttarakhand	-0.643
11	Manipur	-0.783

Highest Index Value — Lowest Index Value

OVERALL RANKINGS

The Epilogue - Cluster Analysis



Rank	Union Territory	Index
1	Puduchery	1.345
2	Jammu & Kashmir	0.396
3	Chandigarh	-0.298
4	Lakshadweep	-0.302
5	Dadra & Nagar Haveli	-0.445
6	Andaman & N. Island	-0.696

Highest Index Value — Lowest Index Value

OVERALL RANKINGS

'The economic man is much less than the whole man and it is the whole man who, in the last analysis, should interest all of us, including the professional economist and the administrative planner.'

Dr. VKRV Rao
Essays in Economic Development, 1964

'You know what the issue is with this world? Everyone wants some magical solution to their problem and everyone refuses to believe in.'

Lewis Carrol
Alice in Wonderland

As we near the end of PAI 2021, it is important to recognise that assessing the performance of States, while important, one needs to also look at a Pan-India picture and answer the question – How are we doing as a country? What are the objective conditions of development across the country and how does this manifest as India's development performance? On the Human Development Index (HDI), India ranks 131 out of 189 countries (Human Development Report 2020, UNDP). The country slid down by two ranks from 2019. The greater part of the aggregate score that determines India's performance is predicated on how the States in India perform. The performance of the States this past year must be seen in the long shadow of the COVID-19 pandemic. The broad picture that emerges from the overall rankings in PAI 2021 is that COVID-19 accentuated the prevailing structural weaknesses in the States and worsened inequalities. While some States managed to stay on course in the development trajectory, though arguably, at a lower level equilibrium, others were compelled to make a conscious trade-off between lives and livelihoods, thus affecting overall development. Yet, it would be fair to say that regardless of the ranks on the PAI 2021 Index, all States deserve credit and in response to the COVID-19 challenge, emerged as winners and ensured, even if with varying degrees of success, that no one is left behind. As a country, despite several resource constraints, it was a seemingly insurmountable job that was well done.

The intent of this concluding chapter of PAI 2021 is to present a cluster analysis of the performance of the States to highlight how important it is to focus attention on those States that are weighing down the national aggregate performance and address the emerging gaps – technical, economic and social. If the longer-term goal of a sustainable and equitable society has to be achieved, development praxis needs to move the needle from a mere headcount analysis to understand better why economic growth is weak in some States and more important, why economic growth has not had a poverty reducing impact in some States relative to others. The Pan-India picture that emerges from the comparative performance of the States is that inequality in human development is pronounced in a cluster of States that show similar shortcomings, especially the poor performance on school education and primary health. The aim of this chapter is to present the patterns of inter-state disparities that make the task of development convergence so much harder. In the chapter on Delta Snalysis it was observed that traditionally low-performing States like Bihar and Odisha among others have shown an improvement in important indicators like school education, while the traditional better-performing States like Kerala and Maharashtra are beginning to decelerate especially from the perspective of equity.

Along the lines similar to PAI 2020, the approach to and the methodology applied for the Cluster Analysis is to assess the rate of transition of the development trajectories of the States. While the Chapter on the Equity Principle assessed the States on their performance on the Equity Pillar measured by a degree of equitable access to resources and opportunities; the Chapter on Economic Growth and its Discontents assessed the States on their ability to allocate the resources; with the Chapter on the Pursuit of Sustainability providing a measure

of environmental consciousness. Encapsulating all the tiers of measurement of Good Governance, PAI 2021 ranks the States on their overall performance. Some trends that emerge from the evidence that PAI 2021 garners are noteworthy:

First, there is an unmistakable process of convergence at play, i.e. all the States are progressing towards a path of steady growth over time, albeit, at a varying pace. Taking a long-term view, the evidence points to the fact that demographics favour the hitherto low-growth States because they have younger populations. They will in the foreseeable future constitute the growth drivers. In fact, the progress made by these States on some specific indicators has outpaced some of the better performing States. In contrast some of the traditionally '*developed*' States are showing signs of slowing down on some aspects of development.

Second, despite the Aspirational Districts initiative, like in the previous years, the evidence that PAI 2021 generates points to persistent and structural inequality concentrated in certain geographies. These populations must receive targeted and coherent policy attention and participatory and coordinated programmatic interventions. A structural problem common to these geographies, from a macroeconomic perspective is that of structural transformation. In the State-specific analysis presented in the fact sheets, PAI 2021 provides some recommendations on what might be done. In sum, the foundations of economic progress in several States remain fragile. Unless the structural issues are addressed in a sustained manner and political economy is better understood for rational economic decision-making, the journey to achieving the SDG goals by 2030 will be a long and arduous one. A sense of urgency must circumscribe the response to these persistent inequalities.

In the overall rankings of PAI 2021 in the Large States category, Kerala held its position at the top with an increase in the overall score to 1.618 from 1.388 from last year. Similarly, Tamil Nadu retained its 2nd rank, though with a slight dip in the overall score from 0.911 to 0.897. At 3rd place replacing Andhra Pradesh from the PAI 2020 ranking is Telangana, with a remarkable improvement in score from 0.387 to 0.891 in PAI 2021. Towards the tail end of the rankings are Odisha (16th) with a score of -0.910, Bihar (17th) with a score of -1.343 and Uttar Pradesh (18th) with a fall in score from -0.489 to -0.552.

Besides the top and bottom performers, Andhra Pradesh which ranked 3rd last year, ranks 8th in PAI 2021, and Karnataka which ranked 4th has fallen three places to 7th, while the score is still on the positive side providing incentive to the State to regain its development trajectory. The State of Gujarat which ranked 9th last year, ranks 5th this year with a score improvement of 0.05 to 0.780 in PAI 2021, while West Bengal which ranked 12th last year, has slipped to 15th, Maharashtra that ranked 7th last year has slipped to 12th, a clear indication that the state is struggling to recover from the 1st and 2nd wave of the pandemic.

In the Small States category, Sikkim tops the ranking in PAI 2021 against its 4th position in PAI 2020 with a significant improvement in the score from 0.602 to 0.907. Goa which was a top performer last year slipped one rank to 2nd with a significant dip in the score from 1.745 to 0.747. Another surprise was Mizoram which ranked 7th last year, but with an improved score of 0.658 has ranked 3rd in PAI 2021.

Delhi and Manipur continue to be at the bottom. Himachal Pradesh also slipped one place from 3rd to 4th in PAI 2021 (score of 0.317). Meghalaya which was at 2nd place last year with a score of 0.797 has seen a significant fall in its performance, ranking 7th in PAI 2021 with a negative score of -0.145.

In the Union Territories (UTs) ranking, Puducherry improving one place has come 1st (score 1.344), followed by Jammu and Kashmir which saw a massive improvement in its Sustainability score pulling up its performance to 2nd.

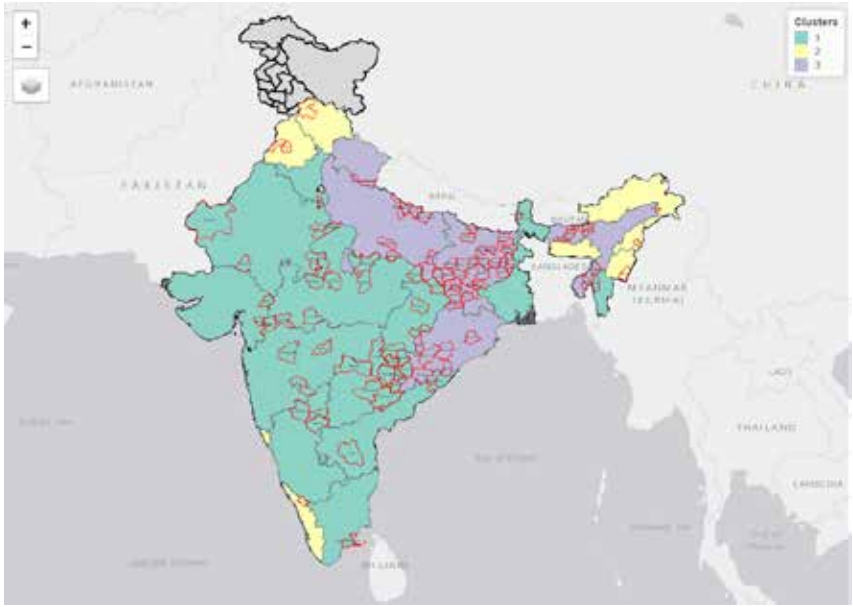
Chandigarh which was a top performer last year has slipped two places coming 3rd now, while the performance of other UTs remain the same.

Cluster Analysis

It is important to identify and understand the patterns emerging out of the performance of the States in terms of Governance. The PAI 2021 conducted a Cluster Analysis, an unsupervised machine learning technique to group data points depicting similar behaviour and uncover hidden patterns. Agglomerative Hierarchical Clustering was applied on the 43 indicators of the PAI Governance Model to classify the natural clusters among the States. The Clusters were first constructed at each of the Pillars then building therefrom a combined clustering of the States on all the indicators.

Equity Pillar Cluster

The Figure below shows Clusters under the Equity Pillar which comprises 21 indicators along various SDGs.



The First Cluster comprises the States - Andhra Pradesh, Chhattisgarh, Delhi, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Mizoram, Rajasthan and Sikkim, Tamil Nadu, Telangana and West Bengal. This Cluster is a mix of States which have performed very well also not so well in the Equity Pillar.

Out of the aforementioned States, Gujarat, Chhattisgarh, Rajasthan, Sikkim and Mizoram are the top performers in the Equity Pillar while others place last in their respective category. Having said that, these States have performed well in SDGs 1 and 11 (under Government Effectiveness) and 16 (under Rule of Law). On the contrary these States perform poorly on SDG 5 (under Voice and Accountability) and SDG 10 (under Government Effectiveness). This Cluster has 11 out of 21 indicators performing below average under the SDGs mentioned earlier.

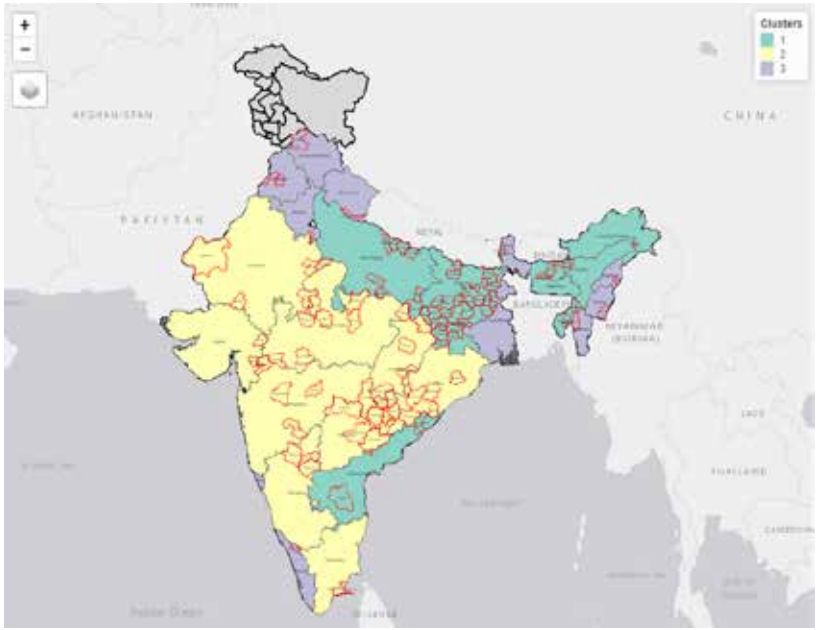
The Second Cluster comprises States - Arunachal Pradesh, Goa, Himachal Pradesh, Kerala, Manipur, Meghalaya, Nagaland and Punjab. This Cluster comprises States that are moderate to poor performers in the Equity Pillar and also heavily dominated by the Small States, apart from Kerala featuring as the outlier.

This Cluster is driven by the performance of the States under SDGs 1 and 2 (under Voice and Accountability), 3 (under Government Effectiveness) and SDG 10 (under Regulatory Quality). Kerala, Goa, Himachal Pradesh and Manipur have performed well in terms of catering towards the health sector registering good performance in providing social protection, prevalence of malnutrition, low infant mortality rates and more inclusive participation of women in the workforce. On the other hand, the States like Meghalaya, Nagaland and Punjab struggle for the same.

In the Third Cluster Assam, Bihar, Jharkhand, Odisha, Tripura, Uttar Pradesh and Uttarakhand which are also placed in the bottom of the Equity Pillar ranking in their respective categories. To not much surprise, two-thirds of the Aspirational districts are also mapped in this Cluster. This Cluster sees 13 out of the 21 Equity indicators performing far below the national average especially under indicators of prevalence of malnutrition, crimes against women, children and minorities and corruption.

Growth Pillar Cluster

The Figure below shows cluster of States on the basis of their performance in the Growth Pillar which constitutes 15 indicators.



The First Cluster includes Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Jharkhand, Meghalaya, Tripura and Uttar Pradesh. This Cluster only performs well in three out of 15 indicators.

This Cluster is an amalgamation of States that have shown improved performance in SDG 8 and SDG 9 (under Government Effectiveness), the aforementioned States as discussed in the chapter of 'Economic Growth and its Discontents' have better fiscal surplus/deficit, improved State's Own Tax Revenue Growth and value added by manufacturing and infrastructure to the GDP. However, these States perform poorly in terms of health and educational outcomes.

The Second Cluster dominated by the Large States comprises Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu and Telangana (also top and moderate performing under the Growth Pillar).

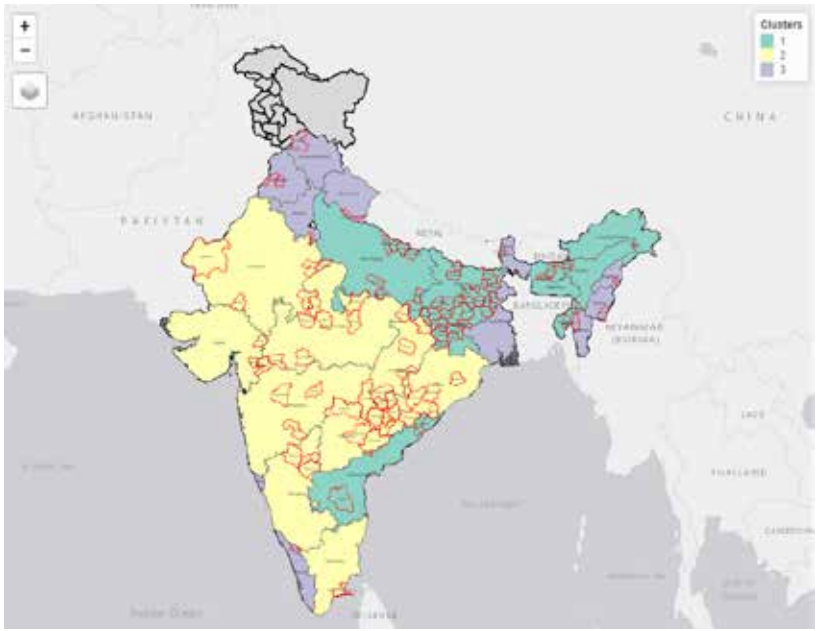
This Cluster can also be termed as 'the cluster of top performers' as the States have performed above national average in 10 out of 15 indicators, to name a few, health worker density, immunisation achievement, institutional delivery, Performance Grading Index (PGI), rural non-farm employment, proportion of houses electrified etc. However, these States suffered the severe burnt of the pandemic resulting them in directing their financial resources towards containing the pandemic.

The Third Cluster comprises Delhi, Goa, Haryana, Himachal Pradesh, Kerala, Manipur, Mizoram, Nagaland, Punjab, Sikkim, Uttarakhand and West Bengal. This cluster is driven by SDGs 3, 4 and 7 (under Government Effectiveness), and 8 (under Regulatory Quality).

The aforementioned States have performed well in terms of structural transformation from rural farm sector to secondary and tertiary sector, health outcomes and educational outcomes.

Sustainability Pillar Cluster

The Figure below shows the cluster of States on the basis of their performance in the Sustainability Pillar which consists of seven indicators.



The First Cluster includes Andhra Pradesh, Gujarat, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu and Telangana. This cluster essentially houses the top and moderate performing Large States in the Sustainability Pillar with Himachal Pradesh as an outlier addition from the Small States Category.

This Cluster sees above national average performance in four out of the seven indicators which map to the SDGs of 7, 15 and 11. States of Maharashtra and Rajasthan however have poor performance in SDG 15.

The Second Cluster comprises States that show a mixed performance under the Sustainability Pillar - Arunachal Pradesh, Assam, Chhattisgarh, Goa, Kerala, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Sikkim, Tripura, Uttarakhand and West Bengal.

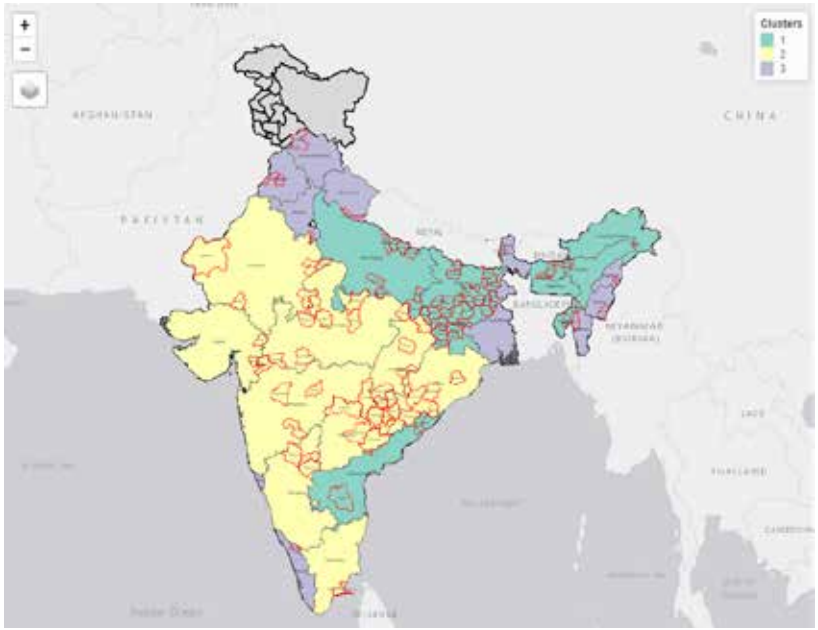
While Arunachal Pradesh, Chhattisgarh, Goa, Kerala, Mizoram and Sikkim are top performers in the Sustainability Pillar, Manipur, Tripura, Uttarakhand and West Bengal are the bottom performers.

The Third Cluster comprises States that have been consistent poor performers in the Sustainability Pillar over the years - Bihar, Delhi, Haryana, Jharkhand, Punjab and Uttar Pradesh. This cluster sees above national average only in two out of the seven indicators of Sustainability, while their performance is dragged down by their consistent poor performance in addressing air pollution, solid waste management and maintaining the Tree cover.

The Epilogue - Cluster Analysis

Composite Analysis Cluster

Finally, to stitch all the Pillar-wise clusters into one, the figure below shows the performance of the States on all the 43 indicators of the PAI 2021 Index.



The First Cluster includes the Large States - Kerala, Haryana, Punjab and all the Small States including Arunachal Pradesh, Delhi, Goa, Himachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura and Uttarakhand. This Cluster appears to be driven by the Growth Pillar where 10 out of 15 indicators are performing above the national average. In the Equity and Sustainability Pillar, 10 out of 21 indicators and four out of seven indicators are performing above the national average respectively.

It is interesting to note that all the Small States falling under this Cluster are characterised by their above-average performance in the Equity Pillar and moderate performance in the other two Pillars.

The 2nd Cluster includes nine Large States - Andhra Pradesh, Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu and Telangana. This Cluster is driven by its performance in the Sustainability Pillar where four out of seven indicators are performing above average.

The performance of the States in this Cluster was moderate in the other two Pillars with above-average performances in 10 out of the 21 indicators in the Equity Pillar and six out of the 15 indicators in the Growth Pillar.

The Third Cluster consists of Assam, Bihar, Jharkhand, Odisha, Uttar Pradesh and West Bengal. This Cluster is characterised by moderate performance in the Growth Pillar and below-average performance in the Equity and Sustainability Pillars. It is interesting to note that 57 out of the 112 districts which account for 50.8% of the total aspirational districts identified by NITI Aayog fall under the six States under this Cluster.

Also, all the bottom five ranked Large States as per the PAI 2021 rankings fall under this Cluster except Jharkhand which ranked 9th out of the 18 Large States.

The results from the Cluster Analysis are comparable to that of the Correlation Analysis. Cluster one contains all the Small States and three of the Large States – Kerala, Haryana and Punjab. In this Cluster, the States have performed well in the Growth parameters as compared to the Sustainability and Equity parameters. Cluster two contains nine Large States and is driven by its performance in the Sustainability Pillar. Cluster three contains all the five bottom-ranked Large States in the PAI 2021 Index along with Jharkhand. These States have performed moderately in the Growth Pillar but below average in the other two Pillars. The correlation coefficient between the Sustainability Index and PAI 2021 Index was 0.85, whereas the coefficient between Growth and PAI 2021 Index was 0.82 and the coefficient between the Equity Index and PAI 2021 Index was 0.79. These results indicate that the rankings of the Large States are almost equally influenced by all three Pillars. On the other hand, when we have a look into the Small States, the correlation coefficients between the

Equity Index and PAI 2021 Index was 0.67 and that of the Sustainability Index and PAI 2021 Index was 0.64. This indicates that the PAI 2021 Index for the Small States was influenced by the Equity and Sustainability Pillar in comparison to the Growth Pillar.

In the final analysis, the disruption caused by the COVID-19 pandemic has disrupted Growth across all the States. While some have been able to recover from it soon, others are preoccupied with implementing measures to counter the disruptive impact. Development as discussed earlier is not a linear phenomenon, it is as complex as one can get. Ensuring a holistic developmental trajectory, leaving no one behind is difficult to achieve. India's economic transition is complex and the patterns of growth and inequality diverse. A standard theoretical framework will perhaps miss a nuanced understanding of what is happening on the ground. But the analysis from PAI 2021 allows one to deduce one economic imperative that must be taken seriously: The States must focus attention on the structure, agency, and regulatory constraints on agriculture. The challenge is to transit from subsistence farming to a modern sustainable food production system, resilient to climate change.

As mentioned in PAI 2021, the heart of India remains rural and the largest number of common citizens the farmers. From this perspective, if one must articulate a sense of an ending it is simply: nothing about them without them.

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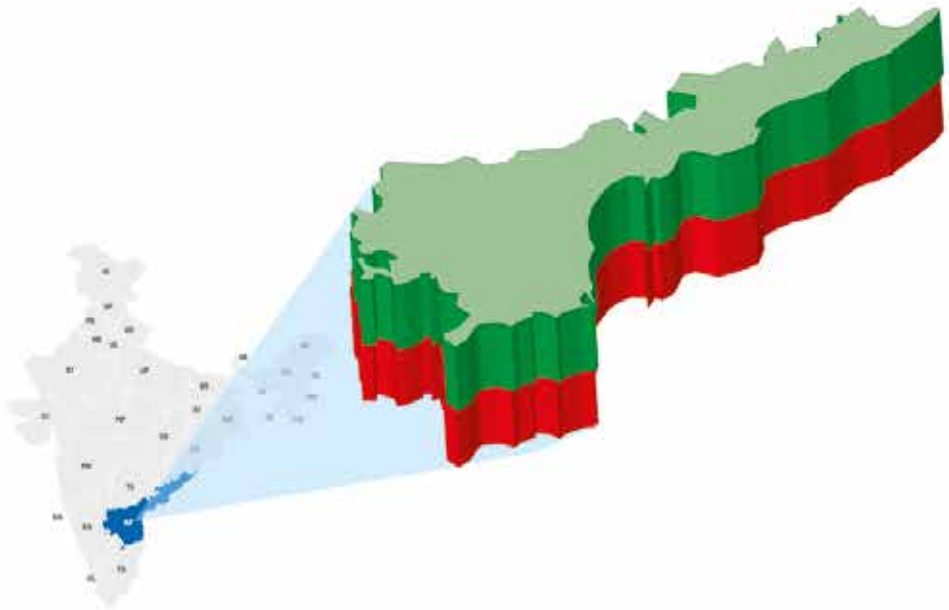
PAI
Governance in the States of India

Diversity in social, political, economic and cultural paradigms, is a unique feature of the Indian States. PAI 2021 assesses the wide variety of context and region-specific interventions for each of the States and UTs and examines them in the backdrop of the objective of "*leave no one behind*"

The State Factsheets presents the performance of each of the State and UTs and point to the sector, schemes and indicators that need urgent attention. The evidence from PAI 2021 will help the States develop a road map of reform action.

In sum, development as a non-linear process requires that States focus on the Human Development elements- Health, Education and Livelihoods.

ANDHRA PRADESH



The state has fallen drastically in terms of equity and growth pillar. PAI 2021 recommends that the state focus on rural sector, gender parity, education and forest reserves to improve it's performance in the index. The state should also imrpove it's performance in Samagra Siksha Abhiyan, Mid-Day Meal Scheme and Integrated Child Development Services.

	Score	Rank		Change in Rank
PAI Index	0.531	3	2020	▼
	0.077	8	2021	
Equity Index	0.651	1	2020	▼
	-0.086	10	2021	
Growth Index	0.729	5	2020	▼
	-0.101	11	2021	
Sustainability Index	0.213	7	2020	
	0.419	7	2021	
MGNREGA Index	0.510	2	2021	
SmSA Index	-0.312	14	2021	
ICDS Index	-0.490	16	2021	
MDMS Index	-1.033	19	2021	
NHM Index	0.493	4	2021	
COVID 19 Response Index	1.166	3	2021	
Preparedness Response	1.552	2	2021	
Containment Response	0.781	5	2021	

Equity

Expenditure in social sector
Worker Population Ratio (Female) (WPR)
Crimes against children
Utilisation of Nirbhaya Fund since its inception
Rural indebtedness
Proportion of urban population living in slums

Growth

Annual growth rate of NDP per capita
Proportion of total government expenditure on infrastructure
Institutional delivery
Proportion of population with access to electricity
Proportion of population using safely managed drinking water services

Sustainability

Renewable energy share in the total final energy consumption
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)
Percentage of households using clean cooking fuel

MGNREGA Index

Proportion of number of applicants who recieved jobcards versus number of applicants who applied for jobcards
Percentage of people who demanded employment to whom employment was provided

SmSA Index

Proportion of SC students enroled as a proportion of total SC population in the age group 6-17
Ratio of number of schools with ramp access to the total number of schools
Net Enrolment Rate
Proportion of ST students enroled as a proportion of total ST population in the age group 6-17

ICDS Index

Total Number of Anganwadis operating per 1000 population

MDMS Index

Proportion of foodgrains allocated to each state to the number of children availing benefits under the scheme in the state
Percentage utilisation of the scheme fund available
Gross Enrolment Rate in government elementary school

NHM Index

Percentage utilisation of the scheme fund available

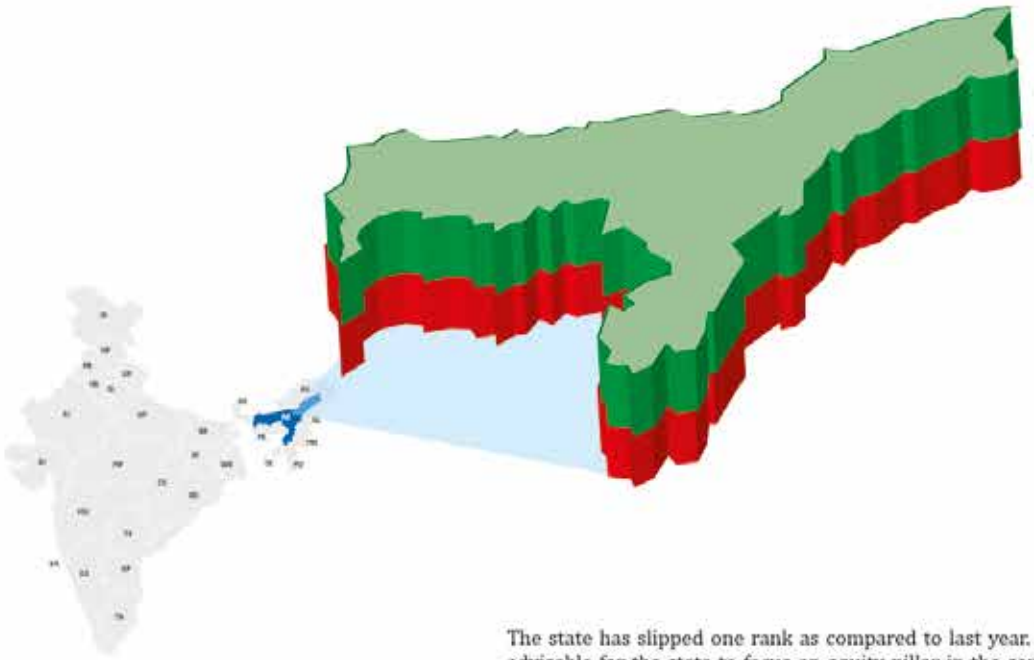
Preparedness Response

Percentage deficit of doctors per million population against normative standards
Percentage deficit of hospital beds per million population against normative standards

Containment Response

Number of COVID-19 tests conducted per million population
Number of COVID-19 cases per million population

ASSAM



The state has slipped one rank as compared to last year. It is advisable for the state to focus on equity pillar in the coming year. PAI 2021 recommends that the state focus on Health and Education, Gender parity, and clean energy to improve it's performance in the index. The state should also improve it's performance in the Mahatma Gandhi National Rural Employment Gurantee Scheme and National Health Mission.

	Score	Rank		Change in Rank
PAI Index	-0.671	13	2020	▼
	0.459	14	2021	
Equity Index	0.279	10	2020	▼
	0.749	13	2021	
Growth Index	-1.026	15	2020	▲
	-0.556	14	2021	
Sustainability Index	0.708	12	2020	▲
	-0.072	11	2021	
MGNREGA Index	-1.186	11	2021	
SmSA Index	-0.037	6	2021	
ICDS Index	0.011	5	2021	
MDMS Index	-0.067	6	2021	
NHM Index	-0.388	10	2021	
COVID 19 Response Index	0.908	4	2021	
Preparedness Response	1.788	1	2021	
Containment Response	0.029	9	2021	

Equity

Proportion of urban population living in slums
Rural indebtedness
No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
Proportion of population covered by social protection (IGNOAPS, IGNDPS, IGNWPS, Maternity Benefit)
Utilisation of Nirbhaya Fund since its inception
Worker Population Ratio (Female) (WPR)
Infant Mortality Rate (IMR)
Percentage of Deprived households across all 7 Deprivation

Growth

Proportion of total government expenditure on infrastructure
Proportion of total Government expenditure on Agriculture and Allied Services
Health worker density
Immunisation achievement
Proportion of population with access to electricity

Sustainability

Annual mean levels of fine particulate matter (PM10) in cities (population weighted)
Renewable energy share in the total final energy consumption
Percentage of households using clean cooking fuel

MGNREGA Index

Proportion of number of applicants who recieved jobcards versus number of applicants who applied for jobcards
Percentage of people who demanded employment to whom employment was provided
Proportion of female active workers to total active workers
Percentage utilisation of the scheme fund available

SmSA Index

Ratio of number of schools with ramp access to the total number of schools
Proportion of girls enroled as a proportion of total enroled population in the age group 6-17
Proportion of ST students enroled as a proportion of total ST population in the age group 6-17
Pupil Teacher Ratio
Per capita expenditure of SSA and RMSA

ICDS Index

Coverage of Pregnant Women and Lactating mothers as per the ICDS scheme
Total Number of Anganwadis operating per 1000 population

MDMS Index

Proportion of students recieving benefits under MDMS to total students enroled in schools
Per capita expenditure

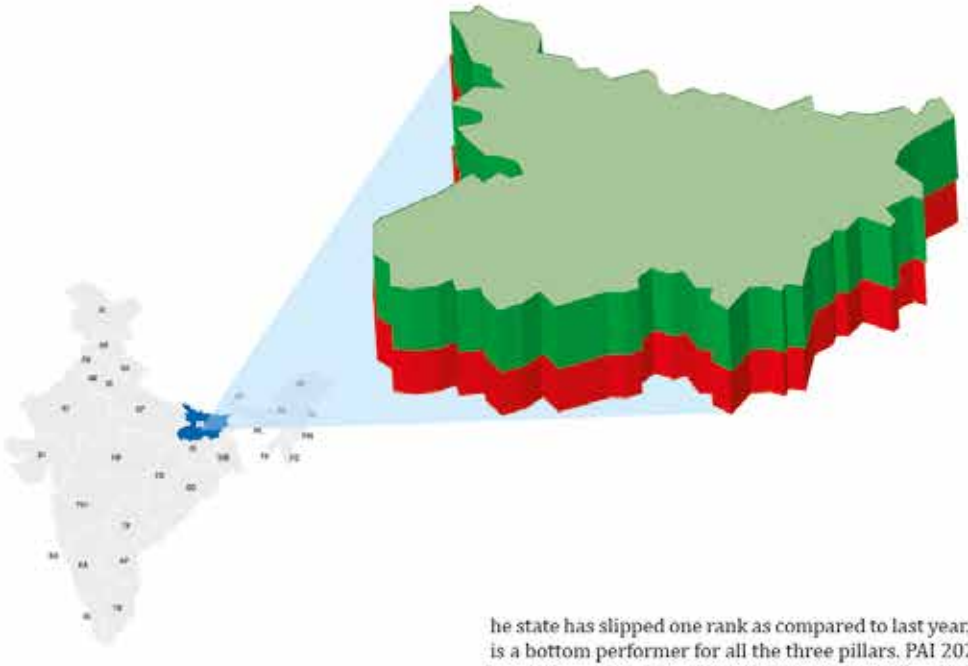
NHM Index

Percentage utilisation of the scheme fund available
Targets & Achievement of Maternity and Child Health Activities (Immunisation) in India
Number of Sub centres per population
Expenditure on Health: Per Capita, as share of Total Expenditure and as share of GSDP for all State & Union Territories
Number of people attending NCD clinics

Preparedness Response

Percentage deficit of doctors per million population against normative standards
Percentage allocation of state budget to health

BIHAR



he state has slipped one rank as compared to last year. The state is a bottom performer for all the three pillars. PAI 2021 recommends that the state focus on Health and Education, Gender parity, decreasing Crime rates and controlling pollution to improve it's performance in the index. The state should also improve it's performance in the Mahatma Gandhi National Rural Employment Gurantee Scheme, Mid-Day Meal Scheme and National Health Mission.

	Score	Rank		Change in Rank
PAI Index	-1.158	16	2020	▼
	-1.343	17	2021	
Equity Index	-0.891	14	2020	▲
	0.734	12	2021	
Growth Index	-1.339	17	2020	▼
	-2.114	18	2021	
Sustainability Index	-1.244	14	2020	▼
	-1.181	17	2021	
MGNREGA Index	-0.495	15	2021	
SmSA Index	0.242	5	2021	
ICDS Index	0.316	4	2021	
MDMS Index	-0.610	17	2021	
NHM Index	-1.046	18	2021	
COVID-19 Response Index	-0848	17	2021	
Preparedness Response	-1.309	17	2021	
Containment Response	-0.387	12	2021	

Equity

Expenditure in social sector
Proportion of population covered by social protection (IGNOAPS, IGNDPS, IGNWPS, Maternity Benefit)
Proportion of urban population living in slums
Average out of pocket expenditure
Crimes against children
No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
Prevalence of malnutrition amongst children below 6 years
Infant Mortality Rate (IMR)
Utilisation of Nirbhaya Fund since its inception
Dowry deaths per 10 lakh population
Worker Population Ratio (Female) (WPR)

Growth

Proportion of population using safely managed drinking water services
Annual growth rate of NDP per capita
Performance Grading Index
Manufacturing value added as a proportion of GDP and per capita
Institutional delivery
Unemployment Rate
Health worker density
Proportion of population using safely managed sanitation services
Proportion of population with access to electricity

Sustainability

Proportion of land that is degraded over total land area
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)
Renewable energy share in the total final energy consumption
Forest area as a proportion of total land area
Percentage of households using clean cooking fuel

MDMS Index

Percentage utilisation of the scheme fund available
Gross Enrolment Rate in government elementary school
Dropout in Primary and Upper Primary government schools

MGNREGA Index

Ratio of notified wage to average wage received
Proportion of number of applicants who recieved jobcards versus number of applicants who applied for jobcards
Percentage of people who demanded employment to whom employment was provided
Percentage utilisation of the scheme fund available

SmSA Index

Proportion of girls enroled as a proportion of total enroled population in the age group 6-17
Proportion of SC students enroled as a proportion of total SC population in the age group 6-17
Proportion of ST students enroled as a proportion of total ST population in the age group 6-17
Net Enrolment Rate
Pupil Teacher Ratio

ICDS Index

Percentage utilisation of the scheme fund available

NHM Index

Percentage utilisation of the scheme fund available
Number of Sub centres per population
Expenditure on Health: Per Capita, as share of Total Expenditure and as share of GSDP for all State & Union Territories
Proportion of deaths due to communicable diseases to total number of deaths
Number of people attending NCD clinics

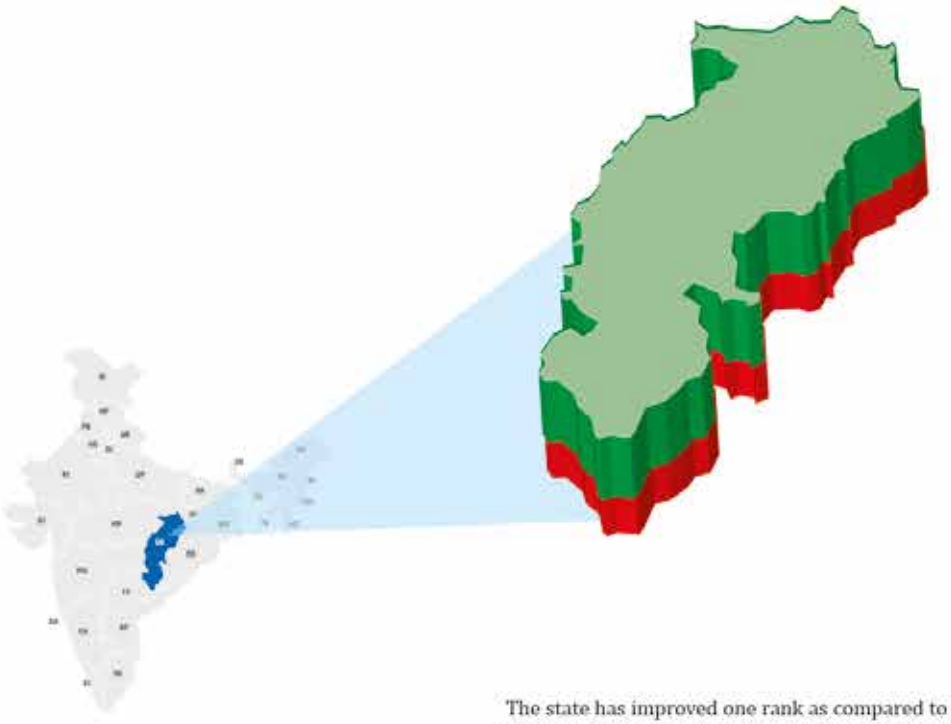
Preparedness Response

Percentage deficit of doctors per million population against normative standards
Percentage deficit of hospital beds per million population against normative standards

Containment Response

Number of COVID-19 cases per million population
Number of COVID-19 deaths per million population
Number of COVID-19 testing laboratories per million population

CHHATTISGARH



The state has improved one rank as compared to last year. The only pillar dragging the state's performance is the growth pillar. PAI 2021 recommends that the state focus on income generation activities which will add value to the economic empowerment of the state to improve it's performance in the index. The state should also improve it's performance in the Mahatma Gandhi National Rural Employment Gurantee Scheme.

	Score	Rank		Change in Rank
PAI Index	0.429	5	2020	▲
	0.872	4	2021	
Equity Index	0.260	3	2020	▼
	1.192	4	2021	
Growth Index	0.187	10	2020	▲
	0.477	8	2021	
Sustainability Index	0.840	4	2020	▲
	0.946	3	2021	
MGNREGA Index	-0.044	11	2021	
SmSA Index	0.907	1	2021	
ICDS Index	1.191	2	2021	
MDMS Index	0.213	6	2021	
NHM Index	-0.081	11	2021	
COVID 19 Response Index	-0.448	13	2021	
Preparedness Response	-0.439	12	2021	
Containment Response	-0.457	14	2021	

Equity

Worker Population Ratio (Female) (WPR)
Proportion of seats held by women in (a) state legislatures and (b) local governments
Average out of pocket expenditure
Unsentenced detainees as a proportion of overall prison population
Rapes per 10 lakh population
Crimes against children
Proportion of urban population living in slums
Prevalence of malnutrition amongst children below 6 years
Real wage (casual labour)
Infant Mortality Rate (IMR)

Growth

Proportion of total Government expenditure on Agriculture and Allied Services
Unemployment Rate
Immunisation achievement
Manufacturing value added as a proportion of GDP and per capita
Health worker density
Rural Non farm employment
Annual growth rate of NDP per capita
Proportion of population using safely managed sanitation services

Sustainability

Solid waste generation and waste processing in the urban areas
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)
Renewable energy share in the total final energy consumption
Percentage of households using clean cooking fuel

MGNREGA Index

Proportion of ST persondays to that of total persondays generated
Percentage of people who demanded employment to whom employment was provided

SmSA Index

Proportion of girls enroled as a proportion of total enrolled population in the age group 6-17
Per capita expenditure of SSA and RMSA

ICDS Index

Total Number of Anganwadis operating per 1000 population
Coverage of Pregnant Women and Lactating mothers as per the ICDS scheme

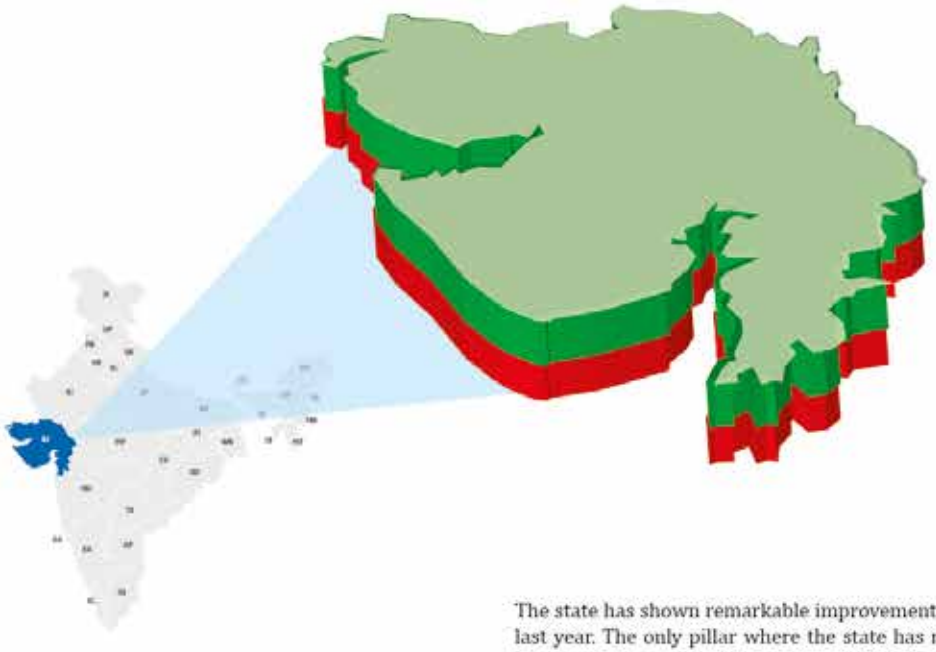
NHM Index

Number of PHC per population
Number of Sub centres per population
Proportion of deaths due to communicable diseases to total number of deaths

Preparedness Response

Percentage allocation of state budget to health

GUJARAT



The state has shown remarkable improvement as compared to last year. The only pillar where the state has not been able to improve is the sustainability pillar. PAI 2021 recommends that the state focus on income generation activities which will add value to the economic empowerment of the state and improve the forest cover to improve it's performance in the index. The state should also improve it's performance in the Samagra Siksha Abhiyan and Mid-Day Meal Scheme.

	Score	Rank		Change in Rank
PAI Index	0.054	9	2020	▲
	0.782	5	2021	
Equity Index	-0.058	8	2020	▲
	1.409	1	2021	
Growth Index	0.512	8	2020	▲
	0.805	4	2021	
Sustainability Index	-0.293	9	2020	
	0.132	9	2021	
MGNREGA Index	0.236	7	2021	
SnSA Index	-0.326	15	2021	
ICDS Index	0.221	7	2021	
MDMS Index	-0.107	13	2021	
NHM Index	-0.041	9	2021	
COVID 19 Response Index	0.203	6	2021	
Preparedness Response	0.122	7	2021	
Containment Response	0.285	7	2021	

Equity

Utilisation of Nirbhaya Fund since its inception
Dowry deaths per 10 lakh population
Average out of pocket expenditure
No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
Expenditure in social sector
Real wage (casual labour)
Prevalence of malnutrition amongst children below 6 years

Growth

Performance Grading Index
Unemployment Rate
Annual growth rate of NDP per capita
Manufacturing value added as a proportion of GDP and per capita
Institutional delivery
Immunisation achievement
Rural Non farm employment

Sustainability

Solid waste generation and waste processing in the urban areas
Renewable energy share in the total final energy consumption
Forest area as a proportion of total land area

MGNREGA Index

Proportion of ST persondays to that of total persondays generated
Proportion of female active workers to total active workers
Proportion of SC persondays to that of total persondays generated

SmSA Index

Ratio of number of schools with ramp access to the total number of schools

ICDS Index

Percentage utilisation of the scheme fund available

MDMS Index

Proportion of foodgrains allocated to each state to the number of children availing benefits under the scheme in the state
Per capita expenditure

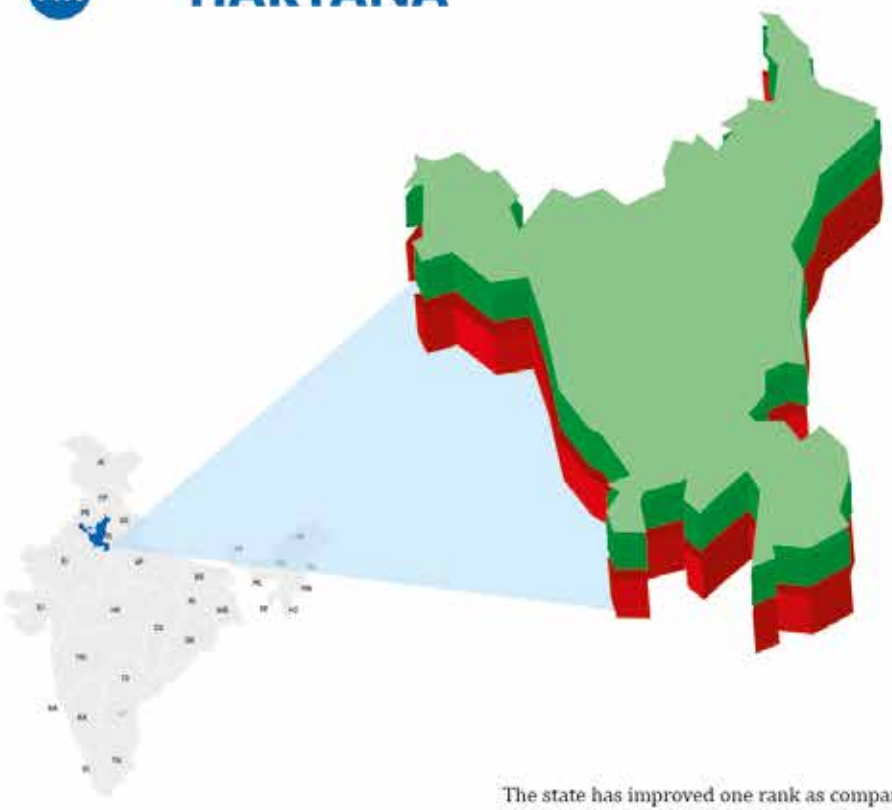
NHM Index

Targets & Achievement of Maternity and Child Health Activities (Immunisation) in India

Preparedness Response

Percentage allocation of state budget to health

HR HARYANA



The state has improved one rank as compared to last year. The state has shown visible improvement in the equity and sustainability pillar. PAI 2021 recommends that the state focus on Gender Parity, income generation activities, improving green cover and reducing pollution in the state to improve it's performance in the index. The state should also improve it's performance in Samagra Siksha Abhiyan.

	Score	Rank		Change in Rank
PAI Index	-0.701	14	2020	▲
	-0.431	13	2021	
Equity Index	-1.273	17	2020	▲
	-0.243	11	2021	
Growth Index	0.562	7	2020	▼
	-0.010	10	2021	
Sustainability Index	-1.393	15	2020	▲
	-1.039	14	2021	
MGNREGA Index	0.151	10	2021	
SmSA Index	-0.427	17	2021	
ICDS Index	-0.018	9	2021	
MDMS Index	0.116	9	2021	
NHM Index	0.311	6	2021	
COVID 19 Response Index	0.001	7	2021	
Preparedness Response	-0.429	11	2021	
Containment Response	0.430	6	2021	

Equity

Average out of pocket expenditure
Real wage (casual labour)
Percentage of Deprived households across all 7 Deprivation
Worker Population Ratio (Female) (WPR)
Rapes per 10 lakh population
Palma Ratio of Household Expenditure in Urban and Rural India
Incidence of Crimes against SC and ST
Dowry deaths per 10 lakh population

Growth

Proportion of population using safely managed sanitation services
Proportion of population with access to electricity
Performance Grading Index
Unemployment Rate

Sustainability

Percentage of Nitrogen fertilizers out of total N P K
Renewable energy share in the total final energy consumption
Percentage of households using clean cooking fuel
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

MGNREGA Index

Proportion of SC persondays to that of total persondays generated
Ratio of notified wage to average wage received
Proportion of ST persondays to that of total persondays generated

SmSA Index

Pupil Teacher Ratio
Proportion of girls enroled as a proportion of total enroled population in the age group 6-17
Proportion of ST students enroled as a proportion of total ST population in the age group 6-17
Percentage utilisation of the scheme fund available

ICDS Index

Beneficiaries covered in the Pre-school education

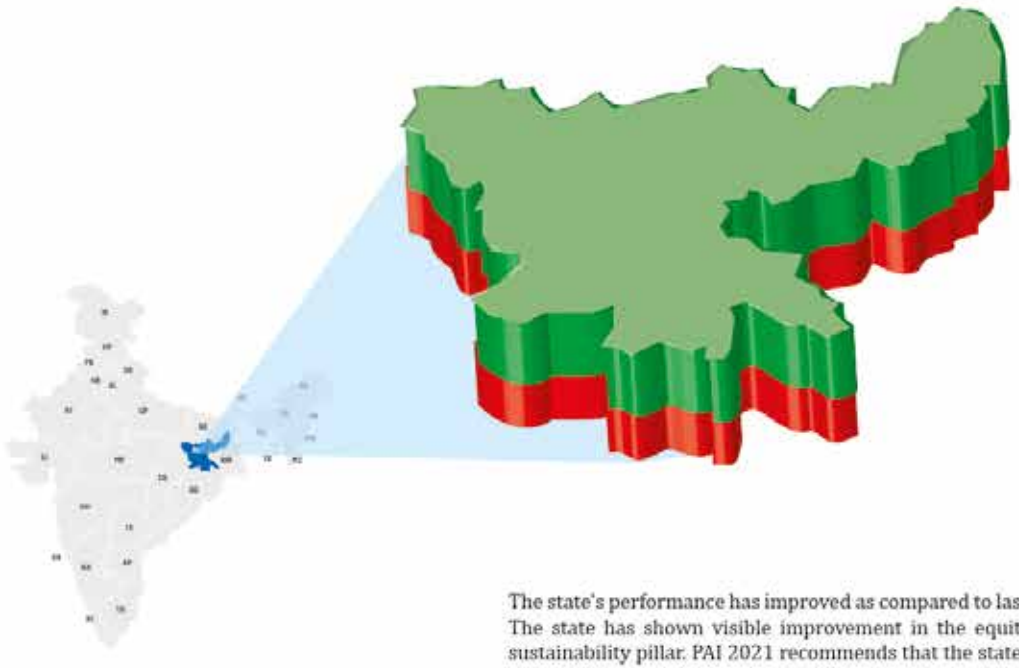
MDMS Index

Percentage utilisation of the scheme fund available
Dropout in Primary and Upper Primary government schools

Preparedness Response

Percentage allocation of state budget to health

JHARKHAND



The state's performance has improved as compared to last year. The state has shown visible improvement in the equity and sustainability pillar. PAI 2021 recommends that the state focus on Gender Parity, Health, income generation activities, clean energy, improving green cover and reducing pollution in the state to improve it's performance in the index. The state should also improve it's performance in Mahatma Gandhi Rural Employment Gurantee Scheme, Samagra Siksha Abhiyan and National Health Mission.

	Score	Rank		Change in Rank
PAI Index	-0.957	15	2020	▲
	-0.071	9	2021	
Equity Index	-0.640	13	2020	▲
	-0.022	9	2021	
Growth Index	-0.836	14	2020	▲
	-0.930	3	2021	
Sustainability Index	-1.397	17	2020	▲
	-1.122	15	2021	
MGNREGA Index	-0.590	17	2021	
SmSA Index	-0.044	10	2021	
ICDS Index	0.276	5	2021	
MDMS Index	-0.002	10	2021	
NHM Index	-0.719	17	2021	
COVID 19 Response Index	-0.485	14	2021	
Preparedness Response	-0.833	15	2021	
Containment Response	-0.138	10	2021	

Equity

Average out of pocket expenditure
Proportion of urban population living in slums
Crimes against children
Expenditure in social sector
Proportion of population covered by social protection (IGNOAPS, IGNDPS, IGNWPS, Maternity Benefit)
Palma Ratio of Household Expenditure in Urban and Rural India
Proportion of seats held by women in (a) state legislatures and (b) local governments
Rapes per 10 lakh population
Infant Mortality Rate (IMR)
Percentage of Deprived households across all 7 Deprivation
Utilisation of Nirbhaya Fund since its inception
Dowry deaths per 10 lakh population
Prevalence of malnutrition amongst children below 6 years

Growth

Annual growth rate of NDP per capita
States Own Tax Revenue Growth
Proportion of total Government expenditure on Agriculture and Allied Services
Fiscal Surplus/ Deficit
Proportion of population using safely managed drinking water services
Institutional delivery
Proportion of population with access to electricity
Health worker density
Proportion of population using safely managed sanitation services

Sustainability

Renewable energy share in the total final energy consumption
Percentage of households using clean cooking fuel
Proportion of land that is degraded over total land area
Percentage of Nitrogen fertilizers out of total N P K
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

MGNREGA Index

Percentage of people who demanded employment to whom employment was provided
Proportion of female active workers to total active workers

SmSA Index

Pupil Teacher Ratio

ICDS Index

Actual Availability of Anganwadi Workers and Helpers against sanctioned number

MDMS Index

Proportion of foodgrains allocated to each state to the number of children availing benefits under the scheme in the state
Dropout in Primary and Upper Primary government schools

NHM Index

Percentage utilisation of the scheme fund available
Number of PHC per population

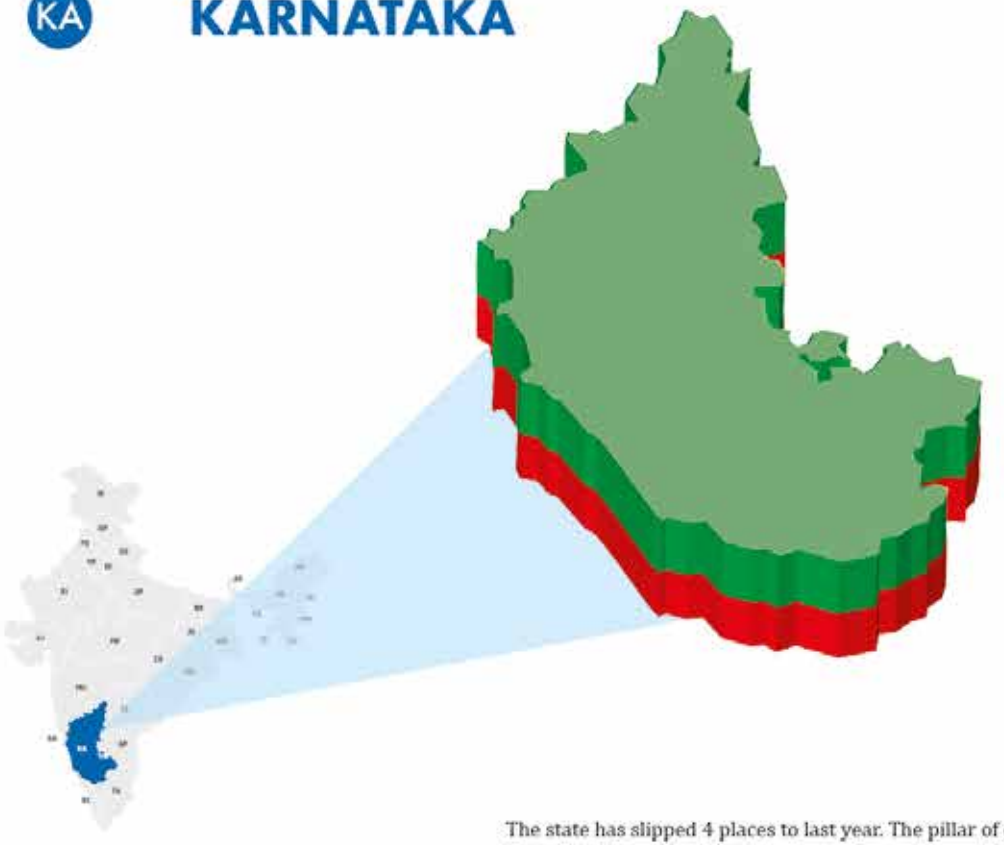
Preparedness Response

Percentage deficit of doctors per million population against normative standards

Containment Response

Number of COVID-19 cases per million population
Number of COVID-19 deaths per million population

KARNATAKA



The state has slipped 4 places to last year. The pillar of equity is the only pillar where the state has performed poorly. PAI 2021 recommends that the state focus on alleivating poverty, improving Health, reducing inequalitieses and creation of decent work to improve it's performance in the index. The state should also improve it's performance in Samagra Siksha Abhiyan, Integrated Child Development Services and National Health Mission.

	Score	Rank		Change in Rank
PAI Index	0.468	4	2020	▼
	0.121	7	2021	
Equity Index	-0.609	12	2020	▼
	-1.161	16	2021	
Growth Index	1.220	2	2020	▼
	0.693	6	2021	
Sustainability Index	0.793	5	2020	▲
	0.832	4	2021	
MGNREGA Index	0.327	4	2021	
SmSA Index	0.222	7	2021	
ICDS Index	-0.090	11	2021	
MDMS Index	0.162	7	2021	
NHM Index	-0.046	10	2021	
COVID 19 Response Index	0.490	5	2021	
Preparedness Response	-0.024	8	2021	
Containment Response	1.004	4	2021	

Equity

Rapes per 10 lakh population
Utilisation of Nirbhaya Fund since its inception
Infant Mortality Rate (IMR)
Percentage of Deprived households across all 7 Deprivation
Prevalence of malnutrition amongst children below 6 years
Expenditure in social sector
Palma Ratio of Household Expenditure in Urban and Rural India
Rural indebtedness

Growth

Unemployment Rate
Institutional delivery
Annual growth rate of NDP per capita
Proportion of total Government expenditure on Agriculture and Allied Services
Health worker density
Rural Non farm employment

Sustainability

Renewable energy share in the total final energy consumption
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

SmSA Index

Percentage utilisation of the scheme fund available

ICDS Index

Percentage utilisation of the scheme fund available

MDMS Index

Proportion of foodgrains allocated to each state to the number of children availing benefits under the scheme in the state
Per capita expenditure

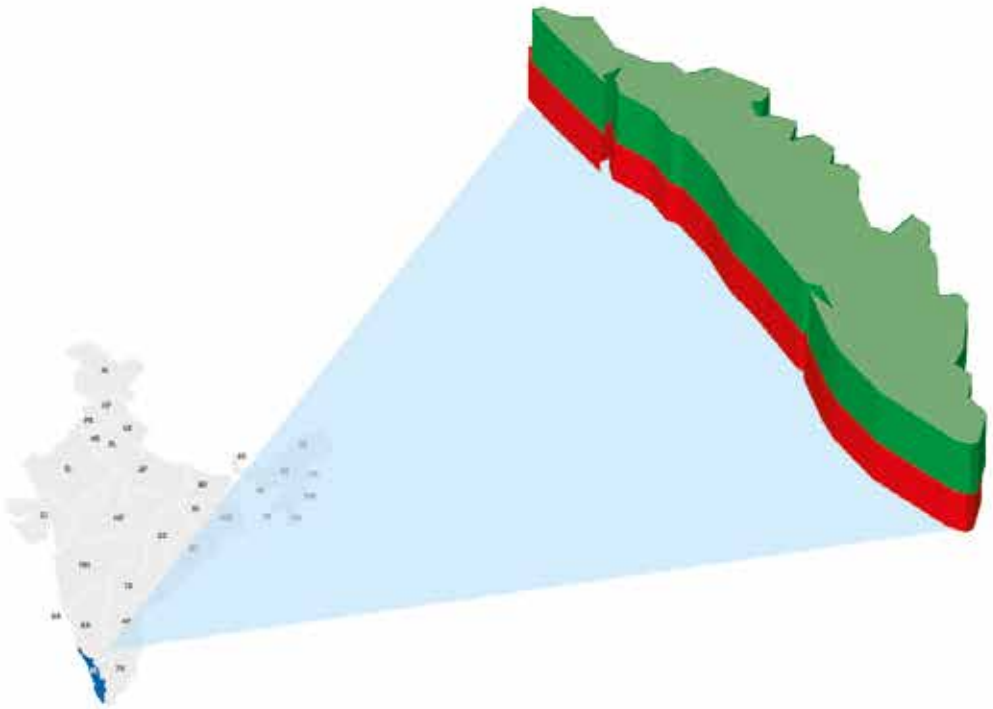
NHM Index

Number of PHC per population

Containment Response

Number of COVID-19 testing laboratories per million population
Number of COVID-19 tests conducted per million population
Number of COVID-19 deaths per million population

KERALA



As last year the state has turned out to be the best performer. PAI 2021 recommends that the state focus on reducing inequalities and clean energy to maintain it's performance in the index. The state should also improve it's performance in the Mid-Day Meal Scheme.

	Score	Rank		Change in Rank
PAI Index	1.388	1	2020	
	1.618	1	2021	
Equity Index	0.628	2	2020	
	1.360	2	2021	
Growth Index	1.419	1	2020	▼
	1.348	2	2021	
Sustainability Index	2.118	1	2020	
	2.146	1	2021	
MGNREGA Index	0.649	1	2021	
SmSA Index	0.574	3	2021	
ICDS Index	0.240	6	2021	
MDMS Index	-0.334	15	2021	
NHM Index	1.499	1	2021	
COVID 19 Response Index	1.472	1	2021	
Preparedness Response	1.546	1	2021	
Containment Response	1.398	1	2021	

Equity

Real wage (casual labour)
Infant Mortality Rate (IMR)
Child Sex ratio
Proportion of population covered by social protection (IGNOAPS, IGNDPS, IGNWPS, Maternity Benefit)
Proportion of urban population living in slums
Dowry deaths per 10 lakh population
Prevalence of malnutrition amongst children below 6 years
Rapes per 10 lakh population
Expenditure in social sector
Average out of pocket expenditure
Rural indebtedness
Palma Ratio of Household Expenditure in Urban and Rural India

Growth

Health worker density
Proportion of population using safely managed sanitation services
Performance Grading Index
Rural Non farm employment
Institutional delivery
Immunisation achievement
Proportion of population with access to electricity
Proportion of total government expenditure on infrastructure

Sustainability

Annual mean levels of fine particulate matter (PM10) in cities (population weighted)
Forest area as a proportion of total land area
Proportion of land that is degraded over total land area
Solid waste generation and waste processing in the urban areas

MGNREGA Index

Proportion of number of applicants who recieved jobcards versus number of applicants who applied for jobcards
Ratio of notified wage to average wage received
Percentage utilisation of the scheme fund available

SmSA Index

Net Enrolment Rate
Percentage utilisation of the scheme fund available
Per capita expenditure of SSA and RMSA

ICDS Index

Actual Availability of Anganwadi Workers and Helpers against sanctioned number

MDMS Index

Dropout in Primary and Upper Primary government schools

NHM Index

Percentage utilisation of the scheme fund available
Expenditure on Health: Per Capita, as share of Total Expenditure and as share of GSDP for all State & Union Territories
Proportion of Health Human Resourse in CHC, PHC and Sub centres
Number of people attending NCD clinics

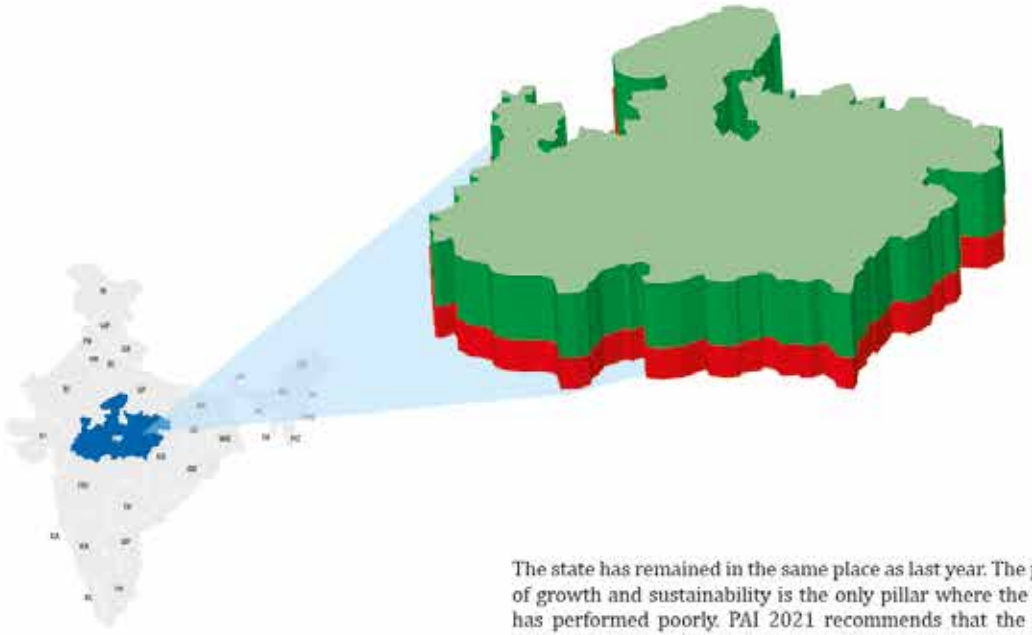
Preparedness Response

Percentage deficit of doctors per million population against normative standards
Percentage deficit of hospital beds per million population against normative standards

Containment Response

Number of COVID-19 testing laboratories per million population
Number of COVID-19 cases per million population
Number of COVID-19 tests conducted per million population

MADHYA PRADESH



The state has remained in the same place as last year. The pillar of growth and sustainability is the only pillar where the state has performed poorly. PAI 2021 recommends that the state focus on Gender Parity, reducing crimes, alleivating poverty, improving Health, creating income generation opportunities and decent work to improve it's performance in the index. The state should also improve it's performance in Mahatma Gandhi Rural Employment Gurantee Scheme, Mid-Day Meal Scheme, and National Health Mission.

	Score	Rank		Change in Rank
PAI Index	-0.345	10	2020	
	-0.113	10	2021	
Equity Index	-1.232	16	2020	▲
	0.578	8	2021	
Growth Index	-0.032	12	2020	▼
	-1.321	16	2021	
Sustainability Index	0.230	6	2020	▼
	0.403	8	2021	
MGNREGA Index	-0.502	16	2021	
SmSA Index	-0.139	11	2021	
ICDS Index	0.884	3	2021	
MDMS Index	-0.202	14	2021	
NHM Index	-0.466	14	2021	
COVID 19 Response Index	-0.831	16	2021	
Preparedness Response	-0.904	16	2021	
Containment Response	-0.759	15	2021	

Equity

Average out of pocket expenditure
Proportion of population covered by social protection (IGNOAPS, IGNDPS, IGNWPS, Maternity Benefit)
No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
Unsentenced detainees as a proportion of overall prison population
Rapes per 10 lakh population
Proportion of urban population living in slums
Dowry deaths per 10 lakh population
Crimes against children
Real wage (casual labour)
Prevalence of malnutrition amongst children below 6 years
Infant Mortality Rate (IMR)
Incidence of Crimes against SC and ST

Growth

Proportion of total Government expenditure on Agriculture and Allied Services
Unemployment Rate
Immunisation achievement
Proportion of total government expenditure on infrastructure
Annual growth rate of NDP per capita
States Own Tax Revenue Growth
Rural Non farm employment
Proportion of population using safely managed sanitation services

Sustainability

Solid waste generation and waste processing in the urban areas
Forest area as a proportion of total land area

MGNREGA Index

Proportion of female active workers to total active workers

ICDS Index

Total Number of Anganwadis operating per 1000 population
Coverage of Pregnant Women and Lactating mothers as per the ICDS scheme
Actual Availability of Anganwadi Workers and Helpers against sanctioned number
Beneficiaries covered in the Pre-school education

MDMS Index

Percentage utilisation of the scheme fund available
Proportion of foodgrains allocated to each state to the number of children availing benefits under the scheme in the state
Per capita expenditure

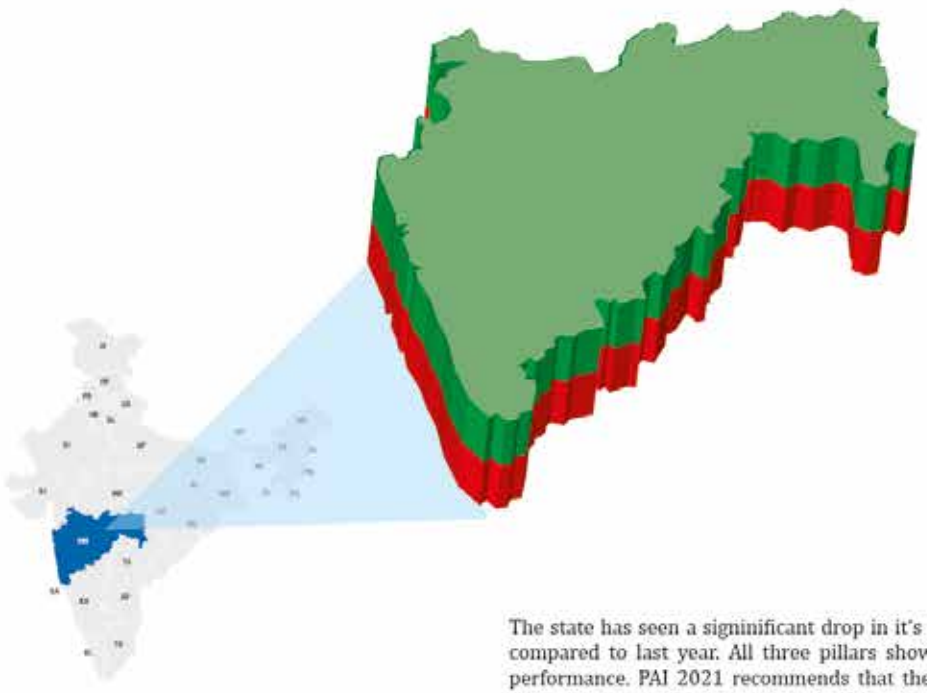
NHM Index

Targets & Achievement of Maternity and Child Health Activities (Immunisation) in India

Containment Response

Number of COVID-19 cases per million population

MAHARASTRA



The state has seen a signinificant drop in it's performance as compared to last year. All three pillars show a drop in the performance. PAI 2021 recommends that the state focus on alleivating poverty, improving health outcomes, creating income generation opportunities and decent work to improve it's performance in the index. The state should also improve it's performance in Mahatma Gandhi Rural Employment Gurantee Scheme, Integrated Child Development Services and National Health Mission.

	Score	Rank		Change in Rank
PAI Index	0.143	7	2020	▼
	-0.306	12	2021	
Equity Index	0.004	6	2020	▼
	-1.008	15	2021	
Growth Index	0.265	9	2020	▼
	-0.201	12	2021	
Sustainability Index	0.159	8	2020	▼
	0.128	10	2021	
MGNREGA Index	-0.125	12	2021	
SmSA Index	0.444	4	2021	
ICDS Index	-0.362	14	2021	
MDMS Index	0.283	4	2021	
NHM Index	-0.482	15	2021	
COVID 19 Response Index	-1.345	18	2021	
Preparedness Response	-0.337	10	2021	
Containment Response	-2.353	18	2021	

Equity

Utilisation of Nirbhaya Fund since its inception
Infant Mortality Rate (IMR)
Dowry deaths per 10 lakh population
Prevalence of malnutrition amongst children below 6 years
Real wage (casual labour)
Percentage of Deprived households across all 7 Deprivation
Proportion of population covered by social protection (IGNOAPS, IGNDPS, IGNWPS, Maternity Benefit)
Proportion of urban population living in slums

Growth

Performance Grading Index
Proportion of total Government expenditure on Agriculture and Allied Services
Institutional delivery
Unemployment Rate
Rural Non farm employment

MGNREGA Index

Percentage utilisation of the scheme fund available
Proportion of SC persondays to that of total persondays generated
Proportion of number of applicants who recieved jobcards versus number of applicants who applied for jobcards

SmSA Index

Ratio of number of schools with ramp access to the total number of schools
Percentage utilisation of the scheme fund available
Per capita expenditure of SSA and RMSA

MDMS Index

Percentage utilisation of the scheme fund available
Gross Enrolment Rate in government elementary school
Per capita expenditure

NHM Index

Number of Sub centres per population

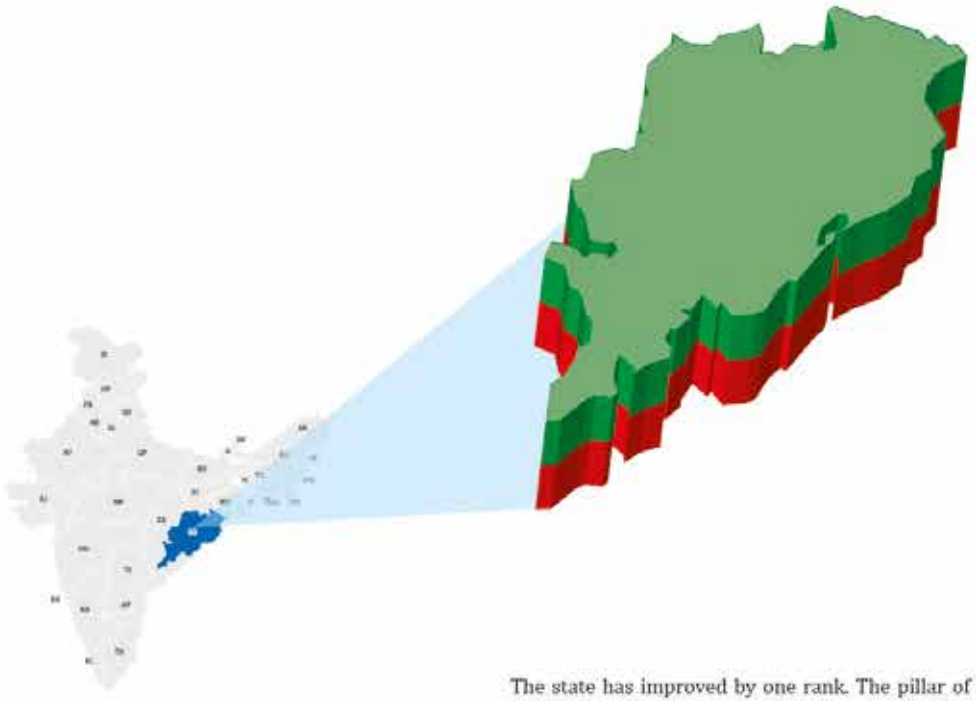
Preparedness Response

Percentage deficit of hospital beds per million population against normative standards

Containment Response

Number of COVID-19 cases per million population
Number of COVID-19 deaths per million population

OR ODISHA



The state has improved by one rank. The pillar of equity has seen a drop in the performance. PAI 2021 recommends that the state focus on Gnder Parity, reducing crimes, alleivating poverty, creating income generation opportunities and decent work and sanitation to improve it's performance in the index. The state should also improve it's performance in National Health Mission.

	Score	Rank		Change in Rank
PAI Index	-1.201	17	2020	▲
	-0.910	16	2021	
Equity Index	-1.154	15	2020	▼
	-1.462	17	2021	
Growth Index	-1.054	16	2020	▲
	-0.556	13	2021	
Sustainability Index	-1.395	16	2020	▲
	-0.713	12	2021	
MGNREGA Index	0.366	3	2021	
SmSA Index	0.639	2	2021	
ICDS Index	1.285	1	2021	
MDMS Index	0.280	5	2021	
NHM Index	0.056	8	2021	
COVID 19 Response Index	-0.178	11	2021	
Preparedness Response	-0.208	9	2021	
Containment Response	0.148	11	2021	

Equity

Proportion of population covered by social protection (IGNOAPS, IGNDPS, IGNWPS, Maternity Benefit)
Rapes per 10 lakh population
Incidence of Crimes against SC and ST
Percentage of Deprived households across all 7 Deprivation
Real wage (casual labour)
Dowry deaths per 10 lakh population
Proportion of seats held by women in (a) state legislatures and (b) local governments

Growth

Immunisation achievement
Manufacturing value added as a proportion of GDP and per capita
Proportion of total Government expenditure on Agriculture and Allied Services
Unemployment Rate
Proportion of population using safely managed sanitation services

Sustainability

Renewable energy share in the total final energy consumption
Percentage of households using clean cooking fuel

SmSA Index

Per capita expenditure of SSA and RMSA

ICDS Index

Total Number of Anganwadis operating per 1000 population
Beneficiaries covered in the Pre-school education

MDMS Index

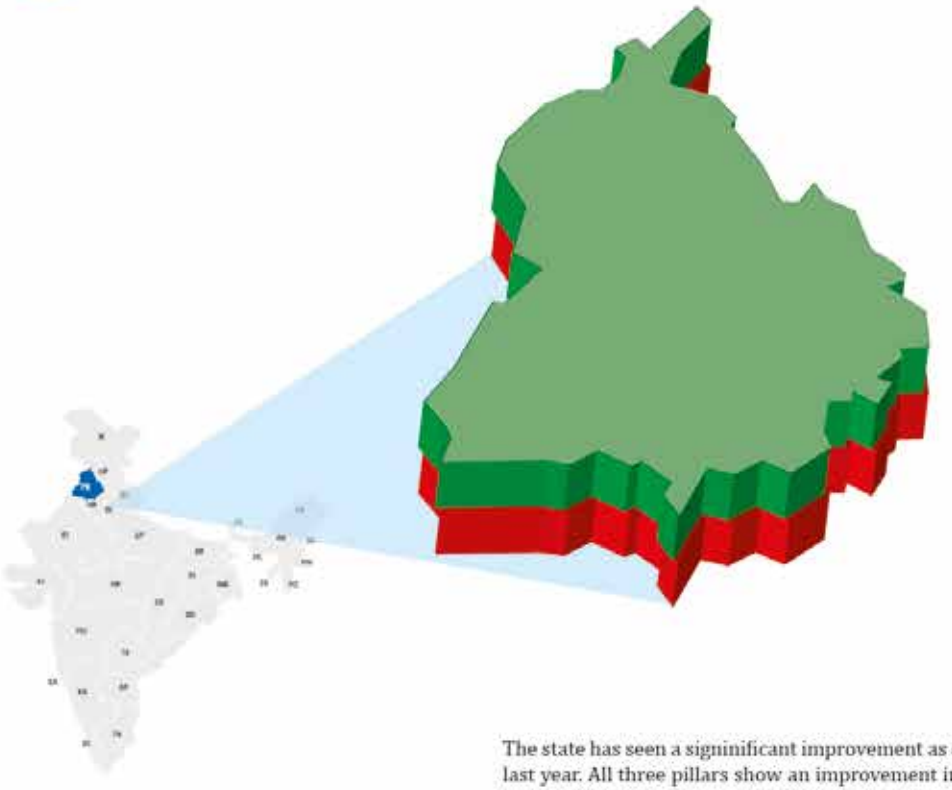
Proportion of students recieving benefits under MDMS to total students enroled in schools

NHM Index

Number of PHC per population
Number of Sub centres per population

PB

PUNJAB



The state has seen a signinificant improvement as compared to last year. All three pillars show an improvement in the performance. PAI 2021 recommends that the state focus on Gender Parity, creating income generation opportunities and decent work to improve it's performance in the index. The state should also improve it's performance in Samagra Siksha Abhiyan, Integrated Child Development Services and Mid-Day Meal Scheme.

	Score	Rank		Change in Rank
PAI Index	0.091	8	2020	▲
	0.643	6	2021	
Equity Index	-0.051	7	2020	
	0.618	7	2021	
Growth Index	0.725	6	2020	▼
	0.698	5	2021	
Sustainability Index	-0.400	10	2020	▲
	0.614	6	2021	
MGNREGA Index	0.197	9	2021	
SmSA Index	-0.390	16	2021	
ICDS Index	-0.023	10	2021	
MDMS Index	-0.080	11	2021	
NHM Index	0.438	5	2021	
COVID 19 Response Index	-0.165	10	2021	
Preparedness Response	-0.208	9	2021	
Containment Response	0.148	11	2021	

Equity

Real wage differential (salaried employee)
Prevalence of malnutrition amongst children below 6 years
Annual Drop-out rate at secondary level
Percentage of Deprived households across all 7 Deprivation
Farmer's/ Cultivators suicide per HHs
Proportion of population covered by social protection (IGNOAPS, IGNDPS, IGNWPS, Maternity Benefit)
Per capita utilisation of PDS services by the last mile beneficiaries
Proportion of seats held by women in (a) state legislatures and (b) local governments
Unsentenced detainees as a proportion of overall prison population
Child Sex ratio

Growth

Immunisation achievement
Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30
Proportion of population using safely managed drinking water services
Proportion of population using safely managed sanitation services
Proportion of population with access to electricity
Rural Non farm employment
Inequality amongst salaried employees
Annual growth rate of NDP per capita

Sustainability

Proportion of land that is degraded over total land area
Percentage of households using clean cooking fuel
Percentage of Nitrogen fertilizers out of total N P K
Forest area as a proportion of total land area

MGNREGA Index

Proportion of SC persondays to that of total persondays generated
Proportion of female active workers to total active workers
Proportion of number of applications versus number of job cards recieved
Percentage utilisation of the scheme fund available

SmSA Index

Pupil Teacher Ratio
Proportion of girls enroled as a proportion of total enroled population in the age group 6-17
Proportion of ST students enroled as a proportion of total ST population in the age group 6-17

ICDS Index

Percentage utilisation of the scheme fund available
Coverage of Pregnant Women and Lactating mothers as per the ICDS scheme

MDMS Index

Per capita expenditure
Gross Enrolment Rate in government elementary school
Percentage utilisation of the scheme fund available

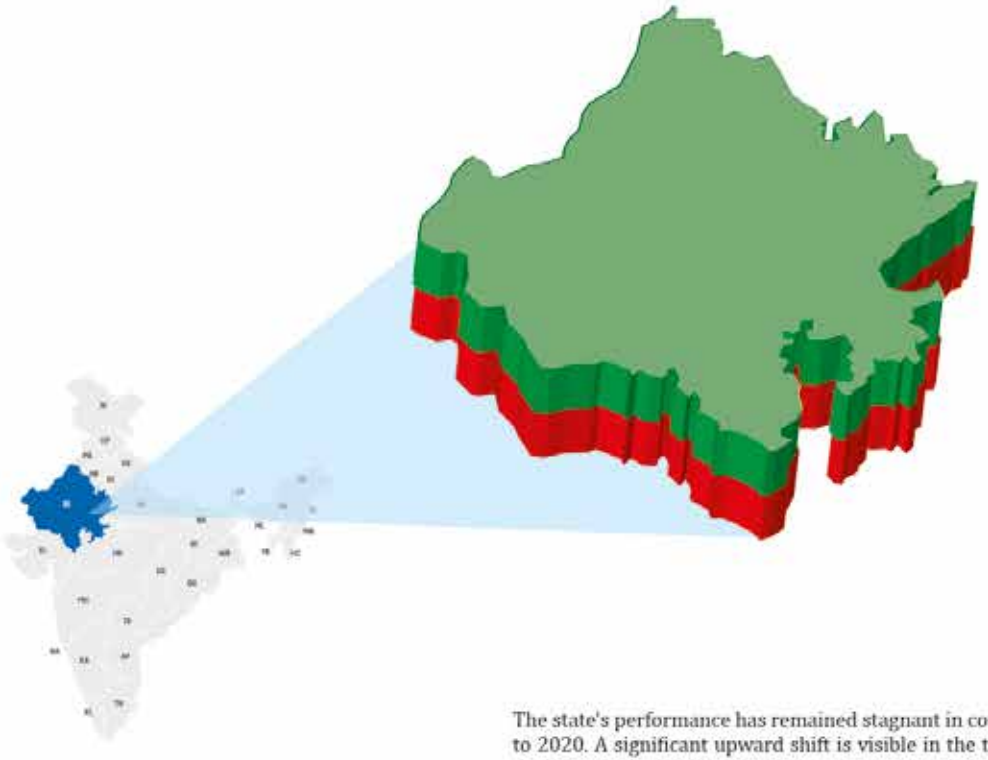
NHM Index

Targets & Achievement of Maternity and Child Health Activities (Immunisation) in India
Proportion of Health Human Resourse in CHC, PHC and Sub centres

Preparedness Response

Percentage allocation of state budget to health

RAJASTHAN



The state's performance has remained stagnant in comparison to 2020. A significant upward shift is visible in the the equity pillar which has been brought down by the depreciating trend in growth and sustainability. The could focus on improving health and sanitation related indicators. The poor performance of the state in NHM is in line with this observation. In the case of COVID-19 response, the containment response has been poor.

	Score	Rank		Change in Rank
PAI Index	-0.380	11	2020	
	-0.243	11	2021	
Equity Index	-0.226	9	2020	▲
	1.199	3	2021	
Growth Index	0.512	8	2020	▼
	-0.914	15	2021	
Sustainability Index	-0.293	9	2020	▼
	-1.015	13	2021	
MGNREGA Index	-0.146	13	2021	
SmSA Index	0.129	8	2021	
ICDS Index	0.136	8	2021	
MDMS Index	-0.101	12	2021	
NHM Index	-0.178	13	2021	
COVID 19 Response Index	-0.362	12	2021	
Preparedness Response	0.531	6	2021	
Containment Response	0.148	17	2021	

Equity

Number of victims of intentional homicide per 100,000population
Proportion of seats held by women in (a) state legislatures and (b) local governments
Utilisation of Nirbhaya Fund since its inception
Infant Mortality Rate (IMR)
Dowry deaths per 10 lakh population
Rural indebtedness
Prevalence of malnutrition amongst children below 6 years

Growth

Immunisation achievement
Proportion of population using safely managed sanitation services
Annual growth rate of NDP per capita
Rural Non farm employment

Sustainability

Renewable energy share in the total final energy consumption
Solid waste generation and waste processing in the urban areas
Percentage of Nitrogen fertilizers out of total N P K
Percentage of households using clean cooking fuel
Forest area as a proportion of total land area
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

MGNREGA Index

Ratio of notified wage to average wage received

SmSA Index

Per capita expenditure of SSA and RMSA
Proportion of girls enroled as a proportion of total enroled population in the age group 6-17
Net Enrolment Rate

MDMS Index

Proportion of students recieving benefits under MDMS to total students enroled in schools

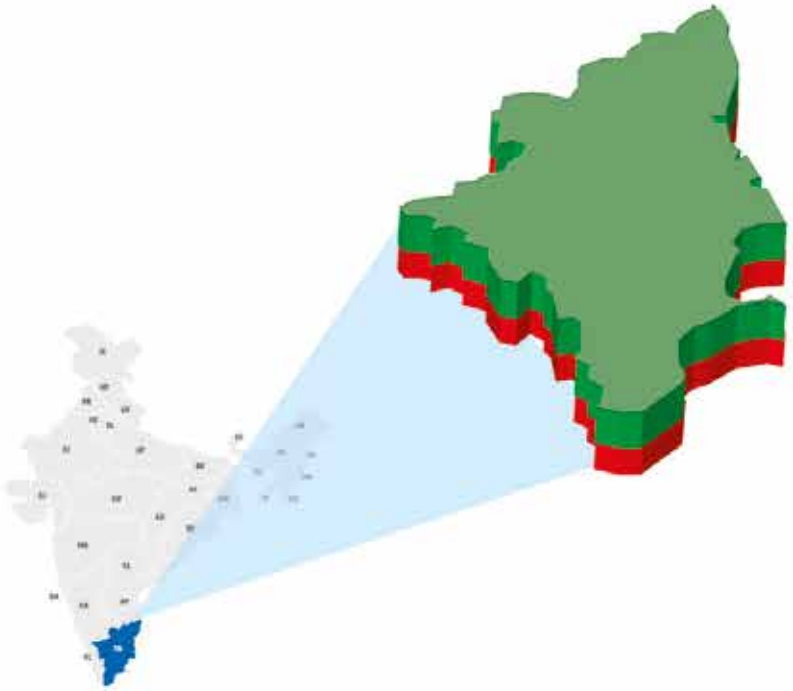
NHM Index

Number of Sub centres per population
Proportion of Health Human Resourse in CHC, PHC and Sub centres

Containment Response

Number of COVID-19 testing laboratories per million population
Number of COVID-19 tests conducted per million population

TAMIL NADU



The state has shown good performance in consistance with the previous year. State's focus could be on women's political representation and expenditure in social sector to improve performance. The stats has shown poor performance in ICDS. It has faired well in the COVID-19 response index. Reducing the number of deaths due to COVID requires some state assistance.

	Score	Rank		Change in Rank
PAI Index	0.912	2	2020	
	0.897	2	2021	
Equity Index	0.118	5	2020	
	0.777	5	2021	
Growth Index	1.159	3	2020	▼
	0.673	7	2021	
Sustainability Index	1.458	2	2020	
	1.241	2	2021	
MGNREGA Index	0.229	8	2021	
SnSA Index	0.234	6	2021	
ICDS Index	-1.119	19	2021	
MDMS Index	0.117	8	2021	
NHM Index	0.892	3	2021	
COVID 19 Response Index	1.197	2	2021	
Preparedness Response	1.085	4	2021	
Containment Response	1.308	3	2021	

Equity

Utilisation of Nirbhaya Fund since its inception
Infant Mortality Rate (IMR)
Dowry deaths per 10 lakh population
Number of victims of intentional homicide per 100,000population
Incidence of Crimes against SC and ST
Worker Population Ratio (Female) (WPR)
Crimes against children
Expenditure in social sector
Proportion of seats held by women in (a) state legislatures and (b) local governments
Proportion of urban population living in slums
Rural indebtedness

Growth

Institutional delivery
Health worker density
Performance Grading Index
Proportion of population with access to electricity
Manufacturing value added as a proportion of GDP and per capita

Sustainability

Renewable energy share in the total final energy consumption
Percentage of households using clean cooking fuel
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

MGNREGA Index

Percentage of people who demanded employment to whom employment was provided
Proportion of ST persondays to total persondays
Ratio of notified wage to average wage received

ICDS Index

Actual Availability of Anganwadi Workers and Helpers against sanctioned number

NHM Index

Percentage utilisation of the scheme fund available
Number of people attending NCD clinics

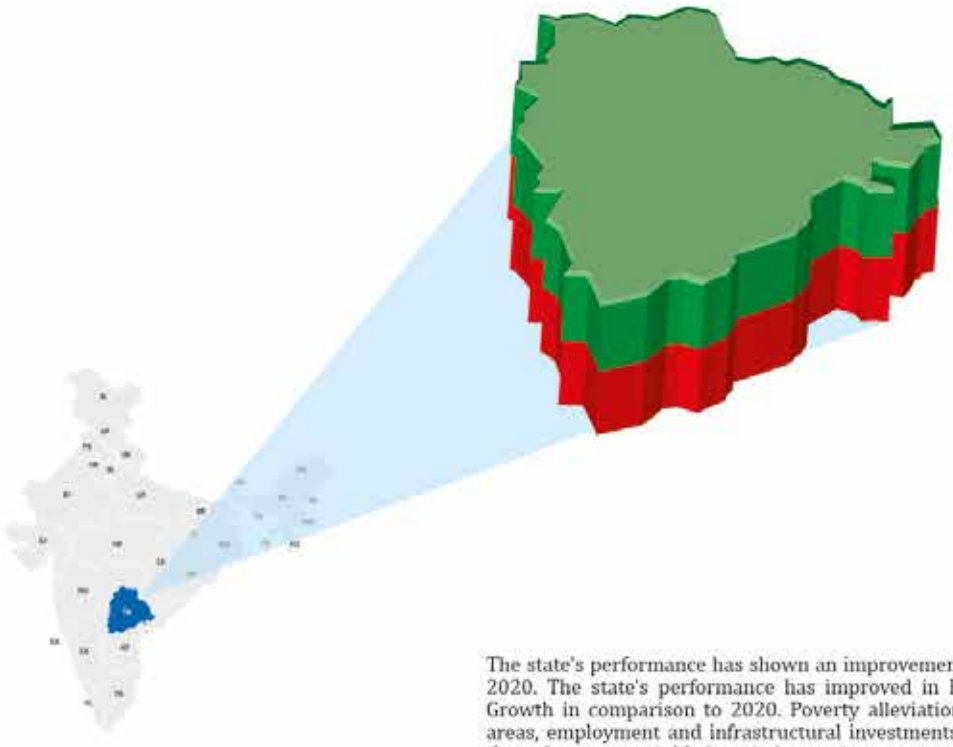
Preparedness Response

Percentage deficit of hospital beds per million population against normative standards
Number of COVID-19 testing laboratories per million population

Containment Response

Number of COVID-19 deaths per million population

TELANGANA



The state's performance has shown an improvement from PAI 2020. The state's performance has improved in Equity and Growth in comparison to 2020. Poverty alleviation in urban areas, employment and infrastructural investments are areas that the state could invest in to improve performance. Implementation of schemes is an area that the state exhibits poor performance. Immediate focus could be in implementing SmSA, ICDS and MDMS. State's preparedness to combat COVID-19 has been poorest among every state. number of hospitals, doctors and allocation of state budget to health requires immediate state attention.

	Score	Rank		Change in Rank
PAI Index	0.388	6	2020	▲
	0.891	3	2021	
Equity Index	-0.568	11	2020	▲
	0.642	6	2021	
Growth Index	0.784	4	2020	▲
	1.380	1	2021	
Sustainability Index	0.947	3	2020	▼
	0.652	5	2021	
MGNREGA Index	0.289	5	2021	
SmSA Index	-0.570	18	2021	
ICDS Index	-0.790	18	2021	
MDMS Index	-0.621	18	2021	
NHM Index	0.205	7	2021	
COVID 19 Response Index	-0.020	8	2021	
Preparedness Response	-1.464	18	2021	
Containment Response	1.423	1	2021	

Equity

Utilisation of Nirbhaya Fund since its inception
Number of victims of intentional homicide per 100,000population
Incidence of Crimes against SC and ST
Worker Population Ratio (Female) (WPR)
Rapes per 10 lakh population
Proportion of population covered by social protection (IGNOAPS, IGNDPS, IGNWPS, Maternity Benefit)
Rural indebtedness
Proportion of urban population living in slums

Growth

Proportion of total Government expenditure on Agriculture and Allied Services
Annual growth rate of NDP per capita
Institutional delivery
Proportion of population with access to electricity
Health worker density
Rural Non farm employment
Proportion of population using safely managed drinking water services
Proportion of total government expenditure on infrastructure

Sustainability

Percentage of households using clean cooking fuel
Solid waste generation and waste processing in the urban areas
Renewable energy share in the total final energy consumption
Forest area as a proportion of total land area

MGNREGA Index

Proportion of number of applications versus number of job cards recieved
Proportion of female active workers to total active workers
Ratio of notified wage to average wage received

SmSA Index

Ratio of number of schools with ramp access to the total number of schools
Proportion of SC students enroled as a proportion of total SC population in the age group 6-17
Percentage utilisation of the scheme fund available

ICDS Index

Total Number of Anganwadis operating per 1000 population
Coverage of Pregnant Women and Lactating mothers as per the ICDS scheme
Percentage utilisation of the scheme fund available
Beneficiaries covered in the Pre-school education

MDMS Index

Proportion of foodgrains allocated to each state to the number of children availing benefits under the scheme in the state

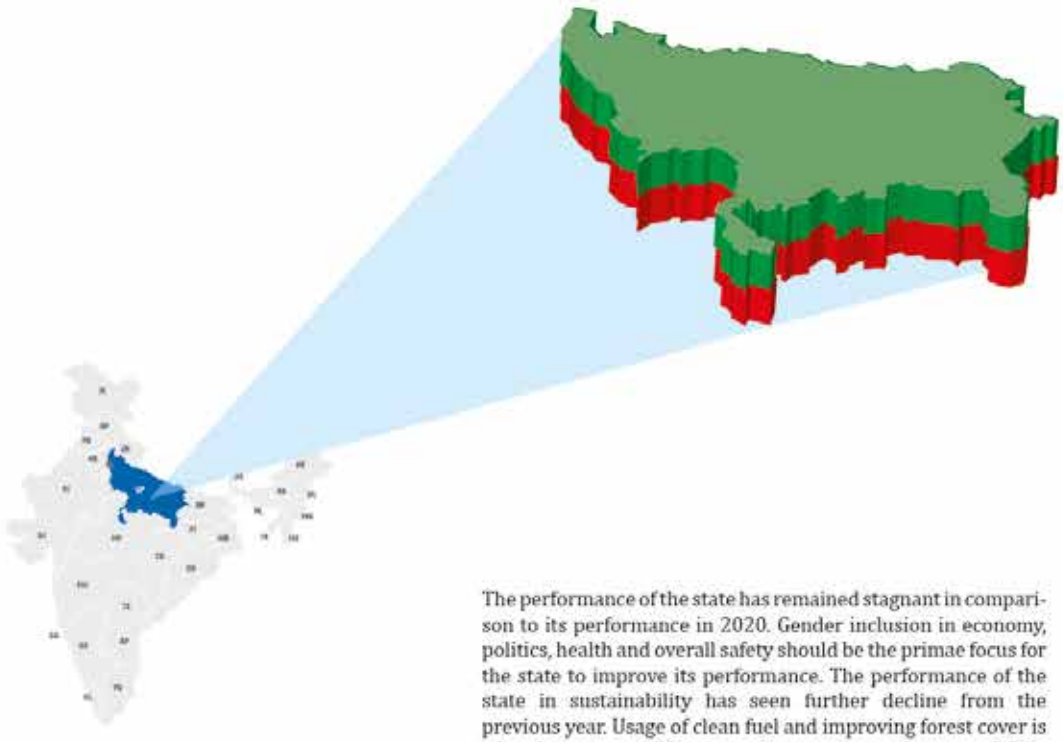
NHM Index

Proportion of deaths due to communicable diseases to total number of deaths
Expenditure on Health: Per Capita, as share of Total Expenditure and as share of GSDP for all State & Union Territories

Preparedness Response

Percentage deficit of doctors per million population against normative standards
Percentage deficit of hospital beds per million population against normative standards
Percentage allocation of state budget to health

UTTAR PRADESH



The performance of the state has remained stagnant in comparison to its performance in 2020. Gender inclusion in economy, politics, health and overall safety should be the primae focus for the state to improve its performance. The performance of the state in sustainability has seen further decline from the previous year. Usage of clean fuel and improving forest cover is what the state could focus on to improve its performance. While the state has consistantly been a poor performer in the scheme analyses, NHM seems to be where the state showed worst performance. The states response to COVID is also similarly poor; all in line with its performance in the governance model and scheme analyses.

	Score	Rank		Change in Rank
PAI Index	-1.201	18	2020	
	-1.418	18	2021	
Equity Index	-1.843	18	2020	
	-1.500	18	2021	
Growth Index	-1.386	18	2020	▲
	-1.521	17	2021	
Sustainability Index	-1.154	13	2020	▼
	-1.234	18	2021	
MGNREGA Index	-0.159	14	2021	
SmSA Index	-0.222	12	2021	
ICDS Index	0.313	12	2021	
MDMS Index	-0.425	16	2021	
NHM Index	-1.146	19	2021	
COVID 19 Response Index	-0.606	15	2021	
Preparedness Response	-0.824	14	2021	
Containment Response	-0.388	13	2021	

Equity

Average out of pocket expenditure
Crimes against children
Proportion of seats held by women in (a) state legislatures and (b) local governments
Palma Ratio of Household Expenditure in Urban and Rural India
Worker Population Ratio (Female) (WPR)
Dowry deaths per 10 lakh population
Infant Mortality Rate (IMR)

Growth

Proportion of population using safely managed drinking water services
States Own Tax Revenue Growth
Manufacturing value added as a proportion of GDP and per capita
Institutional delivery
Rural Non farm employment
Immunisation achievement
Proportion of population using safely managed sanitation services
Health worker density
Proportion of population with access to electricity

Sustainability

Proportion of land that is degraded over total land area
Percentage of households using clean cooking fuel
Forest area as a proportion of total land area
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

MGNREGA Index

Proportion of SC persondays to that of total persondays generated
Percentage utilisation of the scheme fund available

SmSA Index

Proportion of SC students enroled as a proportion of total SC population in the age group 6-17
Proportion of ST students enroled as a proportion of total ST population in the age group 6-17
Pupil Teacher Ratio

ICDS Index

Coverage of Pregnant Women and Lactating mothers as per the ICDS scheme
Actual Availability of Anganwadi Workers and Helpers against sanctioned number

MDMS Index

Proportion of students recieving benefits under MDMS to total students enroled in schools
Gross Enrolment Rate in government elementary school

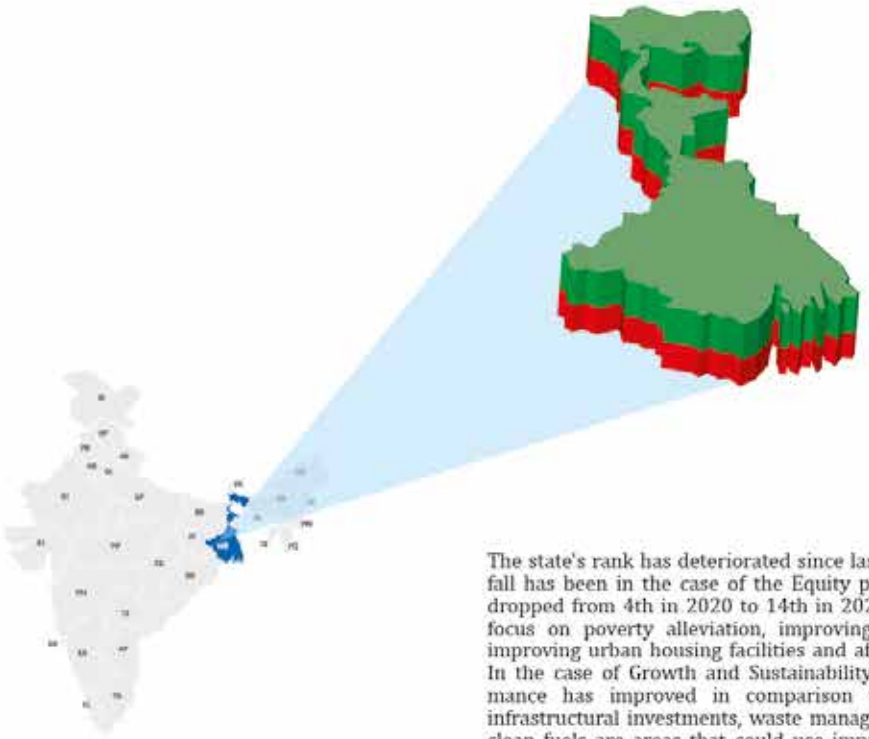
NHM Index

Proportion of deaths due to communicable diseases to total number of deaths
Targets & Achievement of Maternity and Child Health Activities (Immunisation) in India
Expenditure on Health: Per Capita, as share of Total Expenditure and as share of GSDP for all State & Union Territories
Proportion of Health Human Resourse in CHC, PHC and Sub centres

Containment Response

Number of COVID-19 cases per million population
Number of COVID-19 testing laboratories per million population
Number of COVID-19 deaths per million population

WEST BENGAL



The state's rank has deteriorated since last year. The steepest fall has been in the case of the Equity pillar where its rank dropped from 4th in 2020 to 14th in 2021. The state should focus on poverty alleviation, improving safety of women, improving urban housing facilities and affordable healthcare. In the case of Growth and Sustainability, the state's performance has improved in comparison to 2020. However, infrastructural investments, waste management and usage of clean fuels are areas that could use improvement. The poor performance of the state in equity is also visible in its poor performance in NHM scheme. The health infrastructure, deaths due to communicable diseases and awareness of NCD are areas that requires state attention. With respect to the state's response to COVID, the state needs to improve tests per million population conducted.

	Score	Rank		Change in Rank
PAI Index	-0.489	12	2020	▼
	-0.553	15	2021	
Equity Index	0.133	4	2020	▼
	-0.809	14	2021	
Growth Index	0.039	11	2020	▲
	0.287	9	2021	
Sustainability Index	-1.641	18	2020	▲
	-1.137	16	2021	
MGNREGA Index	0.286	6	2021	
SInSA Index	-0.068	9	2021	
ICDS Index	-0.483	15	2021	
MDMS Index	0.510	2	2021	
NHM Index	-0.700	16	2021	
COVID 19 Response Index	-0.146	9	2021	
Preparedness Response	-0.755	5	2021	
Containment Response	-1.046	16	2021	

Equity

Utilisation of Nirbhaya Fund since its inception
Crimes against children
Real wage (casual labour)
Proportion of urban population living in slums
Rapes per 10 lakh population
Percentage of Deprived households across all 7 Deprivation
Average out of pocket expenditure

Growth

Health worker density
Immunisation achievement
Unemployment Rate
Proportion of population using safely managed drinking water services
Proportion of total government expenditure on infrastructure

Sustainability

Proportion of land that is degraded over total land area
Forest area as a proportion of total land area
Renewable energy share in the total final energy consumption
Percentage of households using clean cooking fuel
Solid waste generation and waste processing in the urban areas

SmSA Index

Proportion of girls enroled as a proportion of total enroled population in the age group 6-17

ICDS Index

Beneficiaries covered in the Pre-school education
Actual Availability of Anganwadi Workers and Helpers against sanctioned number
Percentage utilisation of the scheme fund available

MDMS Index

Proportion of students recieving benefits under MDMS to total students enroled in schools

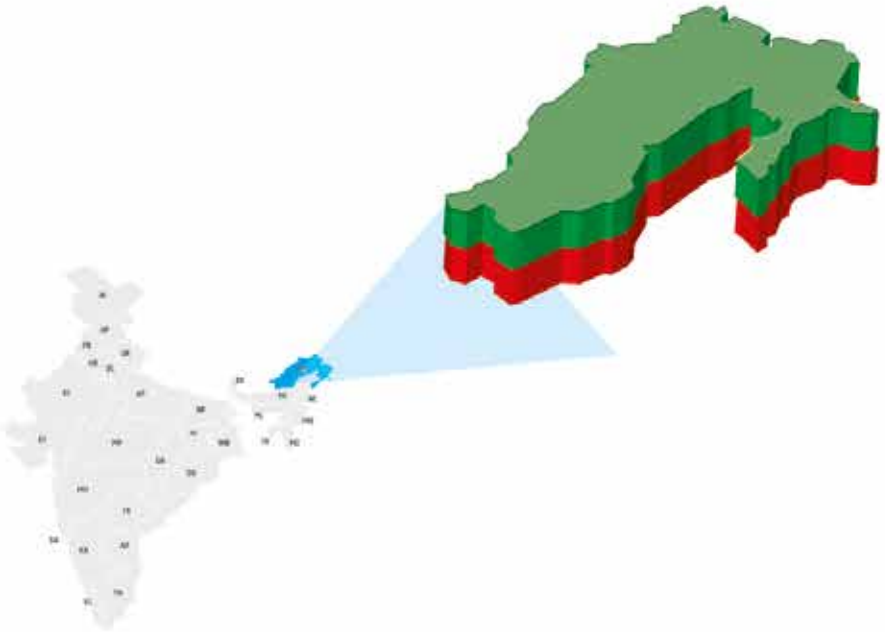
NHM Index

Targets & Achievement of Maternity and Child Health Activities (Immunisation) in India
Number of PHC per population
Proportion of deaths due to communicable diseases to total number of deaths
Number of people attending NCD clinics

Containment Response

Number of COVID-19 tests conducted per million population

ARUNACHAL PRADESH



The state has slipped one rank as compared to last year. Apart from the growth pillar, the pillars of equity and sustainability show a decline. PAI 2021 recommends that the state focus on Gender Parity, creating income generation opportunities that would contribute to the GDP and decent work to improve it's performance in the index. The state should also improve it's performance in the Mid-Day Meal Scheme.

	Score	Rank		Change in Rank
PAI Index	0.048	6	2020	▼
	-0.258	7	2021	
Equity Index	-0.174	9	2020	▼
	-1.521	11	2021	
Growth Index	0.298	5	2020	▼
	-0.625	7	2021	
Sustainability Index	0.019	9	2020	▲
	1.371	2	2021	
MGNREGA Index	0.037	5	2021	
SmSA Index	0.556	3	2021	
ICDS Index	0.906	2	2021	
MDMS Index	-0.346	9	2021	
NHM Index	0.326	4	2021	
COVID 19 Response Index	0.331	3	2021	
Preparedness Response	-0.088	6	2021	
Containment Response	0.751	2	2021	

Equity

Real wage differential (casual labour)
Proportion of urban population living in slums
Infant Mortality Rate (IMR)
Unsentenced detainees as a proportion of overall prison population
Incidence of Crimes against SC and ST
Proportion of population covered by social protection (IGNOAPS, IGNDPS, IGNWPS, Maternity Benefit)
Real wage differential (salaried employee)
Prevalence of malnutrition amongst children below 6 years
Average out of pocket expenditure
Worker Population Ratio (Female) (WPR)
Number of victims of intentional homicide per 100,000population
Annual Drop-out rate at secondary level

Growth

Fiscal Surplus/ Deficit
States Own Tax Revenue Growth
Inequality amongst salaried employees
Proportion of total government expenditure on infrastructuree
Immunisation achievement
Institutional delivery
Performance Grading Index
Proportion of schools with access to (a) electricity; (b) computers for pedagogical purposes; (c) access to CWSN friendly toilets; (d) basic drinking water; (e) single-sex basic sanitation facilities; and (f) basic handwashing facilities (as per the WASH indicator definitions)
Proportion of population using safely managed sanitation services
Proportion of population with access to electricity
Rural Non farm employment
Annual growth rate of NDP per capita
Manufacturing value added as a proportion of GDP and per capita

Sustainability

Renewable energy share in the total final energy consumption
Forest area as a proportion of total land area
Percentage of Nitrogen fertilizers out of total N P K
Solid waste generation and waste processing in the urban areas

MGNREGA Index

Percentage utilisation of the scheme fund available
Proportion of Scheduled Caste persondays to that of total persondays generated
Proportion of female active workers
Ratio of average wage recived to notifed wage

SmSA Index

Percentage utilisation of the scheme fund available
Per capita expenditure of SSA and RMSA
Ratio of number of schools with ramp access to the total number of schools
Proportion of SC students enrolled as a proportion of total SC population in the age group 6-17
Pupil Teacher Ratio

ICDS

Total Number of Anganwadis operating per 1000 population
Beneficiaries covered in the Pre-school education
Actual Availability of Anganwadi Workers and Helpers against sanctioned number
Percentage utilisation of the scheme fund available

MDMS Index

Percentage utilisation of the scheme fund available
Proportion of foodgrains allocated to each state to the number of children availing benefits under the scheme in the state
Dropout in Primary and Upper Primary in government schools

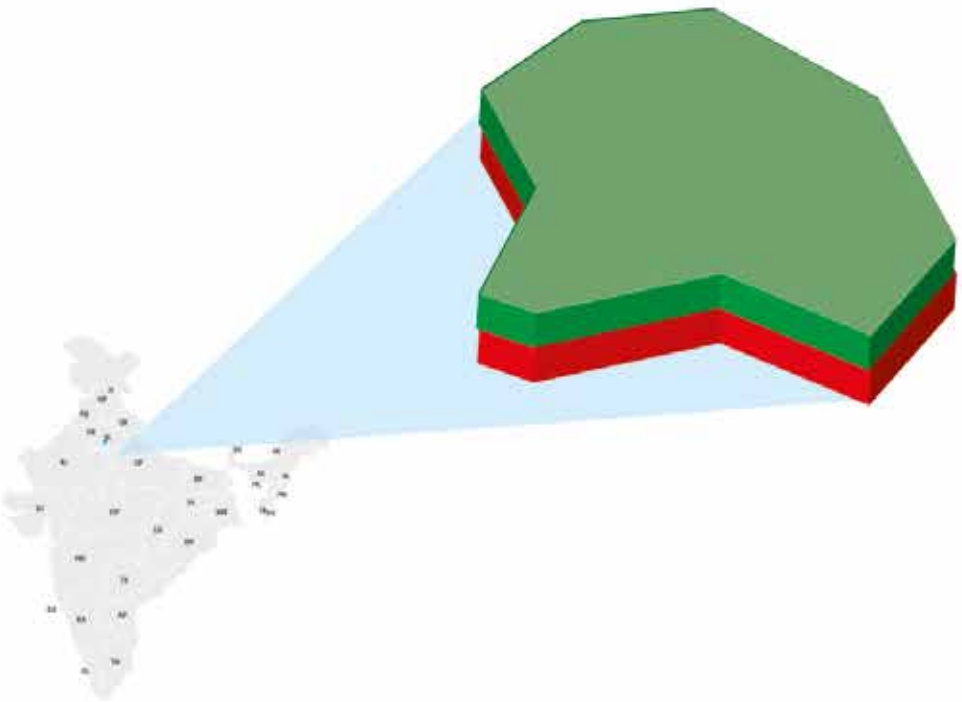
NHM Index

Number of PHC per population
Expenditure on Health: Per Capita, as share of Total Expenditure and as share of GSDP for all State & Union Territories
Proportion of deaths due to communicable diseases to total number of deaths
Number of people attending NCD clinics
Percentage utilisation of the scheme fund available
Proportion of deaths due to communicable diseases to total number of deaths
Proportion of Health Human Resourse in CHC, PHC and Sub centres

Containment Response

Number of COVID-19 testing laboratories per million population
Number of COVID-19 tests conducted per million population
Number of COVID-19 deaths per million population
Number of COVID-19 cases per million population

DL DELHI



The state's performance has seen a slight improvement since 2020 despite significant decline under sustainability. The state should work on gender equality, crimes and poverty alleviation. The state should also focus on National Health mission.

	Score	Rank		Change in Rank
PAI Index	-0.289	10	2020	▲
	-0.476	9	2021	
Equity Index	-1.601	11	2020	▲
	-1.132	10	2021	
Growth Index	0.299	4	2020	▲
	1.334	2	2021	
Sustainability Index	0.434	5	2020	▲
	-1.629	11	2021	
MGNREGA Index	-		2021	
SmSA Index	-0.775	19	2021	
ICDS Index	-0.504	17	2021	
MDMS Index	0.389	3	2021	
NHM Index	-0.158	12	2021	
COVID 19 Response Index	0.656	1	2021	
Preparedness Response	2.505	1	2021	
Containment Response	-1.193	10	2021	

Equity

Utilisation of Nirbhaya Fund since its inception
Real wage (casual labour)
Expenditure in social sector
Worker Population Ratio (Female) (WPR)
Dowry deaths per 10 lakh population
Proportion of population covered by social protection (IGNOAPS, IGNDPS, IGNWPS, Maternity Benefit)
Unsentenced detainees as a proportion of overall prison population
Number of victims of intentional homicide per 100,000population
Proportion of urban population living in slums
Child Sex ratio
Average out of pocket expenditure
Crimes against children

Growth

Rural Non farm employment
Fiscal Surplus/ Deficit
Performance Grading Index
Proportion of population with access to electricity
Proportion of population using safely managed sanitation services
Proportion of total Government expenditure on Agriculture and Allied Services

Sustainability

Percentage of households using clean cooking fuel
Forest area as a proportion of total land area
Renewable energy share in the total final energy consumption
Percentage of Nitrogen fertilizers out of total N P K
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

ICDS

Total Number of Anganwadis operating per 1000 population
Coverage of Pregnant Women and Lactating mothers as per the ICDS scheme

SmSA Index

Ratio of number of schools with ramp access to the total number of schools
Net Enrolment Rate
Proportion of ST students enroled as a proportion of total ST population in the age group 6-17
Per capita expenditure of SSA and RMSA
Proportion of SC students enroled as a proportion of total SC population in the age group 6-17
Percentage utilisation of the scheme fund available

MDMS Index

Gross Enrolment Rate in government elementary schools
Dropout in Primary and Upper Primary government schools
Proportion of students recieving benefits under MDMS to total students enroled in schools

NHM Index

Expenditure on Health: Per Capita, as share of Total Expenditure and as share of GSDP for all State & Union Territories
Proportion of deaths due to communicable diseases to total number of deaths
Proportion of Health Human Resourse in CHC, PHC and Sub centres
Number of PHC per population
Number of Sub centres per population
Number of people attending NCD clinics
Percentage utilisation of the scheme fund available

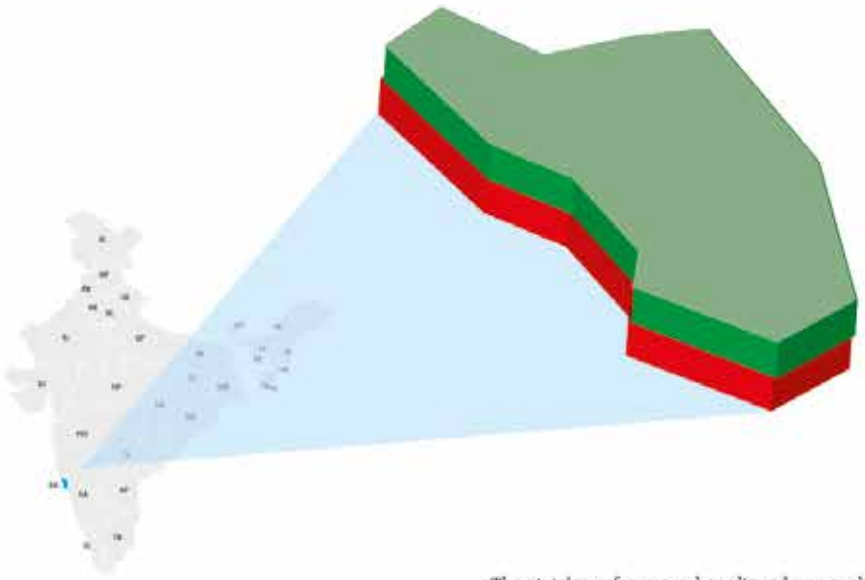
Preparedness Response

Percentage deficit of doctors per million population against normative standards
Percentage allocation of state budget to health

Containment Response

Number of COVID-19 tests conducted per million population
Number of COVID-19 cases per million population
Number of COVID-19 deaths per million population

GOA



The state's performance has slipped one rank as compared to last year. PAI 2021 recommends that the state work on improving gender equality and crimes. The state should also focus on livelihood creation therefore, is recommended to pay attention to Mahatma Gandhi Rural Employment Gurantee Scheme. The state should also improve it's performance in Samagra Sikhsha Abhiyan and Integrated Child Development Services.

	Score	Rank		Change in Rank
PAI Index	-1.745	1	2020	▼
	0.748	2	2021	
Equity Index	1.123	5	2020	▼
	-0.126	6	2021	
Growth Index	1.933	1	2020	
	1.533	1	2021	
Sustainability Index	2.180	1	2020	▼
	0.836	3	2021	
MGNREGA Index	-1.179	18	2021	
SmSA Index	-0.254	13	2021	
ICDS Index	-0.358	13	2021	
MDMS Index	1.444	1	2021	
NHM Index	1.170	2	2021	
COVID 19 Response Index	-1.033	11	2021	
Preparedness Response	0.371	3	2021	
Containment Response	-2.438	11	2021	

Equity

Infant Mortality Rate (IMR)
Proportion of urban population living in slums
Dowry deaths per 10 lakh population
Percentage of Deprived households across all 7 Deprivation
Child Sex ratio
Real wage (casual labour)
Unsentenced detainees as a proportion of overall prison population
Proportion of population covered by social protection (IGNOAPS, IGNDPS, IGNWPS, Maternity Benefit)
Proportion of seats held by women in (a) state legislatures and (b) local governments
Number of victims of intentional homicide per 100,000population

Growth

Rural Non farm employment
Immunisation achievement
Annual growth rate of NDP per capita
Institutional delivery
Manufacturing value added as a proportion of GDP and per capita
Proportion of population using safely managed sanitation services
Proportion of total government expenditure on infrastructure
Proportion of population with access to electricity
Proportion of population using safely managed drinking water services
Performance Grading Index
Proportion of total Government expenditure on Agriculture and Allied Services

Sustainability

Percentage of households using clean cooking fuel
Forest area as a proportion of total land area
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)
Solid waste generation and waste processing in the urban areas
Renewable energy share in the total final energy consumption

MGNREGA Index

Proportion of ST persondays to total persondays
Percentage of people who demanded employment to whom employment was provided
Proportion of number of applicants who recieved jobcards versus number of applicants who applied for jobcards
Proportion of female active workers to total active workers
Percentage utilisation of the scheme fund available
Proportion of SC persondays to total persondays

SmSA Index

Net Enrolment Rate
Pupil Teacher Ratio
Ratio of number of schools with ramp access to the total number of schools
Proportion of SC students enrolled as a proportion of total SC population in the age group 6-17

MDMS Index

Proportion of students recieving benefits under MDMS to total students enroled in schools
Per capita expenditure
Dropout in Primary Upper Primary in government schools

NHM Index

Targets & Achievement of Maternity and Child Health Activities (Immunisation) in India
Expenditure on Health: Per Capita, as share of Total Expenditure and as share of GSDP for all State & Union Territories
Number of people attending NCD clinics
Proportion of Health Human Resourse in CHC,PHC and sub centres

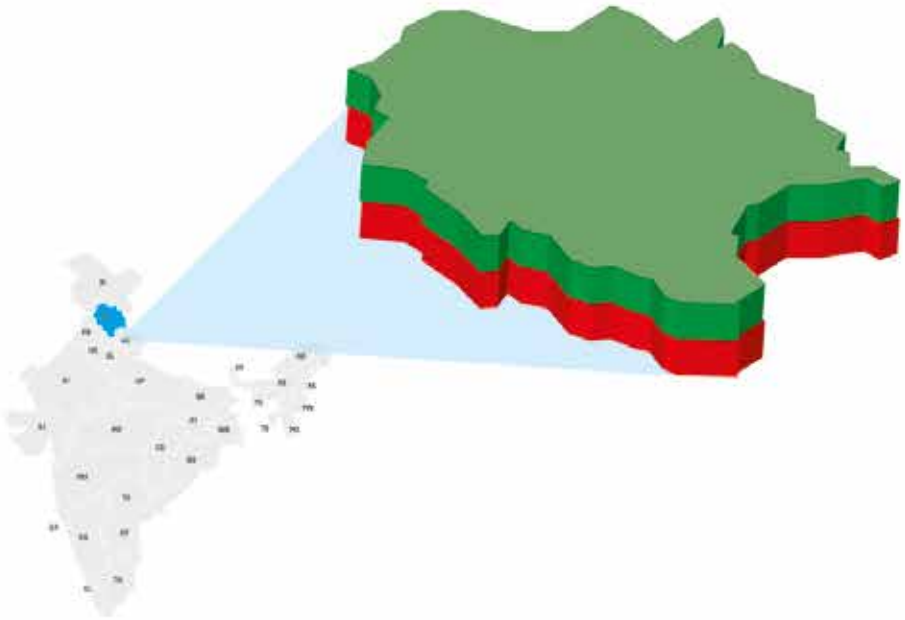
Preparedness Response

Percentage deficit of doctors per million population against normative standards
Percentage deficit of hospital beds per million population against normative standards
Percentage allocation of state budget to health

Containment Response

Number of COVID-19 tests conducted per million population
Number of COVID-19 cases per million population
Number of COVID-19 deaths per million population

HIMACHAL PRADESH



The state's performance has slipped one rank as compared to last year. The state's performance has declined in equity and growth pillar. PAI 2021 recommends that the state work on poverty alleviation, decent work and crimes. The state should also improve it's performance in Integrated Child Development Services.

	Score	Rank		Change in Rank
PAI Index	0.724	3	2020	▼
	0.318	4	2021	
Equity Index	2.020	2	2020	▼
	0.446	4	2021	
Growth Index	0.491	2	2020	▼
	0.745	3	2021	
Sustainability Index	-0.338	10	2020	▲
	-0.237	7	2021	
MGNREGA Index	-0.250	8	2021	
SmSA Index	0.591	2	2021	
ICDS Index	-0.493	9	2021	
MDMS Index	0.715	2	2021	
NHM Index	0.840	1	2021	
COVID 19 Response Index	0.080	6	2021	
Preparedness Response	-0.021	5	2021	
Containment Response	0.182	8	2021	

Equity

Worker Population Ratio (Female) (WPR)
Proportion of urban population living in slums
Prevalence of malnutrition amongst children below 6 years
Dowry deaths per 10 lakh population
Child Sex ratio
Real wage (casual labour)
Rural indebtedness
Percentage of Deprived households across all 7 Deprivation
Proportion of population covered by social protection (IGNOAPS, IGNDPS, IGNWPS, Maternity Benefit)
Incidence of Crimes against SC and ST
Rapes per 10 lakh population

Growth

Health worker density
Proportion of total government expenditure on infrastructure
Performance Grading Index
Proportion of population with access to electricity
Manufacturing value added as a proportion of GDP and per capita
Proportion of population using safely managed drinking water services
Proportion of population using safely managed sanitation services
Rural Non farm employment
Proportion of total Government expenditure on Agriculture and Allied Services

Sustainability

Renewable energy share in the total final energy consumption
Solid waste generation and waste processing in the urban areas
Forest area as a proportion of total land area
Proportion of land that is degraded over total land area

MGNREGA Index

Proportion of Scheduled Caste persondays to total persondays
Proportion of Scheduled Tribe persondays to that of total persondays generated
Ratio of average wage received to notified wage

SmSA Index

Ratio of number of schools with ramp access to the total number of schools
Net Enrolment Rate
Percentage utilisation of the scheme fund available
Proportion of girls enroled as a proportion of total enroled population in the age group 6-17
Proportion of ST students enroled as a proportion of total ST population in the age group 6-17
Proportion of SC students enroled as a proportion of total SC population in the age group 6-17

ICDS

Total Number of Anganwadis operating per 1000 population
Coverage of Pregnant Women and Lactating mothers as per the ICDS scheme
Beneficiaries covered in the Pre school educartion
Percentage utilisation of the scheme fund available

MDMS Index

Proportion of foodgrains allocated to each state to the number of children availing benefits under the scheme in the state
Dropout in Primary and Upper Primary in government schools

NHM Index

Percentage utilisation of the scheme fund available
Number of PHC per population
Number of Sub centres per population
Targets & Achievement of Maternity and Child Health Activities (Immunisation) in India
Proportion of Health Human Resourse in CHC,PHC and Sub centres

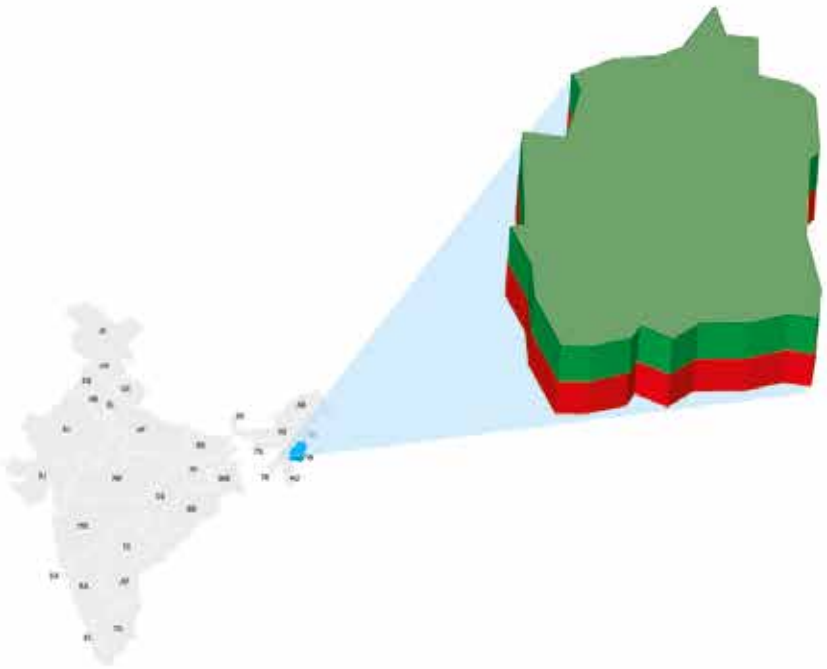
Preparedness Response

Percentage deficit of hospital beds per million population against normative standards

Containment Response

Number of COVID-19 testing laboratories per million population,

MANIPUR



The state's performance has been the same as last year. PAI 2021 recommends that the state work on improving gender equality, reducing crimes and providing decent work to improve their performance in the Index. The state should also focus on improving health outcomes as well therefore, is recommended that it pay attention to National Health Mission.

	Score	Rank		Change in Rank
PAI Index	-0.363	11	2020	
	-0.783	11	2021	
Equity Index	1.505	3	2020	▼
	-0.422	8	2021	
Growth Index	-2.647	11	2020	▲
	-0.963	9	2021	
Sustainability Index	0.053	8	2020	▼
	-0.965	9	2021	
MGNREGA Index	-0.346	9	2021	
SmSA Index	0.026	5	2021	
ICDS Index	1.237	1	2021	
MDMS Index	-0.329	8	2021	
NHM Index	-0.980	11	2021	
COVID 19 Response Index	-0.128	7	2021	
Preparedness Response	-0.482	8	2021	
Containment Response	0.226	7	2021	

Equity

Expenditure in social sector
Prevalence of malnutrition amongst children below 6 years
Dowry deaths per 10 lakh population
Palma Ratio of Household Expenditure in Urban and Rural India
Infant Mortality Rate (IMR)
Crimes against children
Rural indebtedness
Rapes per 10 lakh population
Percentage of Deprived households across all 7 Deprivation
Utilisation of Nirbhaya Fund since its inception
Incidence of Crimes against SC and ST
Unsentenced detainees as a proportion of overall prison population
Average out of pocket expenditure

Growth

Rural Non farm employment
Unemployment Rate
Proportion of total Government expenditure on Agriculture and Allied Services
Fiscal Surplus/ Deficit
Performance Grading Index
Annual growth rate of NDP per capita
Proportion of population using safely managed drinking water services

Sustainability

Forest area as a proportion of total land area
Proportion of land that is degraded over total land area
Renewable energy share in the total final energy consumption

MGNREGA Index

Proportion of female active workers to total active workers
Percentage utilisation of the scheme fund available

SmSA Index

Net Enrolment Rate
Proportion of ST students enroled as a proportion of total ST population in the age group 6-17

ICDS

Total Number of Anganwadis operating per 1000 population
Beneficiaries covered in the Pre-school education
Percentage utilisation of the scheme fund available

MDMS Index

Gross Enrolment Rate in government elementary schools
Proportion of students recieving benefits under MDMS to total students enroled in schools
Per capita expenditure
Percentage utilisation of the scheme fund available

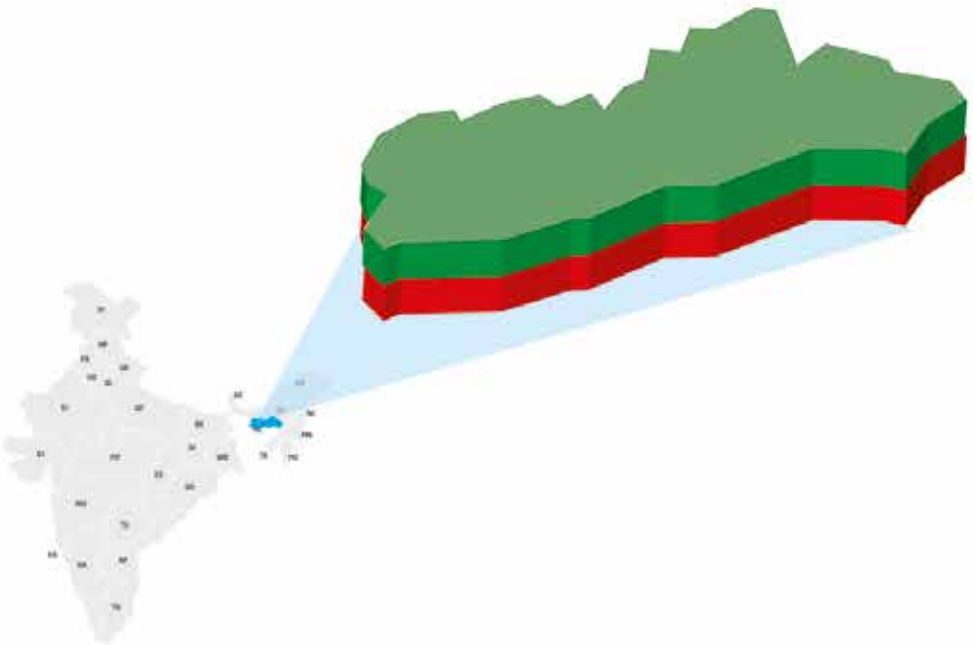
NHM Index

Proportion of Health Human Resourse in CHC, PHC and Sub centres
Number of PHC per population
Number of Sub centres per population
Proportion of deaths due to communicable diseases to total number of deaths
Percentage utilisation of the scheme fund available

Preparedness Response

Percentage deficit of hospital beds per million population against normative standards
Percentage allocation of state budget to health

MEGHALAYA



The state's performance has seen a significant drop as compared to last year. The performance in growth and sustainability pillar has worsend. PAI 2021 recommends that the state work on improving health and education outcomes, access to clean energy and providing decent work to improve their performance in the Index. The state should also focus on Samagra Siksha Abhiyan, Mid-Day Meal scheme and National Health Mission.

	Score	Rank		Change in Rank
PAI Index	0.796	2	2020	▼
	-0.146	6	2021	
Equity Index	2.170	1	2020	▼
	1.144	2	2021	
Growth Index	-0.419	9	2020	▼
	-1.222	11	2021	
Sustainability Index	0.640	2	2020	▲
	-0.358	8	2021	
MGNREGA Index	0.479	2	2021	
SmSA Index	-0.166	8	2021	
ICDS Index	0.298	4	2021	
MDMS Index	-0.323	7	2021	
NHM Index	-0.379	9	2021	
COVID 19 Response Index	0.090	5	2021	
Preparedness Response	-0.450	7	2021	
Containment Response	0.632	3	2021	

Equity

Worker Population Ratio (Female) (WPR)
Rural indebtedness
Percentage of Deprived households across all 7 Deprivation
Palma Ratio of Household Expenditure in Urban and Rural India
Child Sex ratio
Dowry deaths per 10 lakh population
Proportion of urban population living in slums
Number of victims of intentional homicide per 100,000population
Unsentenced detainees as a proportion of overall prison population
Proportion of seats held by women in (a) state legislatures and (b) local governments
Utilisation of Nirbhaya Fund since its inception
Incidence of Crimes against SC and ST

Growth

Unemployment Rate
Proportion of total Government expenditure on Agriculture and Allied Services
Manufacturing value added as a proportion of GDP and per capita
Proportion of population using safely managed drinking water services
Institutional delivery
Performance Grading Index
Fiscal Surplus/ Deficit

Sustainability

Percentage of Nitrogen fertilizers out of total N P K
Forest area as a proportion of total land area
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)
Percentage of households using clean cooking fuel
Solid waste generation and waste processing in the urban areas

MGNREGA Index

Proportion of Scheduled Tribe persondays to that of total persondays generated
Percentage of people who demanded employment to whom employment was provided

SmSA Index

Proportion of girls enroled as a proportion of total enroled population in the age group 6-17
Proportion of ST students enroled as a proportion of total ST population in the age group 6-17
Proportion of SC students enroled as a proportion of total SC population in the age group 6-17
Per capita expenditure of SSA and RMSA

ICDS

Coverage of Pregnant Women and Lactating mothers as per the ICDS scheme
Total Number of Anganwadis operating per 1000 population

MDMS Index

Proportion of students recieving benefits under MDMS to total students enroled in schools
Per capita expenditure
Gross Enrolment rate in elementary school
Dropout in Primary and Upper Primary government schools
Percentage utilisation of the scheme fund available

NHM Index

Proportion of Health Human Resourse in CHC, PHC and Sub centres
Number of subcentres per population

Preparedness Response

Percentage allocation of state budget to health
Percentage deficit of doctors per million population against normative standards

Containment Response

Number of COVID-19 cases per million population
Number of COVID-19 tests conducted per million population

MIZORAM

The state has seen a remarkable improvement in it's performance as compared to last year. There had been a notable improvement in the equity and sustainability pillar, but has placed the same in terms of growth pillar. PAI 2021 recommends that the state work on education outcomes, providing decent work to improve economic outcomes and check on the waste processing mechanism to improve their performance in the Index. The state should also focus on the Integrated Child Development Services.

	Score	Rank		Change in Rank
PAI Index	-0.055	7	2020	▲
	0.659	3	2021	
Equity Index	-0.237	10	2020	▲
	1.123	3	2021	
Growth Index	-0.379	8	2020	
	-0.672	8	2021	
Sustainability Index	0.450	4	2020	▲
	1.525	1	2021	
MGNREGA Index	0.939	1	2021	
SmSA Index	0.840	1	2021	
ICDS Index	-0.196	7	2021	
MDMS Index	0.722	1	2021	
NHM Index	0.354	3	2021	
COVID 19 Response Index	0.592	2	2021	
Preparedness Response	0.102	4	2021	
Containment Response	1.083	1	2021	

Equity

Proportion of seats held by women in (a) state legislatures and (b) local governments
Percentage of Deprived households across all 7 Deprivation
Prevalence of malnutrition amongst children below 6 years
Rural indebtedness
Dowry deaths per 10 lakh population
Real wage (casual labour)
Palma Ratio of Household Expenditure in Urban and Rural India
Incidence of Crimes against SC and ST
No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
Proportion of urban population living in slums
Unsentenced detainees as a proportion of overall prison population
Expenditure in social sector

Growth

Proportion of population using safely managed sanitation services
Health worker density
Performance Grading Index
Rural Non farm employment
Immunisation achievement
Manufacturing value added as a proportion of GDP and per capita
Proportion of total Government expenditure on Agriculture and Allied Services
States Own Tax Revenue Growth

Sustainability

Forest area as a proportion of total land area
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)
Percentage of households using clean cooking fuel
Percentage of Nitrogen fertilizers out of total N P K
Solid waste generation and waste processing in the urban areas

MGNREGA Index

Proportion of Scheduled Tribe persondays to that of total persondays generated
Proportion of number of applicants who recieved jobcards versus number of applicants who applied for jobcards
Percentage of people who demanded employment to whom employment was provided
Proportion of Scheduled Caste persondays to that of total persondays generated

SmSA Index

Pupil Teacher Ratio
Proportion of SC students enroled as a proportion of total SC population in the age group 6-17
Per capita expenditure of SSA and RMSA

ICDS

Actual Availability of Anganwadi Workers and Helpers against sanctioned number

MDMS Index

Proportion of students recieving benefits under MDMS to total students enroled in schools
Per capita expenditure
Gross Enrolment Rate in government elementary school

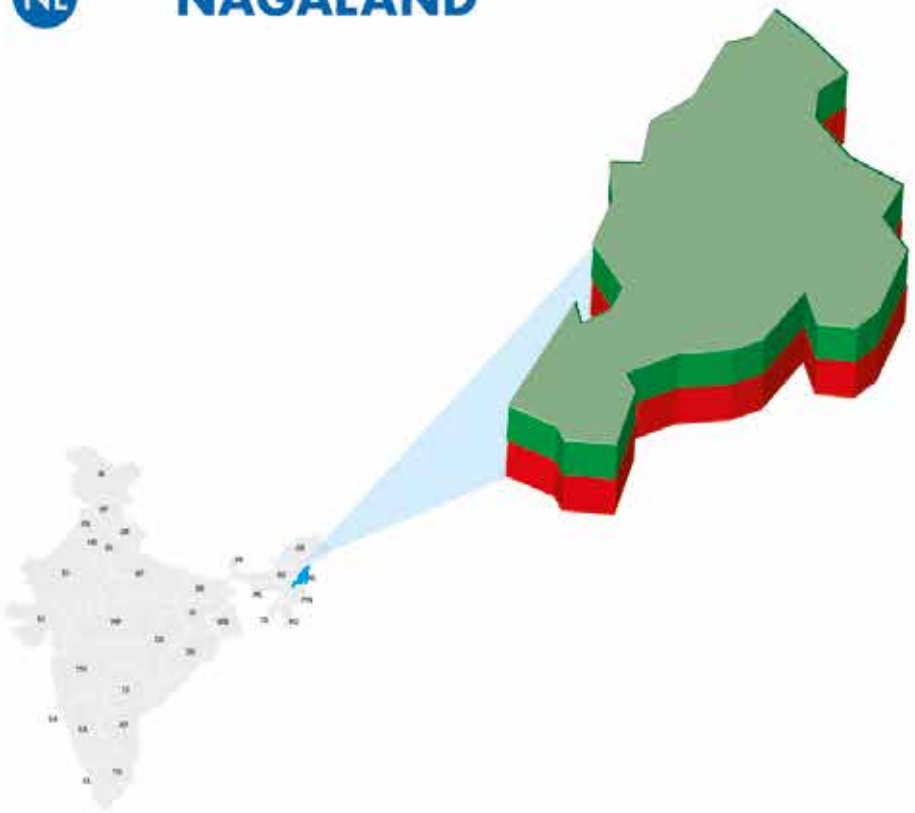
NHM Index

Number of Sub centres per population
Expenditure on Health: Per Capita, as share of Total Expenditure and as share of GSDP for all State & Union Territories
Proportion of deaths due to communicable diseases to total number of deaths
Number of people attending NCD clinics
Percentage utilisation of the scheme fund available

Containment Response

Number of COVID-19 testing laboratories per million population
Number of COVID-19 cases per million population
Number of COVID-19 deaths per million population

NAGALAND



	Score	Rank		Change in Rank
PAI Index	-0.116	8	2020	
	-0.317	8	2021	
Equity Index	1.171	4	2020	▼
	-0.004	5	2021	
Growth Index	-1.588	10	2020	
	-1.187	10	2021	
Sustainability Index	0.069	6	2020	▲
	0.242	5	2021	
MGNREGA Index	0.546	3	2021	
SmSA Index	-0.609	10	2021	
ICDS Index	0.712	3	2021	
MDMS Index	-0.451	10	2021	
NHM Index	-0.350	8	2021	
COVID 19 Response Index	-0.321	9	2021	
Preparedness Response	-1.024	10	2021	
Containment Response	0.382	4	2021	

The state's performance has been the same as last year. PAI 2021 recommends that the state work on improving gender equality, reducing crimes and improve health and education outcomes to improve their performance in the Index. The state should also focus on Samagra Siksha Abhiyan, Mid-Day Meal Scheme and National Health Mission.

Equity

Rural indebtedness
Percentage of Deprived households across all 7 Deprivation
Crimes against children
Prevalence of malnutrition amongst children below 6 years
Dowry deaths per 10 lakh population
Palma Ratio of Household Expenditure in Urban and Rural India
Incidence of Crimes against SC and ST
Average out of pocket expenditure
Worker Population Ratio (Female) (WPR)
Proportion of seats held by women in (a) state legislatures and (b) local governments
Number of victims of intentional homicide per 100,000population

Growth

Proportion of population using safely managed sanitation services
Proportion of total Government expenditure on Agriculture and Allied Services
Health worker density
Performance Grading Index
Annual growth rate of NDP per capita
Immunisation achievement
Institutional delivery
Unemployment Rate

Sustainability

Forest area as a proportion of total land area
Percentage of households using clean cooking fuel
Proportion of land that is degraded over total land area

SmSA Index

Pupil Teacher Ratio
Proportion of SC students enrolled as a proportion of total SC population in the age group 6-17
Proportion of ST students enrolled as a proportion of total ST population in the age group 6-17
Percentage utilisation of the scheme fund available
Net Enrolment Rate

MGNREGA Index

Proportion of Scheduled Tribe persondays to that of total persondays generated
Proportion of number of applicants who recieved jobcards versus number of applicants who applied for jobcards
Percentage of people who demanded employment to whom employment was provided
Ratio of average wage received to notified wage
Proportion of female active workers to total active workers
Percentage utilisation of the scheme fund available
Proportion of ST students enrolled as a proportion of total ST population in the age group 6-17

ICDS

Coverage of Pregnant Women and Lactating mothers as per the ICDS scheme
Beneficiaries covered in the Pre school educartion
Actual Availability of Anganwadi Workers and Helpers against sanctioned number
Percentage utilisation of the scheme fund available

MDMS Index

Percentage utilisation of the scheme fund available
Proportion of foodgrains allocated to each state to the number of children availing benefits under the scheme in the state
Gross Enrolment rate in government elementary school
Dropout in Primary and Upper Primary government schools

NHM Index

Number of PHC per population
Proportion of deaths due to communicable diseases to total number of deaths
Number of people attending NCD clinics
Targets & Achievement of Maternity and Child Health Activities (Immunisation) in India

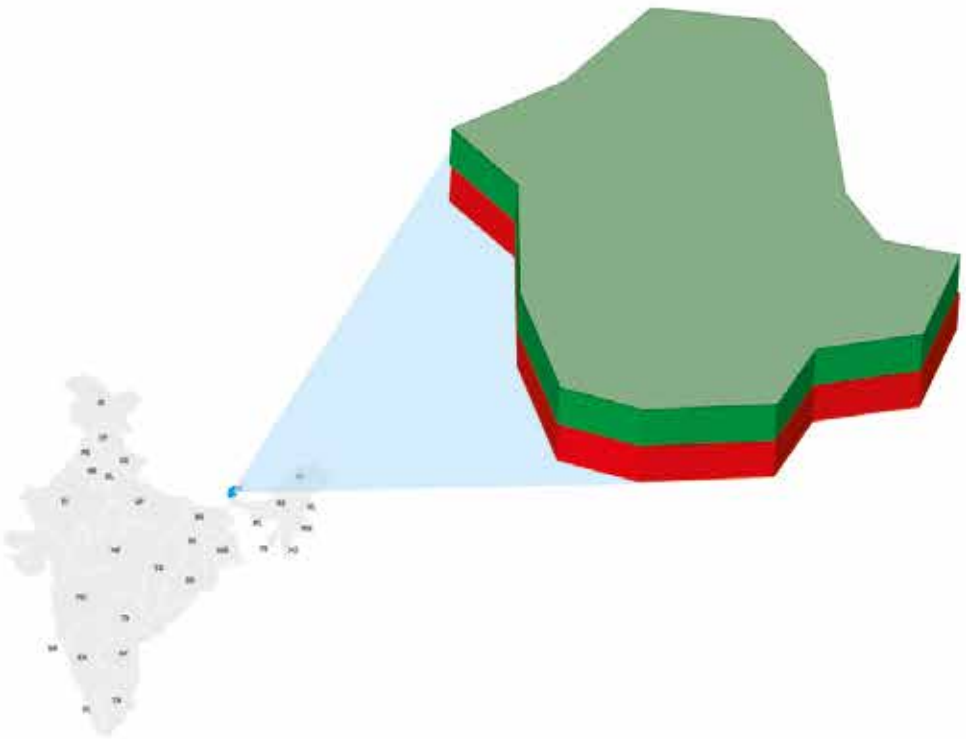
Preparedness Response

Percentage deficit of doctors per million population against normative standards
Percentage allocation of state budget to health

Containment Response

Number of COVID-19 testing laboratories per million population
Number of COVID-19 cases per million population
Number of COVID-19 tests conducted per million population
Number of COVID-19 deaths per million population

SIKKIM



The state is the top performer in the small states category. The state has done remarkably well in the equity pillar. PAI 2021 recommends that the state work on improving health and education outcomes to improve their performance in the Index further. The state should also focus on Integrated Child Development Scheme.

	Score	Rank		Change in Rank
PAI Index	0.602	4	2020	▲
	0.907	1	2021	
Equity Index	0.903	6	2020	▲
	1.617	1	2021	
Growth Index	0.312	3	2020	▼
	0.735	4	2021	
Sustainability Index	0.591	3	2020	▼
	0.369	4	2021	
MGNREGA Index	0.663	2	2021	
SmSA Index	0.198	4	2021	
ICDS Index	-0.454	8	2021	
MDMS Index	0.573	4	2021	
NHM Index	0.664	2	2021	
COVID 19 Response Index	0.253	4	2021	
Preparedness Response	0.760	2	2021	
Containment Response	-0.253	9	2021	

Equity

Worker Population Ratio (Female) (WPR)
No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
Rural indebtedness
Palma Ratio of Household Expenditure in Urban and Rural India
Dowry deaths per 10 lakh population
Number of victims of intentional homicide per 100,000population
Prevalence of malnutrition amongst children below 6 years
Incidence of Crimes against SC and ST
Rapes per 10 lakh population
Utilisation of Nirbhaya Fund since its inception
Percentage of Deprived households across all 7 Deprivation
Crimes against children
Child Sex ratio

Growth

Proportion of population using safely managed sanitation services
Immunisation achievement
Unemployment Rate
Institutional delivery
Manufacturing value added as a proportion of GDP and per capita
Proportion of population using safely managed drinking water services
Proportion of population with access to electricity
Proportion of total Government expenditure on Agriculture and Allied Services

Sustainability

Percentage of Nitrogen fertilizers out of total N P K
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)
Solid waste generation and waste processing in the urban areas
Percentage of households using clean cooking fuel
Renewable energy share in the total final energy consumption
Proportion of land that is degraded over total land area

MGNREGA Index

Ratio of average wage received to notified wage
Proportion of female active workers to total active workers
Percentage utilisation of the scheme fund available

SmSA Index

Proportion of SC students enroled as a proportion of total SC population in the age group 6-17
Pupil Teacher Ratio
Percentage utilisation of the scheme fund available
Proportion of girls enroled as a proportion of total enroled population in the age group 6-17
Ratio of number of schools with ramp access to the total number of schools
Net Enrolment Rate

ICDS

Actual Availability of Anganwadi Workers and Helpers against sanctioned number
Coverage of Pregnant Women and Lactating mothers as per the ICDS scheme

MDMS Index

Proportion of foodgrains allocated to each state to the number of children availing benefits under the scheme in the state
Dropout in Primary and Upper Primary government school
Percentage utilisation of the scheme fund available
Gross Enrolment Rate in elementary school

NHM Index

Targets & Achievement of Maternity and Child Health Activities (Immunisation) in India
Expenditure on Health: Per Capita, as share of Total Expenditure and as share of GSDP for all State & Union Territories
Number of people attending NCD clinics

Preparedness Response

Percentage deficit of doctors per million population against normative standards
Percentage deficit of hospital beds per million population against normative standards

Containment Response

Number of COVID-19 tests conducted per million population
Number of COVID-19 deaths per million population

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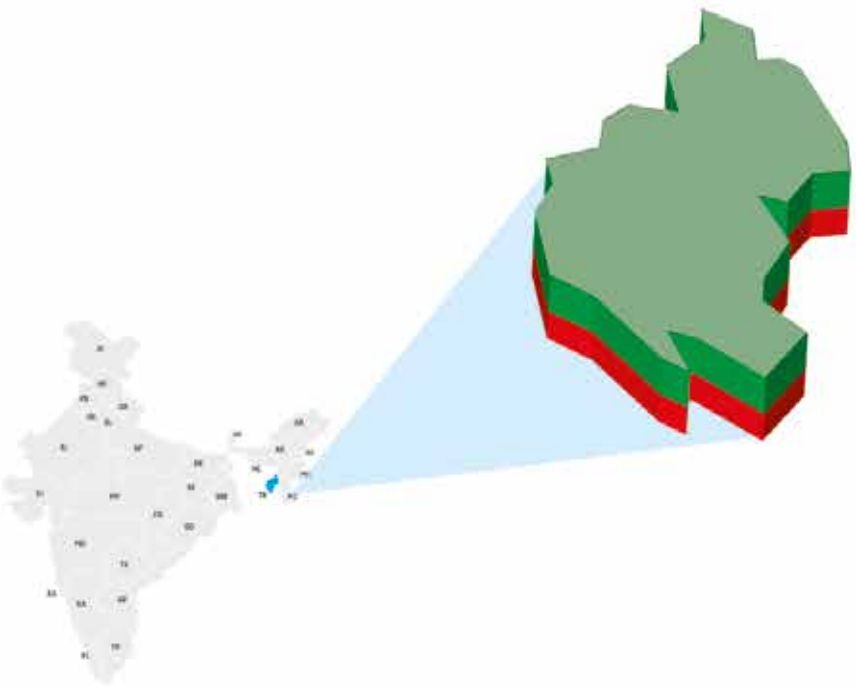

The state's performance has been the same as last year, however it has improved a rank in the growth and sustainability pillar. PAI 2021 recommends that the state work on improving health and education outcomes, reducing crimes against women and providing employment to improve their performance in the Index further. The state should also focus on Samagra Siksha Abhiyan and National Health Mission.

	Score	Rank		Change in Rank
PAI Index	0.145	5	2020	
	-0.009	5	2021	
Equity Index	0.182	7	2020	
	-0.251	7	2021	
Growth Index	0.186	6	2020	▲
	0.319	5	2021	
Sustainability Index	0.319	7	2020	▲
	-0.095	6	2021	
MGNREGA Index	-0.095	6	2021	
SmSA Index	-0.257	8	2021	
ICDS Index	-0.141	6	2021	
MDMS Index	0.593	3	2021	
NHM Index	-0.277	7	2021	
COVID 19 Response Index	-0.152	8	2021	
Preparedness Response	-0.613	9	2021	
Containment Response	0.307	6	2021	

Equity

Rural indebtedness
Incidence of Crimes against SC and ST
Number of victims of intentional homicide per 100,000population
Percentage of Deprived households across all 7 Deprivation
Rapes per 10 lakh population
Worker Population Ratio (Female) (WPR)
Dowry deaths per 10 lakh population

Growth

Annual growth rate of NDP per capita
Rural Non farm employment
Proportion of total government expenditure on infrastructure
Immunisation achievement
Proportion of total Government expenditure on Agriculture and Allied Services
Unemployment Rate
Manufacturing value added as a proportion of GDP and per capita

Sustainability

Forest area as a proportion of total land area
Percentage of households using clean cooking fuel
Renewable energy share in the total final energy consumption

MGNREGA Index

Proportion of Scheduled Caste persondays to that of total persondays generated
Proportion of number of applicants who recieved jobcards versus number of applicants who applied for jobcards
Percentage utilisation of the scheme fund available
Ratio of average wage received to notified wage

SmSA Index

Ratio of number of schools with ramp access to the total number of schools
Net Enrolment Rate
Percentage utilisation of the scheme fund available

ICDS

Actual Availability of Anganwadi Workers and Helpers against sanctioned number
Percentage utilisation of the scheme fund available

MDMS Index

Proportion of foodgrains allocated to each state to the number of children availing benefits under the scheme in the state
Dropout in Primary and Upper Primary in government schools

NHM Index

Number of Sub centres per population
Number of PHC per population
Proportion of Health Human Resourse in CHC,PHC and subcentres

Preparedness Response

Percentage deficit of hospital beds per million population against normative standards

Containment Response

Number of COVID-19 testing laboratories per million population

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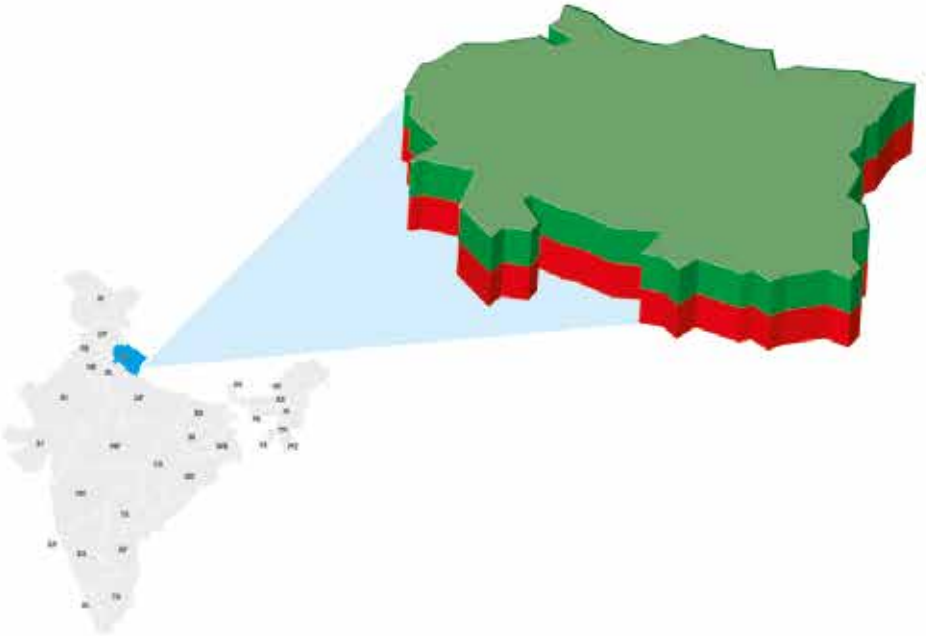

The state's performance has slipped by one rank as compared to last year. PAI 2021 recommends that the state work on improving health and education outcomes, poverty alleivation, providing employment and check on pollution to improve their performance in the Index further. The state should also focus on Samagra Siksha Abhiyan and Integrated Child Development Services.

	Score	Rank		Change in Rank
PAI Index	-0.277	9	2020	▼
	-0.643	10	2021	
Equity Index	-0.032	8	2020	▼
	-0.874	9	2021	
Growth Index	-0.180	7	2020	▲
	0.004	6	2021	
Sustainability Index	-0.619	11	2020	▲
	-1.059	10	2021	
MGNREGA Index	-0.126	7	2021	
SmSA Index	-0.484	9	2021	
ICDS Index	-0.643	10	2021	
MDMS Index	0.067	5	2021	
NHM Index	0.029	6	2021	
COVID 19 Response Index	-0.370	10	2021	
Preparedness Response	-1.060	11	2021	
Containment Response	0.320	5	2021	

Equity

Incidence of Crimes against SC and ST
Proportion of seats held by women in (a) state legislatures and (b) local governments
Average out of pocket expenditure
Number of victims of intentional homicide per 100,000population
Worker Population Ratio (Female) (WPR)
Percentage of Deprived households across all 7 Deprivation

Growth

Proportion of population with access to electricity
Institutional delivery
Health worker density
Unemployment Rate
Proportion of total Government expenditure on Agriculture and Allied Services

Sustainability

Proportion of land that is degraded over total land area
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)
Percentage of Nitrogen fertilizers out of total N P K

MGNREGA Index

Proportion of Scheduled Caste persondays to that of total persondays generated
Proportion of number of applicants who recieved jobcards versus number of applicants who applied for jobcards
Proportion of Scheduled Tribe persondays to that of total persondays generated
Percentage of people who demanded employment to whom employment was provided

SmSA Index

Proportion of girls enroled as a proportion of total enroled population in the age group 6-17
Pupil Teacher Ratio
Per capita expenditure of SSA and RMSA

ICDS

Actual Availability of Anganwadi Workers and Helpers against sanctioned number
Total Number of Anganwadis operating per 1000 population
Beneficiaries covered in the Pre school educartion

MDMS Index

Per capita expenditure
Percentage utilisation of the scheme fund available
Proportion of students recieving benefits under MDMS to total students enroled in schools

NHM Index

Percentage utilisation of the scheme fund available
Proportion of Health Human Resourse in CHC, PHC and Sub centres
Number of PHC per population
Expenditure on Health: Per Capita, as share of Total Expenditure and as share of GSDP for all State & Union Territories
Proportion of deaths due to communicable diseases to total number of deaths
Number of people attending NCD clinics

Preparedness Response

Percentage deficit of doctors per million population against normative standards
Percentage deficit of hospital beds per million population against normative standards
Percentage allocation of state budget to health

Containment Response

Number of COVID-19 testing laboratories per million population

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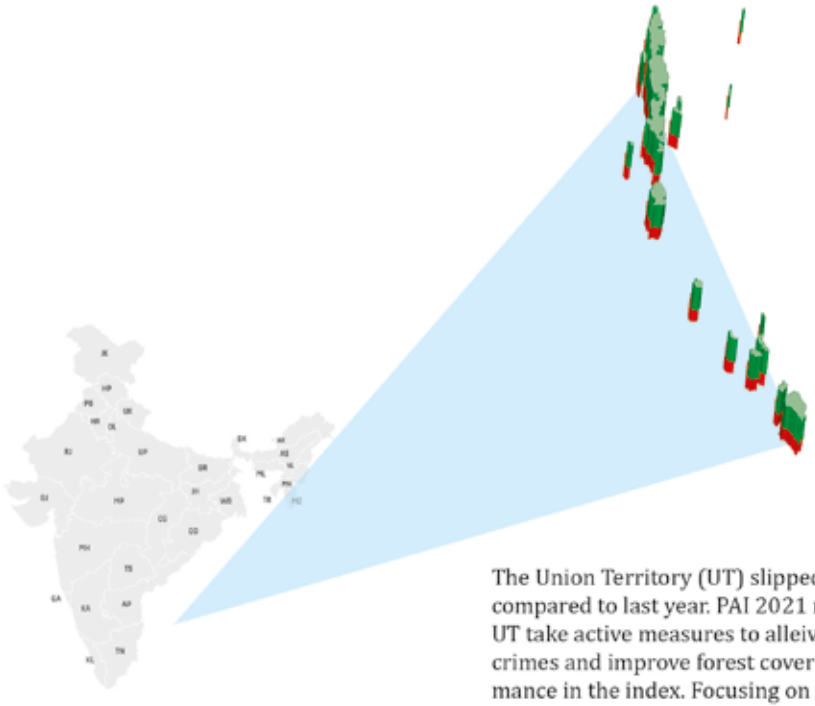


The Union Territory (UT) slipped two ranks as compared to last year. PAI 2021 recommends that the UT take active measures to alleivate poverty, reduce crimes and improve forest cover to improve the performance in the index. Focusing on schemes like National Urban Livelihood Mission, CAMPA act etc. would be beneficial for the UT.

	Score	Rank		Change in Rank
PAI Index	-0.308	5	2020	▼
	-0.696	6	2021	
Equity Index	-0.731	6	2020	▲
	-0.526	5	2021	
Growth Index	-0.724	5	2020	▼
	-1.528	6	2021	
Sustainability Index	-0.308	5	2020	▲
	-0.032	3	2021	

Equity

Child Sex ratio
Infant Mortality Rate (IMR)
Dowry deaths per 10 lakh population
Crimes against children
Palma Ratio of Household Expenditure in Urban and Rural India
Percentage of Deprived households across all 7 Deprivation
Unsentenced detainees as a proportion of overall prison population
Number of victims of intentional homicide per 100,000population

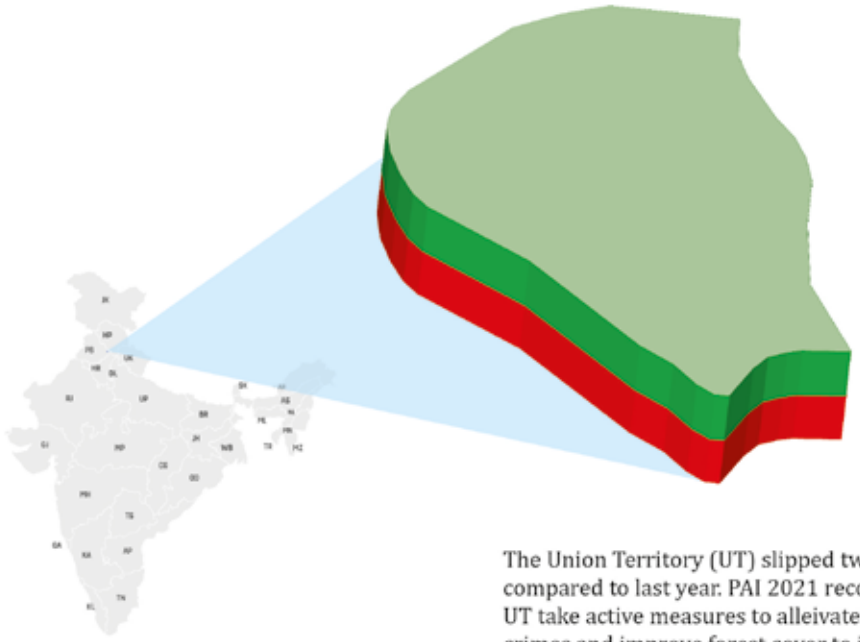
Growth

Performance Grading Index
Proportion of population with access to electricity

Sustainability

Forest area as a proportion of total land area

CHANDIGARH



The Union Territory (UT) slipped two ranks as compared to last year. PAI 2021 recommends that the UT take active measures to alleivate poverty, reduce crimes and improve forest cover to improve the performance in the index. Focusing on schemes like National Urban Livelihood Mission, CAMPA act etc. would be beneficial for the UT.

	Score	Rank		Change in Rank
PAI Index	1.057	1	2020	▼
	-0.298	3	2021	
Equity Index	1.348	1	2020	▼
	0.628	3	2021	
Growth Index	0.326	4	2020	▼
	-0.747	5	2021	
Sustainability Index	1.057	1	2020	▼
	-0.776	5	2021	

Equity

Infant Mortality Rate (IMR)
Percentage of Deprived households across all 7 Deprivation
Unsentenced detainees as a proportion of overall prison population
Number of victims of intentional homicide per 100,000population
Child Sex ratio
Rapes per 10 lakh population
Dowry deaths per 10 lakh population

Growth

Performance Grading Index
Rural Non farm employment
Proportion of population using safely managed sanitation services
Unemployment Rate

Sustainability

Percentage of households using clean cooking fuel
Solid waste generation and waste processing in the urban areas
Percentage of Nitrogen fertilizers out of total N P K
Forest area as a proportion of total land area
Proportion of land that is degraded over total land area

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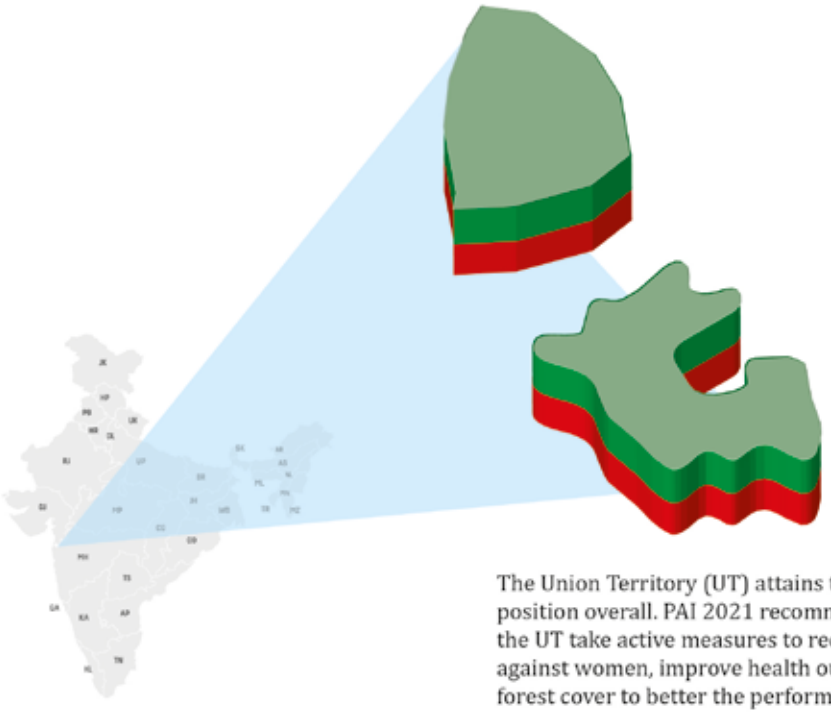

The Union Territory (UT) attains the 5th position overall. PAI 2021 recommends that the UT take active measures to reduce crimes against women, improve health outcomes and forest cover to better the performance in the index. Focusing on schemes like National Urban Livelihood Mission, National Health Mission and the CAMPA act would be beneficial for the UT.

	Score		Rank			Change in Rank
PAI Index	-0.690	-0.076	7	4	2020	▼
	-0.445		5		2021	
Equity Index	-0.151	0.593	5	2	2020	▼
	-1.473		6		2021	
Growth Index	-0.908	0.363	6	3	2020	▲
	0.655		2		2021	
Sustainability Index	-0.690	-0.076	2	4	2020	
	-0.517		4		2021	

Equity

Average out of pocket expenditure
Unsentenced detainees as a proportion of overall prison population
Real wage (casual labour)
Worker Population Ratio (Female) (WPR)
Palma Ratio of Household Expenditure in Urban and Rural India
Dowry deaths per 10 lakh population
Infant Mortality Rate (IMR)
Child Sex ratio
Prevalence of malnutrition amongst children below 6 years

Growth

Immunisation achievement
Unemployment Rate
Institutional delivery
Proportion of population using safely managed sanitation services

Sustainability

Solid waste generation and waste processing in the urban areas
Renewable energy share in the total final energy consumption
Percentage of Nitrogen fertilizers out of total N P K

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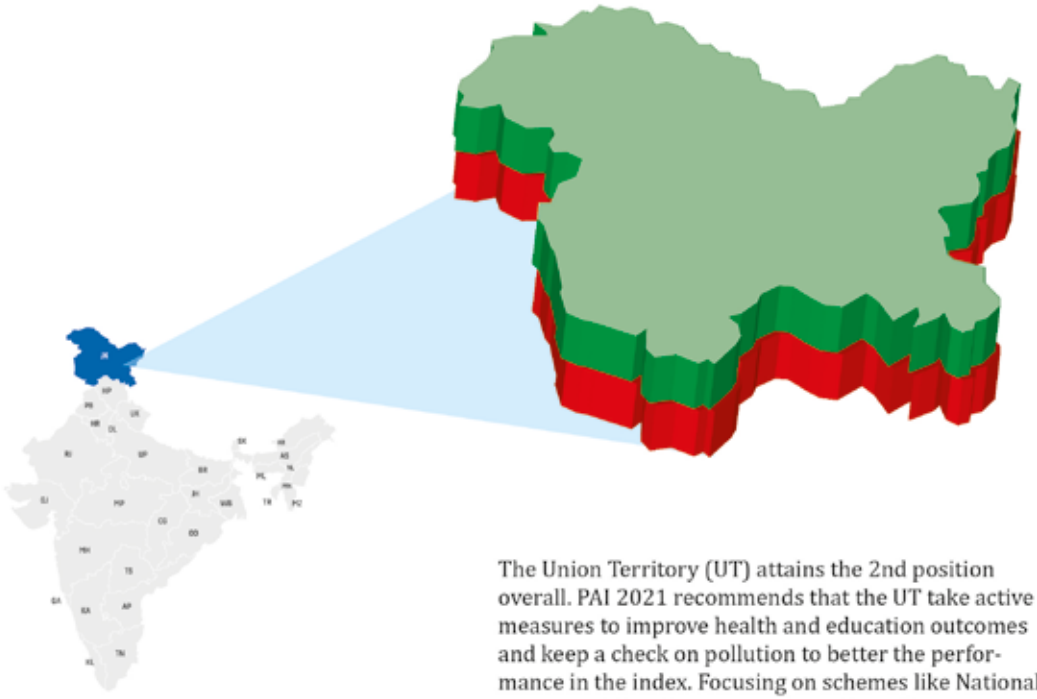


The Union Territory (UT) attains the 2nd position overall. PAI 2021 recommends that the UT take active measures to improve health and education outcomes and keep a check on pollution to better the performance in the index. Focusing on schemes like National Urban Livelihood Mission, National Health Mission and Swachh Bharat Abhiyan would be beneficial for the UT.

	Score	Rank		Change in Rank
PAI Index	-0.506	6	2020	▲
	0.396	2	2021	
Equity Index	0.559	3	2020	▲
	0.705	2	2021	
Growth Index	-1.340	7	2020	▲
	-0.107	4	2021	
Sustainability Index	-0.506	6	2020	▲
	0.590	2	2021	

Equity

Crimes against children
Worker Population Ratio (Female) (WPR)
Prevalence of malnutrition amongst children below 6 years
No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
Infant Mortality Rate (IMR)
Average out of pocket expenditure

Growth

Immunisation achievement
Performance Grading Index
Proportion of population using safely managed sanitation services
Institutional delivery
Rural Non farm employment

Sustainability

Solid waste generation and waste processing in the urban areas
Forest area as a proportion of total land area
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

LAKSHADWEEP

The Union Territory (UT) attains 4th rank overall. PAI 2021 recommends that the UT take active measures to improve health and education outcomes, provide decent work opportunities and access to clean cooking fuel to better the performance in the index. Focusing on schemes like Samagra Siksha Abhiyan, National Urban Livelihood Mission, Ujjwala Yojana and Swachh Bharat Abhiyan would be beneficial for the UT.

	Score	Rank		Change in Rank
PAI Index	0.004	3	2020	▼
	-0.302	4	2021	
Equity Index	-1.718	7	2020	▲
	-0.516	4	2021	
Growth Index	1.066	2	2020	▼
	0.566	3	2021	
Sustainability Index	0.004	3	2020	▼
	-0.958	6	2021	

Equity

Rapes per 10 lakh population
Dowry deaths per 10 lakh population
Number of victims of intentional homicide per 100,000population
Crimes against children
Real wage (casual labour)

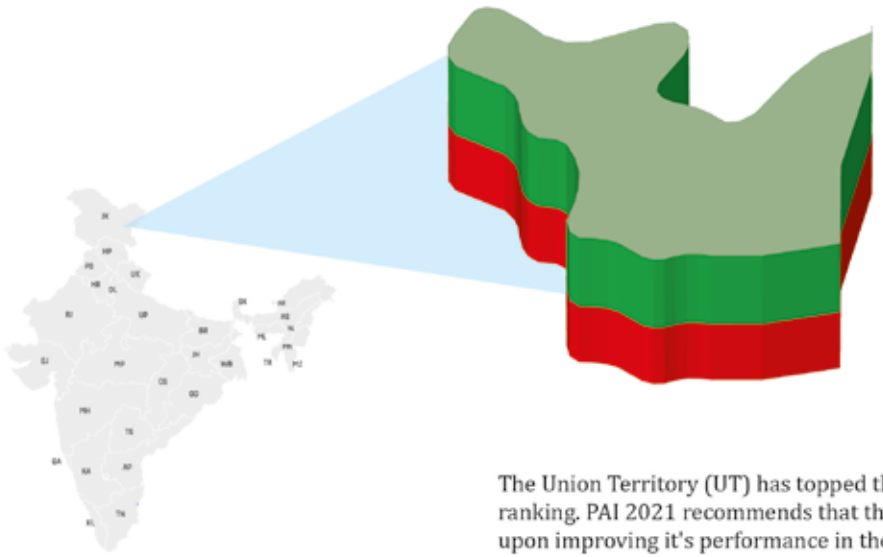
Growth

Proportion of population using safely managed sanitation services
Institutional delivery
Immunisation achievement
Proportion of population using safely managed drinking water services
Performance Grading Index
Unemployment Rate

Sustainability

Renewable energy share in the total final energy consumption
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)
Percentage of Nitrogen fertilizers out of total N P K
Solid waste generation and waste processing in the urban areas
Percentage of households using clean cooking fuel

PY PUDUCHERRY



The Union Territory (UT) has topped the UT ranking. PAI 2021 recommends that the UT act upon improving it's performance in the sustainability pillar to keep up it's performance in the Index. Focusing on schemes like the CAMPA act would be beneficial for the UT.

	Score	Rank		Change in Rank
PAI Index	0.520	2	2020	▲
	1.345	1	2021	
Equity Index	0.099	5	2020	▲
	1.182	1	2021	
Growth Index	1.218	1	2020	
	1.160	1	2021	
Sustainability Index	0.243	5	2020	▲
	1.693	1	2021	

Equity

No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
Child Sex ratio
Number of victims of intentional homicide per 100,000population
Unsentenced detainees as a proportion of overall prison population
Crimes against children
Dowry deaths per 10 lakh population

Growth

Institutional delivery
Proportion of population with access to electricity
Immunisation achievement

Sustainability

Annual mean levels of fine particulate matter (PM10) in cities (population weighted)
Percentage of households using clean cooking fuel
Renewable energy share in the total final energy consumption
Solid waste generation and waste processing in the urban areas
Forest area as a proportion of total land area

PUBLIC AFFAIRS INDEX
PAI
Governance in the States of India

- Technical Note
- Pillar-wise and Theme-wise State and UT Rankings
- Scheme Rankings
- COVID-19 Response Index Rankings
- Analytical Note on Indicators
- PAI 2020 Media coverage and Outreach

Abstract

This technical note explains and justifies the approach used to calculate the Public Affairs Index (PAI) 2021 in great detail. The PAI 2021 model employs a version of the Principal Components Analysis (PCA) approach to arrive at the Composite Index, whereas other composite indices use the weighted average method for assessing overall governance from a number of different variables. This method successfully pronounces tiny differences across states and avoids outlier bias. The 43 indicators used in PAI 2021 are organised into Sustainable Development Goals (SDG), Themes, and Pillars at various levels.

Introduction

Composite indicators provide a common basis for comparing numerous entities based on a variety of distinct indicators, each of which represents a different aspect of the entity. PAI 2021 utilises a total of 43 indicators divided over the topics of Voice and Accountability, Government Effectiveness, Regulatory Quality, Rule of Law and Corruption Control, encompassing several areas of Growth, Sustainability and Equity. In addition, the 43 indicators include 14 SDGs. The entities in this context are India's 30 states, which are divided into Large and Small States.

The weighted average of the indicators rolling up at each level using uniform or subjective weights is a typical method for computing the Composite Index for each of the 30 states. Subjective weights are assigned based on prior experience and thorough examination with acceptable explanations. These justifications, no matter how solid, are debatable. [1][2] Discuss several ways for calculating Composite Indices, as well as a critical evaluation of each approach. The 43 indicators at the bottom of the PAI 2021 model are mapped to the relevant SDG in such a way that each indicator corresponds to precisely one SDG. Each indicator can be tied to a Pillar, Theme and the SDG that it maps to a pictorial representation of the PAI 2021 model constituting the three levels namely - Pillars, Themes and SDGs as presented below:

Using a variation of the Principal Components Analysis approach, an Index score is generated for each node in each of the levels, namely Pillars, Themes, and SDG. Finally, the composite score for each state is calculated by averaging the Index scores at the highest level, which comprise the Pillars of Equity, Growth and Sustainability. The remainder of this note describes in detail how the Index scores at various levels and the Composite Index for each state are generated.

Unlike the Governance Model, the Scheme Analysis is based on five schemes. The five different schemes are Mahatma Gandhi National Rural Employment

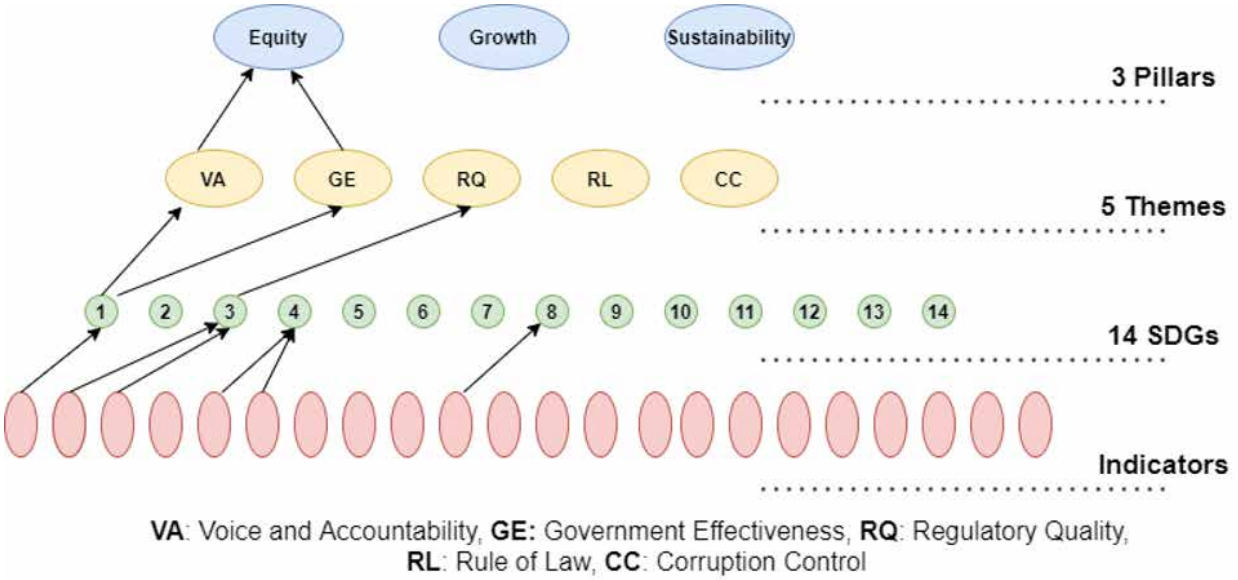


Figure 1: PAI 2021 Model illustrating the three levels - Pillars, Themes and SDGs

Guarantee Act (MGNREGA), Samagra Shiksha Abhiyan (SmSA), Mid-Day Meal Scheme (MDMS), National Health Mission (NHM) and Umbrella Integrated Child Development Services (ICDS). Based on these schemes, Composite indicators provide a common framework for comparing several states using a wide range of different themes. The indicators are divided over the themes of Access, Coverage, Availability and Utilisation. Compared to the governance model, the scheme analysis works differently; the main difference is that the indicators used across all the schemes are not the same; it varies from scheme to scheme. The data collected for each scheme differs as well. For MGNREGA and SmSA, five years of data is collected, while MDMS and NHM data collected is for four years. The ICDS is the only scheme where data is collected at endpoint consisting of only one year of data. In the Governance Model, the Index is generated by directly calculating the z score from the data. In Scheme analysis, after data collection, prior to calculating the z scores, the rolling median methodology was used to smoothen the crests and troughs. It is a method of analysing survey data collected over a longer period to discover long-term patterns. In order to find the rolling median, the sliding window size is taken as k=3, where the median of the values of the time period for t=1,2,3 are found individually. The resultant median is again averaged to compute the final value of the scheme. Meaning that it takes the previous years' data, and then uses that averaged figure to represent that period in a trend line. Based on the rolling median values, Z- scores are calculated after which the Composite Index was generated for all schemes on similar lines as that of the Governance Model.

Similar to the Scheme Analysis, the COVID-19 Response Index is based on seven indicators under two themes namely – Preparedness and Containment Response each measured on a continuous scale. These themes were formulated based on the rationale of measuring Sub-national level pandemic preparedness and their containment strategies to tackle the spread of COVID-19 from Government data sources ever since the first case was reported in the country on March 31, 2021. Once, the Z scores were generated depending upon the directionality of the indicators, the same methodology for constructing the Composite Index as that of the Governance Model was adopted.

Computing Composite Index

Let x, q and s be the raw value of the individual indicator 'q' for state 's', with q = 1...43 and s = 1...30. These scores are then transformed into normalised z scores in order to ensure data scaling. The direction of the scores is reversed for the alignment of values for each indication, where higher number indicates high performance and vice versa.

The normalised values of the individual indicator 'q' for state 's' are denoted by iq,s .

$$i_{a,s} = \frac{x_{a,s} - \mu_q}{\sigma_q}$$ <------Equation 1

$$m_{q,s} = \frac{x_{q,s} - min_q(x_s)}{max_q(x_s) - min_q(x_s)}$$ <------Equation 2

Principal Components Analysis as the Aggregation Technique

Composite Index can be calculated at each node using the weighted average method wherein, suitable weights (subjective or uniform) are applied to the different indicators totalling into a node at each level, can be utilised to decide the Composite Index at every node. The blue, pink and green circles in Figure 1 address nodes at each level, specifically Pillars, Themes, and SDGs. The index scores for every node are figured utilizing the Principal Components Analysis (PCA) technique. PAI 2021 utilises the Principal Components Analysis (PCA) method to figure the index scores at every node. PCA clarifies the change in the observed data utilizing a couple of linear combinations of the original data. These trivial linear combinations diminish the first data to a more modest set of variables called the Principal Components (PCs) in a way that the PCs hold a high sum of the cumulative variance in the original data. These PCs are symmetrical to one another or "uncorrelated". The PCs are determined utilising the particular factor loadings with the end goal that:

$$PC_{i,q} = \sum \alpha_{i,q} . i_{q,s} \quad \text{where} \sum \alpha_{i,q}^2$$ <------Equation 3

- The cut-off for the PCs is taken at 0.8. In other words, the model selects as many PCs that explain a cumulative variance of 80 principal component as the aggregated score,
- Euclidean Distance of the PCs - $\sqrt{\sum PC_j^2}$
- Manhattan Distance of the PCs - $\sum PC_j$
- Weighted average of the PCs, using the variance explained by the PCs as the respective weights - $\sum w_j . PC_j$

PAI 2021 uses the accompanying strategy to total the PCs into an index score at the particular node:

$$I_n = \sum \frac{PC_j}{V_j} \quad \text{<------Equation 4}$$

where V_j is the variance explained by the Principal Component PC_j and PC_j is the PC. When compared to states that perform well on most of the indicators and thus account for small dispersion in the PC scores, this aggregation technique ensures that states performing exceptionally well on one off indicator and thus accounting for large dispersion in the PC scores do not bias the Index scores at a node. Furthermore, the choice of a Manhattan Distance variant over Euclidean Distance guarantees that minor variations in PC scores across states are amplified during aggregation.

The process mentioned above on computing the Index scores is rehashed at each level until the Index scores at the top most level is determined namely the scores for the Pillars (Equity, Growth and Sustainability). The three Index scores for the pillars are then averaged to compute the Composite Index for each state.

Summary

Calculating the Index scores at each level taking into consideration of the variance in the data is employed in PAI 2021. The Composite Index is no longer calculated using subjective weights and above all the model guarantees the removal of outlier that may result into any bias. Lastly, at the Pillar, Theme, and SDG levels, the Composite Index may be split into individual index scores enabling detailed study of each State from multiple view points.

1 *Freudenberg, M. (2003), & quot; Composite Indicators of Country Performance: A Critical Assessment & quot; OECD Science, Technology and Industry Working Papers, No. 2003/16, OECD Publishing, Paris. https://doi.org/10.1787/405566708255*

2 *Nardo, M., Saisana, M. (2008). OECD/JRC handbook on constructing composite indicators. Putting theory into practice.*

PAI 2021 State Codes

Category	Code	State/UT Name
Union Territory	AN	Andaman & Nicobar Islands
Large State	AP	Andhra Pradesh
Small State	AR	Arunachal Pradesh
Large State	AS	Assam
Large State	BR	Bihar
Union Territory	CH	Chandigarh
Large State	CG	Chhattisgarh
Union Territory	DH	Dadra & Nagar Haveli
Union Territory	DD	Daman & Diu
Small State	DL	Delhi
Small State	GA	Goa
Large State	GJ	Gujarat
Large State	HR	Haryana
Small State	HP	Himachal Pradesh
Union Territory	JK	Jammu & Kashmir
Large State	JH	Jharkhand
Large State	KA	Karnataka
Large State	KL	Kerala
Union Territory	LD	Lakshadweep
Large State	MP	Madhya Pradesh
Large State	MH	Maharashtra
Small State	MN	Manipur
Small State	ML	Meghalaya
Small State	MZ	Mizoram
Small State	NL	Nagaland
Large State	OR	Odisha
Union Territory	PY	Puducherry
Large State	PB	Punjab
Large State	RJ	Rajasthan
Small State	SK	Sikkim
Large State	TN	Tamil Nadu
Large State	TL	Telangana
Small State	TR	Tripura
Large State	UP	Uttar Pradesh
Small State	UK	Uttarakhand
Large State	WB	West Bengal

Equity

Large States

Rank	States	Voice and Accountability	States	Government Effectiveness	States	Rule of Law	States	Regulatory Quality	States	Control of Corruption
1	KL	1.681	PB	1.941	AP	2.342	TN	1.956	MP	2.085
2	RJ	1.557	KL	1.353	TN	1.295	TL	1.158	GJ	1.455
3	GJ	0.949	HR	1.049	WB	1.210	CG	0.929	AS	1.329
4	CG	0.889	TL	1.030	KL	0.978	AP	0.730	PB	1.181
5	WB	0.832	TN	0.992	CG	0.602	RJ	0.705	JH	0.622
6	BR	0.828	MP	0.268	GJ	0.496	GJ	0.675	CG	0.345
7	JH	0.522	AP	0.263	MP	0.130	KL	0.483	RJ	0.037
8	AS	0.499	RJ	0.159	JH	-0.037	KA	0.309	AP	-0.042
9	TL	0.192	GJ	0.131	AS	-0.127	OR	0.216	HR	-0.066
10	HR	-0.440	CG	-0.200	TL	-0.167	WB	-0.166	UP	-0.304
11	TN	-0.440	BR	-0.387	MH	-0.325	JH	-0.238	TN	-0.334
12	MP	-0.635	WB	-0.434	KA	-0.666	MH	-0.256	MH	-0.537
13	UP	-0.847	MH	-0.605	PB	-0.679	UP	-0.273	KA	-0.607
14	MH	-0.851	KA	-0.764	RJ	-0.719	PB	-0.609	BR	-0.672
15	KA	-0.920	JH	-0.853	BR	-0.802	BR	-0.841	KL	-0.849
16	OR	-0.958	OR	-0.856	OR	-0.860	AS	-1.222	OR	-0.930
17	AP	-1.268	UP	-1.030	UP	-0.968	HR	-1.761	TL	-0.980
18	PB	-1.589	AS	-2.055	HR	-1.704	MP	-1.793	WB	-1.733

Growth

Large States

Rank	States	Government Effectiveness	States	Regulatory Quality
1	KL	2.173	TL	1.951
2	PB	1.104	JH	1.264
3	GJ	0.966	CG	0.980
4	HR	0.902	KA	0.962
5	TN	0.722	AP	0.697
6	WB	0.094	MP	0.360
7	RJ	0.062	WB	0.304
8	JH	0.026	TN	0.211
9	MH	0.001	GJ	0.150
10	KA	-0.002	PB	-0.136
11	UP	-0.032	AS	-0.200
12	TL	-0.039	MH	-0.279
13	CG	-0.319	KL	-0.305
14	OR	-0.427	OR	-0.342
15	AS	-0.569	HR	-0.916
16	AP	-0.837	BR	-1.296
17	BR	-1.633	RJ	-1.329
18	MP	-2.190	UP	-2.075

Sustainabilty

Large States

Rank	States	Government Effectiveness	States	Regulatory Quality
1	KL	2.396	CG	1.700
2	TN	1.402	KL	1.371
3	PB	1.227	MP	1.020
4	KA	1.122	TL	0.896
5	AP	0.536	TN	0.776
6	TL	0.247	GJ	0.667
7	MH	0.047	KA	0.339
8	CG	-0.038	AS	0.329
9	WB	-0.058	AP	0.199
10	MP	-0.313	MH	0.178
11	GJ	-0.436	PB	-0.150
12	AS	-0.455	OR	-0.601
13	OR	-0.651	RJ	-0.690
14	UP	-0.766	BR	-0.727
15	HR	-0.857	HR	-0.967
16	JH	-0.966	JH	-1.004
17	RJ	-1.091	UP	-1.401
18	BR	-1.346	WB	-1.937

Large States

Rank	Equity				Voice and Accountability			
	1 NO POVERTY		2 ZERO HUNGER		5 GENDER EQUALITY		10 REDUCED INEQUALITIES		11 SUSTAINABLE CITIES AND COMMUNITIES	
	States		States		States		States		States	
1	KL	2.886	KL	0.976	RJ	1.480	JH	0.717	KL	1.278
2	BR	1.102	PB	0.727	CG	1.375	BR	0.676	AS	1.269
3	OR	0.827	TL	0.439	WB	1.273	GJ	0.425	JH	1.122
4	AS	0.391	AP	0.304	GJ	1.164	TL	0.413	BR	1.105
5	JH	0.341	TN	0.181	TL	1.045	AP	0.413	GJ	0.636
6	MP	0.323	AS	0.013	MH	0.682	RJ	0.248	RJ	0.565
7	UP	0.094	WB	-0.087	JH	0.102	AS	0.047	UP	0.536
8	CG	0.027	OR	-0.209	HR	-0.085	MH	-0.074	OR	0.359
9	TN	0.020	HR	-0.393	MP	-0.100	CG	-0.192	PB	-0.094
10	AP	-0.045	UP	-0.603	KA	-0.199	OR	-0.245	KA	-0.133
11	HR	-0.053	CG	-0.759	KL	-0.233	WB	-0.411	HR	-0.477
12	RJ	-0.188	RJ	-0.801	BR	-0.254	PB	-0.422	WB	-0.616
13	WB	-0.429	MH	-0.829	TN	-0.285	MP	-0.526	CG	-0.734
14	KA	-0.682	KA	-1.012	AS	-0.578	TN	-0.534	MP	-0.851
15	GJ	-0.854	BR	-1.031	AP	-0.950	UP	-0.918	TN	-0.913
16	TL	-0.926	GJ	-1.105	UP	-1.031	HR	-0.992	MH	-1.650
17	PB	-1.198	MP	-1.257	PB	-1.614	KA	-1.081	TL	-2.092
18	MH	-1.636	JH	-1.890	OR	-1.793	KL	-2.022	AP	-2.092

Equity

Government Effectiveness

Large States

Rank	States	1 NO POVERTY	States	3 GOOD HEALTH AND WELL-BEING	States	10 REDUCED INEQUALITIES
1	PB	1.606	KL	2.282	BR	1.830
2	TL	0.664	TN	1.103	JH	1.435
3	HR	0.655	MH	0.800	AS	1.042
4	TN	0.548	KA	0.538	HR	0.786
5	KL	0.495	WB	0.489	CG	0.742
6	MP	0.421	TL	0.473	MP	0.551
7	RJ	0.129	PB	0.366	UP	0.351
8	AP	0.067	HR	0.039	WB	0.221
9	CG	0.030	GJ	-0.059	MH	0.141
10	GJ	-0.054	AP	-0.117	RJ	-0.089
11	BR	-0.443	OR	-0.534	AP	-0.101
12	UP	-0.445	RJ	-0.616	GJ	-0.291
13	OR	-0.817	JH	-0.861	OR	-0.486
14	WB	-0.838	AS	-1.156	TL	-0.558
15	KA	-0.929	BR	-1.197	PB	-0.847
16	JH	-0.949	MP	-1.434	KL	-1.469
17	MH	-1.093	CG	-1.680	TN	-1.567
18	AS	-1.951	UP	-2.499	KA	-1.691

Equity

Rule of Law

Large States

Rank	States	16 PEACE, JUSTICE AND STRONG INSTITUTIONS
1	TN	1.956
2	TL	1.158
3	CG	0.929
4	AP	0.730
5	RJ	0.705
6	GJ	0.675
7	KL	0.483
8	KA	0.309
9	OR	0.216
10	WB	-0.166
11	JH	-0.238
12	MH	-0.256
13	UP	-0.273
14	PB	-0.609
15	BR	-0.841
16	AS	-1.222
17	HR	-1.761
18	MP	-1.793

Equity – Regulatory Quality

Large States

Rank	States	10 REDUCED INEQUALITIES
1	CG	1.736
2	AP	1.108
3	TL	0.772
4	TN	0.719
5	MH	0.405
6	RJ	0.383
7	MP	0.121
8	KL	0.062
9	KA	-0.021
10	OR	-0.178
11	WB	-0.320
12	GJ	-0.349
13	JH	-0.402
14	PB	-0.648
15	HR	-0.895
16	UP	-1.045
17	AS	-1.134
18	BR	-1.740

Equity – Control of Corruption

Large States

Rank	States	3 GOOD HEALTH AND WELL-BEING	States	16 PEACE, JUSTICE AND STRONG INSTITUTIONS
1	JH	1.144	MP	0.959
2	CG	1.142	AS	0.866
3	MP	1.141	GJ	0.650
4	HR	1.102	PB	0.421
5	BR	1.007	JH	-0.031
6	PB	0.960	KL	-0.055
7	UP	0.931	RJ	-0.144
8	GJ	0.851	CG	-0.217
9	AP	0.768	KA	-0.263
10	TN	0.641	AP	-0.328
11	RJ	0.444	MH	-0.438
12	MH	0.211	WB	-0.471
13	AS	0.103	TN	-0.474
14	TL	-0.073	HR	-0.479
15	OR	-0.077	UP	-0.571
16	KA	-0.342	OR	-0.588
17	KL	-1.264	TL	-0.623
18	WB	-1.715	BR	-0.850

Growth

Government Effectiveness

Large States

Rank	States	3 GOOD HEALTH AND WELL-BEING	States	4 QUALITY EDUCATION	States	6 CLEAN WATER AND SANITATION	States	7 AFFORDABLE AND CLEAN ENERGY	States	8 DECENT WORK AND ECONOMIC GROWTH
1	KL	1.984	GJ	1.893	PB	1.801	PB	0.838	JH	2.394
2	PB	1.621	KL	1.776	KL	1.673	KL	0.775	UP	1.152
3	WB	1.380	MH	0.896	HR	0.962	AP	0.730	AS	0.669
4	OR	0.804	TN	0.735	WB	0.617	HR	0.721	KL	0.663
5	TN	0.753	HR	0.617	GJ	0.534	TN	0.721	RJ	0.559
6	KA	0.215	MP	0.500	UP	0.443	TL	0.622	GJ	0.529
7	AP	0.201	PB	0.412	BR	0.408	KA	0.604	TL	0.505
8	CG	0.191	RJ	0.383	MH	0.311	CG	0.379	TN	0.178
9	TL	0.099	JH	0.295	TN	0.222	GJ	0.307	HR	-0.032
10	HR	-0.279	TL	0.236	KA	0.214	WB	0.153	OR	-0.077
11	MH	-0.345	KA	0.207	CG	-0.174	MH	-0.027	AP	-0.243
12	RJ	-0.517	OR	0.119	RJ	-0.486	RJ	-0.171	MH	-0.409
13	GJ	-0.755	WB	0.075	OR	-0.494	MP	-0.351	CG	-0.593
14	BR	-0.787	CG	-0.130	AS	-0.605	OR	-0.585	KA	-0.646
15	MP	-0.794	AP	-0.233	MP	-0.831	AS	-1.378	WB	-0.762
16	JH	-0.932	AS	-0.453	TL	-1.167	JH	-1.432	PB	-0.779
17	UP	-1.361	UP	-0.482	AP	-1.648	UP	-2.522	BR	-0.796
18	AS	-1.476	BR	-0.761	JH	-1.779	BR	-3.260	MP	-2.313

Large States

Rank	States	2 ZERO HUNGER	States	8 DECENT WORK AND ECONOMIC GROWTH	States	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
1	TL	1.781	GJ	1.890	AP	1.293
2	CG	1.118	KA	1.404	AS	0.723
3	OR	0.897	JH	1.098	TN	0.579
4	KL	0.851	WB	1.092	CG	0.397
5	PB	0.709	AP	1.051	UP	0.223
6	AS	0.571	TL	0.739	OR	-0.006
7	MP	0.558	MH	0.222	KA	-0.147
8	JH	0.520	CG	0.140	PB	-0.168
9	TN	0.353	MP	-0.083	HR	-0.192
10	HR	-0.172	TN	-0.087	GJ	-0.243
11	KA	-0.182	UP	-0.686	JH	-0.337
12	AP	-0.184	RJ	-0.756	RJ	-0.377
13	MH	-0.583	BR	-0.789	BR	-0.403
14	WB	-0.708	AS	-0.828	MH	-0.423
15	BR	-0.871	PB	-0.872	WB	-0.754
16	RJ	-0.946	HR	-0.995	MP	-0.811
17	GJ	-1.723	KL	-1.218	KL	-0.854
18	UP	-1.989	OR	-1.321	TL	-1.051

Large States	Rank	States	7 AFFORDABLE AND CLEAN ENERGY	States	15 LIFE ON LAND
	1	TN	1.810	KL	2.730
	2	KA	1.556	CG	1.054
	3	AP	1.131	PB	0.979
	4	TL	0.954	WB	0.850
	5	GJ	0.718	AS	0.483
	6	MH	0.651	OR	0.379
	7	RJ	0.427	JH	0.155
	8	PB	0.391	MP	-0.027
	9	KL	0.043	TN	-0.137
	10	HR	-0.229	KA	-0.142
	11	MP	-0.302	BR	-0.397
	12	UP	-0.504	UP	-0.398
	13	WB	-0.924	AP	-0.491
	14	AS	-1.023	MH	-0.628
	15	CG	-1.094	TL	-0.704
	16	OR	-1.131	HR	-0.861
	17	BR	-1.178	GJ	-1.221
	18	JH	-1.295	RJ	-1.624

Large States	Rank	States	11 SUSTAINABLE CITIES AND COMMUNITIES	States	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
	1	CG	1.699	KL	0.635
	2	KL	1.351	WB	0.267
	3	MP	1.025	KA	0.182
	4	TL	0.905	MH	0.131
	5	TN	0.770	TN	0.061
	6	GJ	0.680	CG	0.008
	7	AS	0.334	AP	-0.014
	8	KA	0.327	OR	-0.143
	9	AP	0.193	MP	-0.276
	10	MH	0.167	AS	-0.377
	11	PB	-0.133	TL	-0.423
	12	OR	-0.607	UP	-0.437
	13	RJ	-0.680	BR	-0.524
	14	BR	-0.722	GJ	-0.589
	15	HR	-0.957	RJ	-0.696
	16	JH	-0.991	HR	-0.758
	17	UP	-1.402	PB	-0.834
	18	WB	-1.961	JH	-0.837

Equity

Small States

Rank	States	Voice and Accountability	States	Government Effectiveness	States	Rule of Law	States	Regulatory Quality	States	Control of Corruption
1	MZ	1.235	ML	1.546	AR	1.095	HP	2.461	SK	2.109
2	DL	0.563	NL	1.499	MZ	0.752	ML	1.766	MZ	0.626
3	SK	0.442	MZ	0.927	TR	0.742	SK	1.751	UK	0.563
4	NL	0.376	MN	0.423	SK	0.575	GA	0.129	GA	0.532
5	ML	0.308	DL	-0.279	MN	0.473	MZ	-0.006	TR	0.530
6	MN	0.274	AR	-0.280	HP	0.189	MN	-0.290	NL	-0.215
7	TR	0.055	TR	-0.398	ML	-0.044	UK	-0.738	DL	-0.419
8	GA	-0.014	GA	-0.480	UK	-0.075	DL	-0.746	ML	-0.546
9	UK	-0.207	SK	-0.562	GA	-0.580	NL	-0.850	HP	-0.736
10	HP	-0.290	HP	-0.651	NL	-0.599	AR	-0.962	AR	-0.877
11	AR	-2.742	UK	-1.744	DL	-2.528	TR	-1.089	MN	-1.565

Growth

Small States

Rank	States	Government Effectiveness	States	Regulatory Quality
1	HP	1.352	GA	2.031
2	DL	1.016	DL	1.390
3	SK	0.842	SK	0.483
4	GA	0.735	TR	0.270
5	TR	0.306	HP	-0.008
6	UK	0.250	UK	-0.242
7	AR	-0.200	MN	-0.290
8	MZ	-0.296	ML	-0.582
9	NL	-0.935	MZ	-0.915
10	MN	-1.447	AR	-0.928
11	ML	-1.624	NL	-1.207

Sustainabilty

Small States

Rank	States	Government Effectiveness	States	Regulatory Quality
1	AR	1.829	SK	1.810
2	MZ	1.697	GA	0.706
3	GA	0.229	HP	0.592
4	DL	0.156	NL	0.359
5	UK	0.053	ML	0.245
6	NL	-0.088	TR	0.153
7	TR	-0.259	MZ	0.008
8	ML	-0.645	AR	-0.295
9	MN	-0.719	MN	-0.361
10	HP	-0.858	UK	-1.238
11	SK	-1.396	DL	-1.978

Equity

Voice and Accountability

Small States

Rank	States	1 NO POVERTY	States	2 ZERO HUNGER	States	5 GENDER EQUALITY	States	10 REDUCED INEQUALITIES	States	11 SUSTAINABLE CITIES AND COMMUNITIES
1	MZ	1.893	MZ	1.698	DL	1.825	ML	1.320	HP	1.193
2	SK	0.946	MN	1.602	MZ	1.795	SK	1.116	AR	1.125
3	DL	0.650	NL	1.109	UK	0.321	MN	1.072	GA	0.925
4	NL	0.527	HP	0.990	GA	0.111	NL	1.054	ML	0.884
5	UK	0.243	SK	0.821	TR	-0.008	MZ	0.735	MN	0.448
6	HP	-0.249	TR	0.577	HP	-0.257	TR	0.591	TR	0.336
7	ML	-0.270	DL	0.466	MN	-0.472	DL	0.443	NL	0.230
8	TR	-0.565	AR	0.319	SK	-0.549	GA	0.337	UK	0.029
9	GA	-0.649	GA	0.145	NL	-0.563	UK	0.009	SK	-0.059
10	MN	-0.672	ML	-0.170	ML	-1.069	HP	0.003	MZ	-0.654
11	AR	-1.854	UK	-0.222	AR	-1.133	AR	-2.202	DL	-1.676

Small States

Rank	States	1 NO POVERTY	States	3 GOOD HEALTH AND WELL-BEING	States	10 REDUCED INEQUALITIES
1	MZ	1.842	GA	1.684	ML	1.278
2	ML	1.655	MN	0.964	NL	1.230
3	NL	1.628	AR	0.858	MN	1.222
4	AR	1.260	TR	0.555	SK	0.371
5	GA	0.836	NL	0.325	MZ	0.289
6	DL	0.419	SK	0.325	TR	0.145
7	HP	-0.608	ML	0.293	HP	-0.354
8	MN	-0.713	DL	0.203	DL	-0.492
9	TR	-0.830	HP	-0.067	AR	-1.035
10	UK	-1.044	UK	-0.534	GA	-1.044
11	SK	-1.540	MZ	-0.542	UK	-1.609

Small States

Rank	States	16 PEACE, JUSTICE AND STRONG INSTITUTIONS
1	AR	1.095
2	MZ	0.752
3	TR	0.742
4	SK	0.575
5	MN	0.473
6	HP	0.189
7	ML	-0.044
8	UK	-0.075
9	GA	-0.580
10	NL	-0.599
11	DL	-2.528

Equity | Regulatory Quality

Small States	Rank	States	10 REDUCED INEQUALITIES
	1	HP	2.461
	2	ML	1.766
	3	SK	1.751
	4	GA	0.129
	5	MZ	-0.006
	6	MN	-0.290
	7	UK	-0.738
	8	DL	-0.746
	9	NL	-0.850
	10	AR	-0.962
	11	TR	-1.089

Equity | Control of Corruption

Small States	Rank	States	3 GOOD HEALTH AND WELL-BEING	States	16 PEACE, JUSTICE AND STRONG INSTITUTIONS
	1	UK	0.637	SK	1.483
	2	ML	0.326	GA	0.556
	3	HP	0.321	MZ	0.528
	4	SK	0.027	TR	0.526
	5	MZ	-0.109	DL	0.365
	6	TR	-0.324	UK	0.272
	7	GA	-0.425	NL	0.166
	8	NL	-0.810	MN	-0.170
	9	AR	-1.074	AR	-0.202
	10	DL	-1.981	ML	-0.382
	11	MN	-2.793	HP	-0.508

Growth

Government Effectiveness

Small States

Rank	States	3 GOOD HEALTH AND WELL-BEING	States	4 QUALITY EDUCATION	States	6 CLEAN WATER AND SANITATION	States	7 AFFORDABLE AND CLEAN ENERGY	States	8 DECENT WORK AND ECONOMIC GROWTH
1	HP	1.557	DL	1.292	SK	0.903	DL	0.874	DL	1.341
2	MZ	1.122	HP	0.852	GA	0.791	GA	0.865	TR	0.644
3	DL	0.662	GA	0.603	HP	0.681	SK	0.838	HP	0.421
4	MN	0.590	SK	0.148	UK	0.541	HP	0.829	UK	0.391
5	SK	0.090	TR	-0.204	MZ	0.518	UK	0.559	SK	0.380
6	GA	0.067	UK	-0.424	AR	0.210	NL	0.478	AR	0.328
7	AR	-0.397	MZ	-0.717	TR	0.198	MZ	0.054	NL	0.163
8	TR	-0.410	MN	-1.450	NL	-0.150	MN	-0.018	GA	0.136
9	ML	-0.418	NL	-1.758	DL	-0.192	TR	-0.027	MN	-0.065
10	UK	-0.752	ML	-1.920	ML	-0.953	ML	-0.099	ML	-1.586
11	NL	-2.110	AR	-2.506	MN	-2.546	AR	-0.477	MZ	-2.154

Growth | Regulatory Quality

Small States

Rank	States	2 ZERO HUNGER	States	8 DECENT WORK AND ECONOMIC GROWTH	States	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
1	DL	1.999	GA	1.579	AR	1.112
2	GA	1.553	SK	1.428	HP	0.903
3	MN	0.589	HP	0.743	GA	0.890
4	TR	0.320	UK	0.325	TR	0.660
5	NL	-0.361	DL	0.147	SK	0.512
6	UK	-0.514	TR	0.006	MZ	0.137
7	SK	-0.528	ML	-0.273	ML	-0.155
8	ML	-0.556	MZ	-0.322	DL	-0.209
9	AR	-0.699	AR	-0.976	NL	-0.290
10	HP	-0.746	MN	-1.076	UK	-0.396
11	MZ	-1.056	NL	-1.580	MN	-0.423

Small States

Rank	States	7 AFFORDABLE AND CLEAN ENERGY	States	15 LIFE ON LAND
1	AR	1.862	MZ	1.445
2	MZ	0.879	TR	1.067
3	HP	0.525	AR	0.643
4	UK	0.494	ML	0.456
5	DL	0.476	GA	0.414
6	NL	-0.085	MN	0.079
7	GA	-0.100	NL	-0.036
8	SK	-0.228	DL	-0.263
9	MN	-1.063	UK	-0.421
10	ML	-1.339	SK	-1.684
11	TR	-1.422	HP	-1.700

Small States

Rank	States	11 SUSTAINABLE CITIES AND COMMUNITIES	States	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
1	SK	1.384	SK	2.560
2	HP	1.006	ML	2.560
3	GA	0.913	AR	2.560
4	MZ	0.538	NL	0.468
5	NL	0.439	GA	0.404
6	TR	0.309	TR	0.163
7	MN	-0.075	HP	-0.143
8	ML	-0.623	MN	-0.465
9	UK	-0.958	MZ	-0.785
10	AR	-1.315	UK	-1.018
11	DL	-1.618	DL	-1.680

Equity

Union Territories

Rank	UTs	Voice and Accountability	UTs	Government Effectiveness	UTs	Rule of Law	UTs	Regulatory Quality	UTs	Control of Corruption
1	DH	1.521	CH	1.023	LD	1.616	DH	0.917	LD	1.432
2	LD	0.904	LD	0.799	DH	0.622	LD	0.840	AN	0.484
3	AN	-0.179	JK	0.766	AN	0.010	AN	0.730	PY	0.089
4	JK	-0.535	PY	-0.325	CH	-0.349	JK	-0.125	JK	0.013
5	PY	-0.647	AN	-0.955	PY	-0.752	PY	-0.434	CH	-0.433
6	CH	-1.064	DH	-1.308	JK	-1.147	CH	-1.928	DH	-1.587

Growth

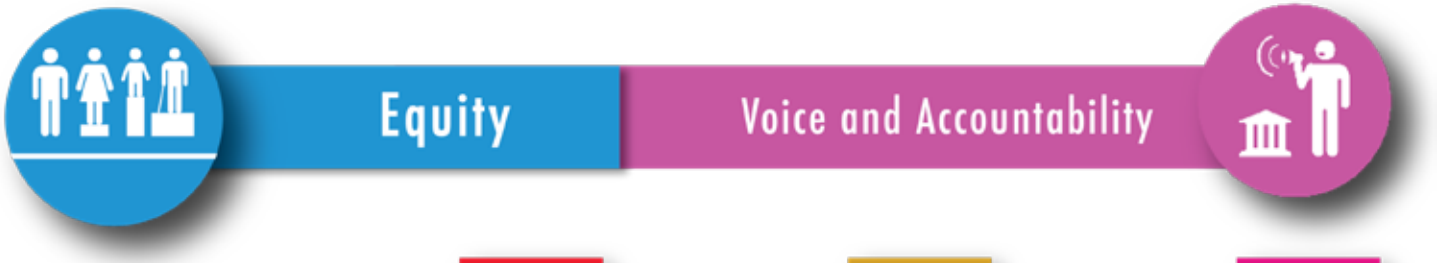
Union Territories

Rank	States	Government Effectiveness	States	Regulatory Quality
1	JK	1.248	JK	1.334
2	LD	0.934	AN	0.701
3	CH	0.235	PY	0.202
4	AN	-0.478	LD	0.077
5	PY	-0.516	DH	-1.113
6	DH	-1.422	CH	-1.201

Sustainabilty

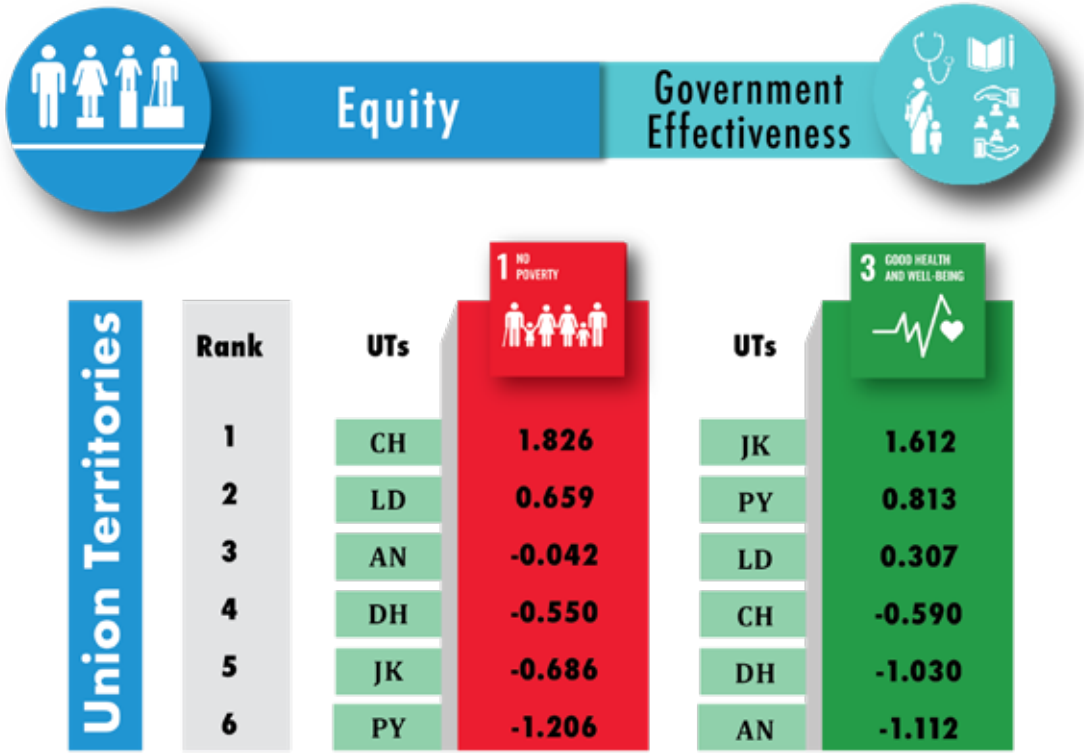
Union Territories

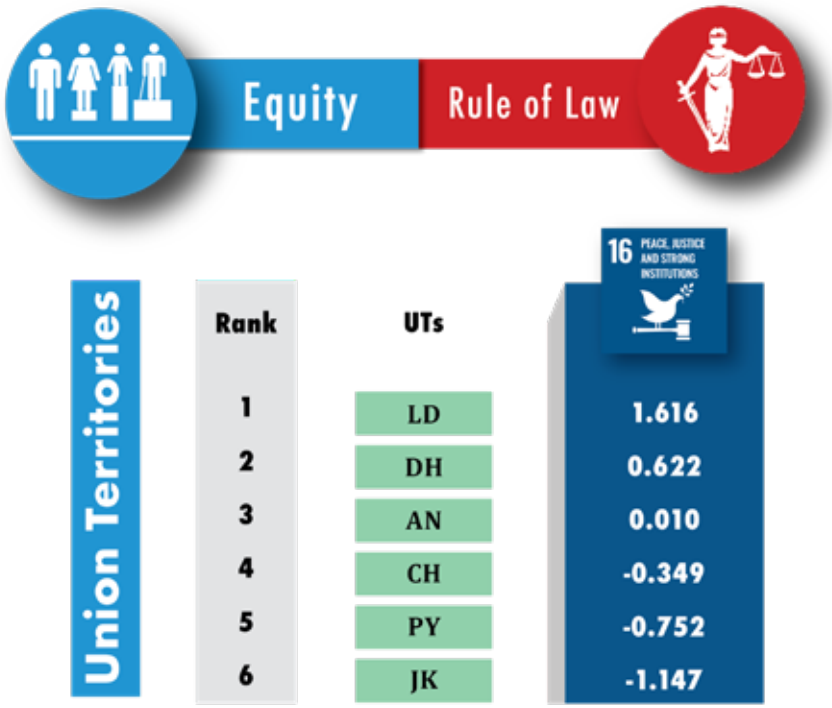
Rank	UTs	Government Effectiveness	UTs	Regulatory Quality
1	CH	1.240	JK	1.164
2	PY	0.732	CH	0.672
3	JK	0.465	PY	0.408
4	LD	-0.278	LD	-0.005
5	AN	-0.690	AN	-0.610
6	DH	-1.469	DH	-1.629



Union Territories

Rank	UTs	1 NO POVERTY	UTs	2 ZERO HUNGER	UTs	10 REDUCED INEQUALITIES
1	AN	0.756	DH	0.889	LD	0.960
2	DH	0.595	CH	0.566	AN	0.699
3	JK	0.546	JK	0.505	CH	0.556
4	LD	0.204	PY	0.304	DH	0.465
5	PY	0.073	LD	-0.135	PY	-1.080
6	CH	-2.175	AN	-2.127	JK	-1.600


Equity
Government Effectiveness
Union Territories
Rank
UTs
1 NO POVERTY
UTs
3 GOOD HEALTH AND WELL-BEING
1
2
3
4
5
6
CH
LD
AN
DH
JK
PY
1.826
0.659
-0.042
-0.550
-0.686
-1.206
JK
PY
LD
CH
DH
AN
1.612
0.813
0.307
-0.590
-1.030
-1.112


Equity
Rule of Law
Union Territories
Rank
UTs
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
1
2
3
4
5
6
LD
DH
AN
CH
PY
JK
1.616
0.622
0.010
-0.349
-0.752
-1.147

Union Territories

Rank	UTs	10 REDUCED INEQUALITIES
1	DH	0.917
2	LD	0.840
3	AN	0.730
4	JK	-0.125
5	PY	-0.434
6	CH	-1.928

Union Territories

Rank	UTs	3 GOOD HEALTH AND WELL-BEING	UTs	16 PEACE, JUSTICE AND STRONG INSTITUTIONS
1	AN	1.307	LD	1.947
2	LD	0.217	PY	0.287
3	CH	0.006	JK	0.239
4	PY	-0.268	DH	-0.674
5	JK	-0.336	AN	-0.899
6	DH	-1.824	CH	-0.899

Growth

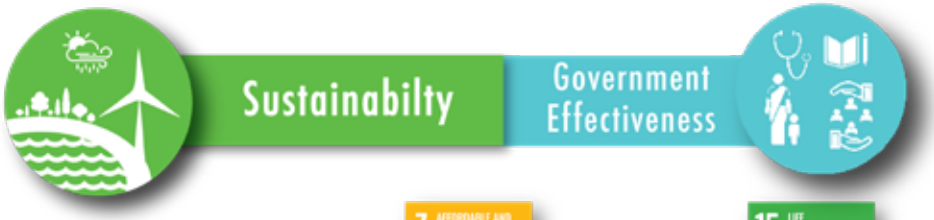
Government Effectiveness

Union Territories

Rank	States	3 GOOD HEALTH AND WELL-BEING	States	4 QUALITY EDUCATION	States	6 CLEAN WATER AND SANITATION	States	7 AFFORDABLE AND CLEAN ENERGY
1	LD	1.079	JK	1.914	JK	1.404	CH	1.172
2	CH	0.980	LD	0.452	CH	0.467	JK	0.825
3	PY	0.470	AN	0.120	PY	0.187	LD	0.825
4	JK	-0.337	DH	-0.651	LD	0.168	AN	-0.304
5	AN	-0.832	CH	-0.851	AN	-0.747	PY	-1.259
6	DH	-1.360	PY	-0.984	DH	-1.479	DH	-1.259

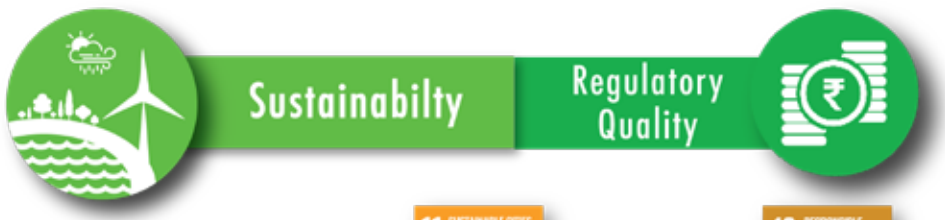
Union Territories

Rank	UTs (2 ZERO HUNGER)		UTs (8 DECENT WORK AND ECONOMIC GROWTH)	
1	JK	1.263	AN	0.945
2	PY	0.441	JK	0.625
3	CH	0.406	DH	0.430
4	AN	0.047	LD	0.262
5	LD	-0.153	PY	-0.156
6	DH	-2.005	CH	-2.107



Union Territories

Rank	UTs	7 AFFORDABLE AND CLEAN ENERGY	UTs	15 LIFE ON LAND
1	JK	1.438	CH	1.336
2	CH	0.537	PY	1.111
3	LD	0.281	AN	-0.038
4	PY	-0.004	LD	-0.701
5	AN	-1.005	JK	-0.735
6	DH	-1.247	DH	-0.973



Union Territories

Rank	UTs	11 SUSTAINABLE CITIES AND COMMUNITIES	UTs	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
1	AN	0.769	JK	1.055
2	JK	0.623	CH	1.055
3	LD	0.320	PY	0.319
4	PY	0.261	DH	-0.170
5	CH	-0.011	LD	-0.391
6	DH	-1.962	AN	-1.868

MDMS

Scheme Index 90:10

Rank	States	Access	States	Coverage	States	Availability	States	Utilisation
1	HP	1.860	HP	1.492	MZ	3.029	NL	2.121
2	TR	0.981	TR	1.334	UK	0.326	SK	0.979
3	SK	0.841	SK	0.927	ML	0.269	AR	0.567
4	UK	0.460	AS	0.531	HP	-0.427	TR	0.494
5	MZ	0.205	UK	0.158	TR	-0.435	HP	-0.063
6	MN	-0.001	MZ	-0.138	SK	-0.453	AS	-0.162
7	AS	-0.159	ML	-0.271	AR	-0.456	MZ	-0.208
8	ML	-0.594	MN	-0.449	NL	-0.456	MN	-0.407
9	AR	-0.693	AR	-0.804	MN	-0.457	UK	-0.676
10	JK	-0.921	JK	-1.287	JK	-0.464	ML	-0.696
11	NL	-1.978	NL	-1.493	AS	-0.477	JK	-1.949

MDMS

Scheme Index 60:40

Rank	States	Access	States	Coverage	States	Availability	States	Utilisation
1	JH	1.333	DL	2.085	GA	4.190	HR	2.100
2	GJ	1.269	WB	1.243	PB	0.244	MP	1.353
3	KA	0.865	GA	1.161	KA	-0.120	MH	1.222
4	TN	0.769	MH	0.694	CG	-0.141	DL	0.765
5	HR	0.723	KL	0.533	JH	-0.151	RJ	0.697
6	CG	0.713	CG	0.493	OR	-0.154	WB	0.473
7	BR	0.576	OR	0.441	TN	-0.155	OR	0.465
8	WB	0.567	PB	0.334	AP	-0.186	UP	0.384
9	PB	0.442	TN	0.328	HR	-0.186	TL	0.283
10	GA	0.426	KA	0.295	KL	-0.221	GA	-0.001
11	OR	0.368	TL	-0.173	TL	-0.233	CG	-0.213
12	RJ	-0.061	GJ	-0.342	WB	-0.241	KA	-0.392
13	MH	-0.372	MP	-0.544	BR	-0.291	JH	-0.428
14	UP	-0.374	RJ	-0.685	DL	-0.325	TN	-0.474
15	DL	-0.970	BR	-0.735	RJ	-0.357	KL	-0.567
16	KL	-1.082	JH	-0.761	UP	-0.404	GJ	-0.923
17	MP	-1.189	AP	-0.892	MH	-0.412	PB	-1.341
18	AP	-1.641	UP	-1.304	MP	-0.429	AP	-1.412
19	TL	-2.361	HR	-2.173	GJ	-0.433	BR	-1.989

ICDS

Scheme Index 90:10

Rank	States	Access	States	Coverage	States	Availability	States	Utilisation
1	AR	2.276	NL	1.665	NL	0.651	MN	2.317
2	MN	1.717	ML	1.152	AR	0.651	NL	1.226
3	HP	0.197	MN	0.849	MZ	0.651	AR	0.568
4	TR	0.126	AS	0.396	SK	0.651	ML	0.174
5	JK	-0.277	TR	0.312	ML	0.588	AS	0.106
6	SK	-0.537	AR	0.131	AS	0.256	SK	-0.390
7	MZ	-0.652	MZ	-0.372	HP	0.157	MZ	-0.412
8	NL	-0.693	UK	-0.542	MN	0.067	UK	-0.682
9	AS	-0.716	JK	-1.021	TR	-0.136	JK	-0.747
10	UK	-0.719	HP	-1.031	UK	-0.630	TR	-0.866
11	ML	-0.722	SK	-1.540	JK	-2.907	HP	-1.293

ICDS

Scheme Index 60:40

Rank	States	Access	States	Coverage	States	Availability	States	Utilisation
1	CG	2.723	MP	2.164	MP	1.244	GJ	1.622
2	OR	1.952	OR	1.616	OR	0.701	BR	1.438
3	MP	0.856	WB	1.376	WB	-1.824	PB	1.167
4	WB	0.673	CG	1.170	CG	-0.075	CG	0.945
5	JH	0.374	UP	0.780	UP	-1.786	OR	0.869
6	KA	0.133	KA	0.485	KA	0.789	RJ	0.600
7	HR	-0.021	GJ	-0.053	GJ	-0.255	TL	0.343
8	KL	-0.102	BR	-0.058	BR	0.094	JH	0.286
9	PB	-0.135	RJ	-0.122	RJ	0.424	HR	0.174
10	MH	-0.142	TN	-0.302	TN	-2.146	KL	0.033
11	BR	-0.209	MH	-0.418	MH	-0.362	UP	0.006
12	UP	-0.253	HR	-0.448	HR	0.223	AP	-0.050
13	RJ	-0.356	KL	-0.497	KL	1.527	GA	-0.344
14	GJ	-0.431	GA	-0.555	GA	-0.068	MH	-0.525
15	GA	-0.465	JH	-0.801	JH	1.248	DL	-0.666
16	TN	-0.774	PB	-0.882	PB	-0.242	MP	-0.725
17	AP	-1.046	AP	-0.883	AP	0.017	TN	-1.253
18	DL	-1.069	DL	-1.123	DL	0.841	KA	-1.765
19	TL	-1.707	TL	-1.448	TL	-0.348	WB	-2.157

MGNREGS

Scheme Index 90:10

Rank	States	Access	States	Coverage	States	Availability	States	Utilisation
1	MZ	0.788	NL	1.765	MZ	1.434	SK	1.386
2	TR	0.733	SK	0.767	NL	1.099	AR	0.895
3	NL	0.667	MZ	0.663	ML	0.943	MZ	0.869
4	MN	0.663	JK	0.533	MN	0.668	ML	0.678
5	SK	0.587	UK	0.467	TR	0.496	JK	0.343
6	AR	0.487	HP	0.084	AR	0.067	UK	0.296
7	ML	0.417	ML	-0.124	SK	-0.085	AS	0.167
8	HP	0.079	TR	-0.174	HP	-0.589	HP	-0.575
9	UK	-0.420	AS	-1.245	UK	-0.847	MN	-1.278
10	JK	-1.907	AR	-1.298	AS	-1.574	NL	-1.345
11	AS	-2.094	MN	-1.438	JK	-1.612	TR	-1.435

MGNREGS

Scheme Index 60:40

Rank	States	Access	States	Coverage	States	Availability	States	Utilisation
1	AP	1.034	PB	1.980	GA	2.226	KL	1.032
2	TL	1.034	TL	1.624	TN	1.891	UP	0.861
3	KL	1.018	GJ	1.445	AP	0.992	BR	0.735
4	HR	0.996	CG	0.605	KL	0.812	JH	0.704
5	KA	0.869	RJ	0.527	WB	0.602	HR	0.678
6	OR	0.722	OR	0.137	MH	0.217	MH	0.657
7	TN	0.507	AP	0.128	KA	0.168	KA	0.651
8	WB	0.399	MH	-0.141	OR	0.146	OR	0.458
9	MP	0.397	TN	-0.190	RJ	0.036	WB	0.345
10	RJ	0.397	WB	-0.201	UP	-0.152	MP	0.335
11	CG	-0.030	BR	-0.215	TL	-0.161	CG	0.277
12	GJ	-0.038	HR	-0.222	GJ	-0.334	PB	0.214
13	UP	-0.499	KL	-0.266	HR	-0.850	AP	-0.112
14	PB	-0.518	KA	-0.381	PB	-0.888	GJ	-0.128
15	JH	-1.162	JH	-0.409	MP	-0.977	TN	-1.293
16	MH	-1.233	UP	-0.847	CG	-1.029	TL	-1.341
17	BR	-1.292	MP	-1.764	BR	-1.209	RJ	-1.542
18	GA	-2.601	GA	-1.809	JH	-1.491	GA	-2.531

NHM

Scheme Index 90:10

Rank	States	Access	States	Coverage	States	Availability	States	Utilisation
1	AR	1.670	SK	1.482	UK	1.835	HP	1.925
2	HP	1.319	JK	1.062	SK	1.286	UK	1.404
3	MZ	1.108	HP	0.765	MZ	0.876	AS	0.904
4	NL	0.151	ML	0.433	AR	0.771	JK	0.336
5	SK	0.086	TR	0.316	MN	-0.441	SK	-0.197
6	JK	0.024	MZ	0.132	ML	-0.456	NL	-0.253
7	TR	-0.306	AS	-0.240	NL	-0.616	TR	-0.467
8	ML	-0.930	AR	-0.396	HP	-0.649	ML	-0.565
9	UK	-0.989	NL	-0.682	TR	-0.650	MZ	-0.699
10	AS	-1.040	MN	-0.736	JK	-0.779	AR	-0.740
11	MN	-1.093	UK	-2.136	AS	-1.177	MN	-1.649

NHM

Scheme Index 60:40

Rank	States	Access	States	Coverage	States	Availability	States	Utilisation
1	TN	2.027	PB	1.866	DL	2.507	KL	2.491
2	GA	1.749	GA	1.831	GA	1.865	AP	1.468
3	KL	1.589	KL	1.006	KL	0.908	TN	1.236
4	RJ	0.718	TN	0.674	PB	0.375	HR	1.127
5	GJ	0.567	TL	0.672	HR	0.289	WB	0.490
6	KA	0.460	OR	0.459	AP	0.251	OR	0.268
7	CG	0.180	AP	0.457	TL	0.114	GJ	0.237
8	OR	0.068	HR	0.211	CG	0.040	TL	0.225
9	TL	-0.191	KA	0.128	GJ	-0.141	MP	0.000
10	AP	-0.205	DL	-0.053	MH	-0.254	PB	-0.155
11	PB	-0.332	JH	-0.336	KA	-0.359	CG	-0.197
12	HR	-0.384	CG	-0.349	TN	-0.368	RJ	-0.389
13	MH	-0.397	MH	-0.386	BR	-0.376	KA	-0.413
14	MP	-0.656	RJ	-0.482	JH	-0.387	GA	-0.765
15	UP	-0.683	MP	-0.592	WB	-0.424	MH	-0.891
16	JH	-0.800	UP	-0.608	RJ	-0.558	UP	-0.994
17	BR	-0.889	GJ	-0.829	OR	-0.570	BR	-1.166
18	WB	-0.952	BR	-1.755	MP	-0.615	DL	-1.218
19	DL	-1.869	WB	-1.913	UP	-2.297	JH	-1.353

SmSA

Scheme Index 90:10

Rank	States	Access	States	Coverage	States	Availability	States	Utilisation
1	HP	1.855	MZ	1.845	AR	2.229	AR	2.010
2	MZ	1.243	AS	1.065	JK	0.947	HP	1.417
3	MN	0.391	TR	0.729	MZ	0.699	SK	0.520
4	TR	0.225	ML	0.514	SK	0.656	UK	0.248
5	AS	0.177	MN	0.050	NL	0.150	MN	0.041
6	NL	0.021	AR	-0.238	MN	-0.379	ML	-0.003
7	SK	-0.029	HP	-0.314	HP	-0.594	AS	-0.182
8	ML	-0.470	SK	-0.354	TR	-0.642	MZ	-0.427
9	UK	-0.644	UK	-0.388	ML	-0.704	NL	-1.139
10	JK	-0.992	JK	-1.441	UK	-1.154	JK	-1.144
11	AR	-1.778	NL	-1.468	AS	-1.208	TR	-1.341

SmSA

Scheme Index 60:40

Rank	States	Access	States	Coverage	States	Availability	States	Utilisation
1	MH	1.181	WB	1.536	CG	1.828	MH	2.259
2	GJ	1.057	BR	1.121	RJ	1.774	KL	1.934
3	PB	1.023	TN	1.017	OR	1.479	KA	1.153
4	HR	0.935	KL	0.973	BR	0.830	JH	0.598
5	TN	0.862	CG	0.963	MP	0.650	BR	0.512
6	DL	0.764	JH	0.622	AP	0.551	RJ	0.339
7	KL	0.698	UP	0.562	JH	0.275	CG	0.281
8	OR	0.595	TL	0.330	UP	0.222	OR	0.217
9	CG	0.558	OR	0.264	HR	0.149	WB	0.097
10	MP	0.239	KA	0.208	TN	0.044	GA	-0.046
11	KA	0.052	GA	0.058	TL	-0.055	AP	-0.259
12	GA	0.013	AP	-0.055	PB	-0.472	GJ	-0.261
13	RJ	-0.110	DL	-0.385	KA	-0.524	PB	-0.454
14	WB	-0.623	MP	-0.459	WB	-0.737	UP	-0.488
15	UP	-1.183	MH	-0.487	GJ	-0.778	MP	-0.986
16	TL	-1.412	GJ	-1.324	GA	-1.042	TN	-0.987
17	AP	-1.485	RJ	-1.487	MH	-1.176	HR	-0.995
18	BR	-1.495	PB	-1.656	KL	-1.310	TL	-1.145
19	JH	-1.671	HR	-1.800	DL	-1.710	DL	-1.769

COVID-19 Response Index

Large States

Rank	States	Preparedness Response	States	Containment Response	States	Overall Index
1	AS	1.788	TS	1.424	KL	1.472
2	AP	1.552	KL	1.398	TN	1.197
3	KL	1.547	TN	1.308	AP	1.167
4	TN	1.086	KA	1.004	AS	0.909
5	WB	0.756	AP	0.781	KA	0.490
6	RJ	0.531	HR	0.431	GJ	0.204
7	GJ	0.122	GJ	0.285	HR	0.001
8	KA	-0.024	PB	0.276	TS	-0.020
9	OR	-0.208	AS	0.029	WB	-0.146
10	MH	-0.337	JH	-0.139	PB	-0.166
11	HR	-0.429	OR	-0.149	OR	-0.178
12	CS	-0.439	BH	-0.387	RJ	-0.363
13	PB	-0.607	UP	-0.388	CS	-0.449
14	UP	-0.824	CS	-0.458	JH	-0.486
15	JH	-0.833	MP	-0.759	UP	-0.606
16	MP	-0.904	WB	-1.047	MP	-0.832
17	BH	-1.310	RJ	-1.257	BH	-0.849
18	TS	-1.464	MH	-2.354	MH	-1.346

COVID-19 Response Index

Small States

Rank	States	Preparedness Response	States	Containment Response	States	Overall Index
1	DL	2.506	MZ	1.083	DL	0.656
2	SK	0.760	AR	0.751	MZ	0.593
3	GA	0.372	ML	0.632	AR	0.331
4	MZ	0.102	NL	0.382	SK	0.253
5	HP	-0.021	UK	0.320	ML	0.091
6	AR	-0.088	TR	0.308	HP	0.081
7	ML	-0.450	MN	0.226	MN	-0.128
8	MN	-0.482	HP	0.183	TR	-0.153
9	TR	-0.613	SK	-0.254	NL	-0.321
10	NL	-1.024	DL	-1.193	UK	-0.370
11	UK	-1.061	GA	-2.439	GA	-1.033

Indicator	Proportion of population covered by social protection (IGNOAPS, IGNDPS, IGNWPS, Maternity Benefit)
SDG	SDG 1- End Poverty
Pillar	Equity
Theme	Voice and Accountability
Data Source	National Social Assistance Programme, 2020-21
Rationale of the Indicator	These schemes align to cover the vulnerable population. The economy constitutes of not only young age population who is in the current workforce, but also the elderly, widows and disabled population. For a country where the concept of Universal social security benefit is not prevalent, the state's role in catering to these population is important.
Indicator Computation	(Total number of beneficiaries/Total eligible population)*100
Unit of measurement	Percentage
Periodicity	Annual
Granularity	State Level

Indicator	Prevalence of malnutrition amongst children below 6 years
SDG	SDG 2- Zero Hunger
Pillar	Equity
Theme	Voice and Accountability
Data Source	National Family Health Survey- 2015-16
Rationale of the Indicator	The Global Hunger Index of 2020, ranks India 94 amongst 107 countries. The indicators it takes into consideration is stunting, wasting, serverely wasted and undernourished children. This indicator is very important to measure the child nutrition levels. As research studies suggest that nutritional outcomes directly affect the educational outcomes and thus facilitate in economic empowerment.
Indicator Computation	(% of children stunted+ % of children underweight+ % of children wasted + % of children severely wasted)/4
Unit of measurement	Percentage
Periodicity	5 years
Granularity	State Level

Indicator	Proportion of seats held by women in (a) state legislatures and (b) local governments
SDG	SDG 5- Gender Equality
Pillar	Equity
Theme	Voice and Accountability
Data Source	Election Commission of India, Ministry of Panchayati Raj, 2020
Rationale of the Indicator	Political participation of women is an estimate of the political empowerment of women. Rationally, politics is a male-dominanted area. This indicator tries to understand whether there has been any improvement in the visible political participation of women.
Indicator Computation	(% of seats won by women in legislative assembly+ % of elected women in Panchyati Raj institutions)/2
Unit of measurement	Percentage
Periodicity	4 years
Granularity	State Level

Indicator	Utilisation of Nirbhaya fund
SDG	SDG 5- Gender Equality
Pillar	Equity
Theme	Voice and Accountability
Data Source	Press Information Bureau, 2021
Rationale of the Indicator	The Nirbhaya Fund was set up in place to improve safety of women. To ensure safety and security of women is the objective of the state. Therefore this indicator is a measure of state's initiatives towards ensuring women's safety.
Indicator Computation	Direct Indicator
Unit of measurement	Percentage
Periodicity	Annual
Granularity	State Level

Indicator	Palma Ratio of Household Expenditure in Urban and Rural India
SDG	SDG 10- Reduced Inequalities
Pillar	Equity
Theme	Voice and Accountability
Data Source	Numerator: Ministry of Statistics and Programme Implementation [Household Consumer Expenditure Reports 2011] Denominator: Ministry of Home Affairs [Census 2011]
Rationale of the Indicator	As an alternate to Gini coefficient, Palma ratio measures the richest 10% and the poorest 40%. To understand the underlying divide between the rich and the poor this indicator is used.
Indicator Computation	Monthly Consumption Expenditure of richest 10% households/Monthly Consumption Expenditure of Poorest 40% Households
Unit of measurement	Ratio
Periodicity	10 years
Granularity	State Level

Indicator	Real wage (casual labour)
SDG	SDG 1- End Poverty
Pillar	Equity
Theme	Voice and Accountability
Data Source	Periodic Labour Force Survey, Ministry of Statistics and Programme Implementation, 2018-19
Rationale of the Indicator	91% of the work force is composed of informal sector. This indicator measures whether, based on the current level of inflation, the per capita income is sufficient for their survival.
Indicator Computation	Per day Income under Casual Labour (CWS)/Consumer Price Index (CPI)
Unit of measurement	Rate
Periodicity	Annual
Granularity	State Level

Indicator	Proportion of urban population living in slums
SDG	SDG 11- Sustainable Cities and Communities
Pillar	Equity
Theme	Voice and Accountability
Data Source	Census 2011, Ministry of Home Affairs, 2011
Rationale of the Indicator	This indicator measures the balance between urbanisation and poverty. It tests the general idea that urbanisation always leads to growth.
Indicator Computation	Direct Indicator
Unit of measurement	Percentage
Periodicity	10 years
Granularity	State Level

Indicator	Infant Mortality Rate (IMR)
SDG	SDG 3- Good Health and Well Being
Pillar	Equity
Theme	Government Effectiveness
Data Source	National Family Health Survey 2015-16
Rationale of the Indicator	This indicator measures rate of death per 1000 live births of infants. This helps in analysing the efforts taken by the government in the health sector.
Indicator Computation	Number of child deaths below the age of 1/total live births
Unit of measurement	Rate
Periodicity	5 years
Granularity	State Level

Indicator	Percentage of Deprived households across all 7 Deprivation
SDG	SDG 1- End Poverty
Pillar	Equity
Theme	Government Effectiveness
Data Source	Socio Economic Caste Census, 2011
Rationale of the Indicator	Deprivation composes of various categories, complying to which a house is declared to be deprived. One of the most intrinsic measure to assess the extent of poverty in a household, deprivation is the second best way.
Indicator Computation	(Households deprived in all 7 criteria/total households)*100
Unit of measurement	Percentage
Periodicity	10 years
Granularity	State Level

Indicator	Rural Indebtedness
SDG	SDG 10- Reduced Inequalities
Pillar	Equity
Theme	Government Effectiveness
Data Source	Agricultural Pocketbook 2019, Ministry of Agricultutre and Farmers Welfare
Rationale of the Indicator	This indicator is trying to measure whether the loans taken by farmers are benefitting them or decreasing their financial standing.
Indicator Computation	% of Agricultural Households Indebted
Unit of measurement	Percentage
Periodicity	Annual
Granularity	State Level

Indicator	Farmer/ Cultivator suicide per HHs
SDG	SDG 10- Reduced Inequalities
Pillar	Equity
Theme	Government Effectiveness
Data Source	National Crime Records Bureau, 2019
Rationale of the Indicator	The indicator is trying to assess whether the state is able to understand and address the issues faced by farmers within the state. Whether it is the financial distress causing death of a farmer.
Indicator Computation	Number of suicides per household = (Number of sucides/ Number of households with loans)
Unit of measurement	Ratio
Periodicity	Annual
Granularity	State Level

Indicator	Number of victims of intentional homicide per 100,000 population
SDG	SDG 16- Peace, Justice and Strong Institutions
Pillar	Equity
Theme	Rule of Law
Data Source	National Crime Records Bureau, 2019
Rationale of the Indicator	This indicator is trying to estimate the intional homicide happening within a state. It also measures the rate of crime addresed by the state.
Indicator Computation	Compunded Annual Growth rate of rate of homicide over the period of 4 years
Unit of measurement	Growth Rate
Periodicity	Annual
Granularity	State Level

Indicator	Unsentenced detainees as a proportion of overall prison population
SDG	SDG 16- Peace, Justice and Strong Institutions
Pillar	Equity
Theme	Rule of Law
Data Source	National Crime Records Bureau, 2019
Rationale of the Indicator	This ratio would help in estimating the time taken for the judiciary to investigate a case and give a judgement. It is a measure of efficiency of the state judiciary.
Indicator Computation	Compunded Annual Growth rate percentage of undertrials to total prision population
Unit of measurement	Growth Rate
Periodicity	Annual
Granularity	State Level

Indicator	Incidence of Crimes against SC and ST
SDG	SDG 16- Peace, Justice and Strong Institutions
Pillar	Equity
Theme	Rule of Law
Data Source	National Crime Records Bureau, 2019
Rationale of the Indicator	Caste based dicrimination is illegal according to the Constitution of India. Despite this, caste-based violence continue to happen. This indicator is trying to assess the number of caste based violence that takes place.
Indicator Computation	Direct Indicator
Unit of measurement	Rate of Crime
Periodicity	Annual
Granularity	State Level

Indicator	Child Sex ratio
SDG	SDG 16- Peace, Justice and Strong Institutions
Pillar	Equity
Theme	Rule of Law
Data Source	NFHS-4, 2015-16
Rationale of the Indicator	Female foeticide and infanticide is still prevalent. Girl child is often viewed as a liability in the indian society. This indicator is trying to measure the child sex ratio to estimate whether sex selective crimes continue to exist.
Indicator Computation	Direct Indicator
Unit of measurement	Integer
Periodicity	Annual
Granularity	State Level

Indicator	Crimes against children
SDG	SDG 16- Peace, Justice and Strong Institutions
Pillar	Equity
Theme	Rule of Law
Data Source	National Crime Records Bureau, 2019
Rationale of the Indicator	Children are one of the most vulnerable sections of the society. They are often forced to work, trafficked, abused, etc. This indicator is trying to understand the proportion of children who are exploited.
Indicator Computation	Direct Indicator
Unit of measurement	Rate
Periodicity	Annual
Granularity	State Level

Indicator	Dowry Deaths per 10 lakh population
SDG	SDG 16- Peace, Justice and Strong Institutions
Pillar	Equity
Theme	Rule of Law
Data Source	National Crime Records Bureau, 2019
Rationale of the Indicator	Giving or recieving dowry is a punishable offence. This indicator is trying to assess the prevalence of dowry deaths per 10 lakh population. This would indicate whether the states have taken measures to increase awareness and prevent dowry deaths.
Indicator Computation	[Number of Dowry Death victims/ Female population (in 10 lakhs)]
Unit of measurement	Integer
Periodicity	Annual
Granularity	State Level

Indicator	Rapes per 10 lakh population
SDG	SDG 16- Peace, Justice and Strong Institutions
Pillar	Equity
Theme	Rule of Law
Data Source	National Crime Records Bureau, 2019
Rationale of the Indicator	Safety and security of citizens is a responsibility of the state. The number of rapes per 10 lakh population measures the probability of safety that a women is ensured in her state.
Indicator Computation	[Number of Cases reported/ Female population (in 10 lakhs)]
Unit of measurement	Integer
Periodicity	Annual
Granularity	State Level

Indicator	Child Sex ratio
SDG	SDG 16- Peace, Justice and Strong Institutions
Pillar	Equity
Theme	Rule of Law
Data Source	NFHS-4, 2015-16
Rationale of the Indicator	Female foeticide and infanticide is still prevalent. Girl child is often viewed as a liability in the indian society. This indicator is trying to measure the child sex ratio to estimate whether sex selective crimes continue to exist.
Indicator Computation	Direct Indicator
Unit of measurement	Integer
Periodicity	Annual
Granularity	State Level

Indicator	Worker Population Ratio (Female) (WPR)
SDG	SDG 10- Reduced Inequalities
Pillar	Equity
Theme	Regulatory Quality
Data Source	Annual Periodic Labour Force Survey, 2018-19
Rationale of the Indicator	The labour froce participation of women tend to be typically lower than that of men. Worker population ratio of women helps to understand the percentage of total women employed with respect to the total working age population of women. This indicator assess the percentage of women that are employe
Indicator Computation	Direct Indicator
Unit of measurement	Percentage
Periodicity	Annual
Granularity	State Level

Indicator	No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
SDG	SDG 16- Peace, Justice and Strong Institutions
Pillar	Equity
Theme	Control of Corruption
Data Source	National Crime Records Bureau, 2019
Rationale of the Indicator	Number of cases disposed against the number of cases registered itself indicates the amount of awareness regarding corruption and the extent of corruption.
Indicator Computation	(Number of cases disposed/Number of cases registered)
Unit of measurement	Percentage
Periodicity	Annual
Granularity	State Level

Indicator	Average out of pocket expenditure
SDG	SDG 3- Good Health and Well Being
Pillar	Equity
Theme	Control of Corruption
Data Source	NFHS-4, 2015-16
Rationale of the Indicator	For services falling under the bracket of National Health mission, the services of PHCs and CHCs are free and accessible to every individual. If at all one is paying some amount to avail certain entitled services depicts a picture of creeping corruption.
Indicator Computation	Direct Indicator
Unit of measurement	Integer
Periodicity	5 years
Granularity	State Level

Indicator	Health worker density
SDG	SDG 3- Good Health and Well Being
Pillar	Growth
Theme	Government Effectiveness
Data Source	National Health Profile, 2020
Rationale of the Indicator	Health and sanitation is a state subject. Accessibility to healthcare is a prominent indicator of the state, within which the density of health workers helps to evaluate the extent of access to healthcare services. Higher the density, better the access to healthcare.
Indicator Computation	Average of No. of Govt. Allopathic Doctors, ANM, RN and RM, LHV, Pharmacists and total AYUSH Doctors
Unit of measurement	Ratio
Periodicity	Annual
Granularity	State Level

Indicator	Immunisation achievement
SDG	SDG 3- Good Health and Well Being
Pillar	Growth
Theme	Government Effectiveness
Data Source	National Family Health Survey- 2015-16
Rationale of the Indicator	Vaccinations help control the spread of several lethal diseases like polio, measles, hepatitis, etc. It aslo improves the life expentancy of the population. This indicator tries to estimate the immunisation achievemnt of the state.
Indicator Computation	Direct Indicator
Unit of measurement	Percentage
Periodicity	5 years
Granularity	State Level

Indicator	Institutional delivery
SDG	SDG 3- Good Health and Well Being
Pillar	Growth
Theme	Government Effectiveness
Data Source	National Family Health Survey- 2015-16
Rationale of the Indicator	Institutional delivery helps improve the maternal mortality ratio by ensuring access to professional help during any complications that arise at the time of delivery. There are several projects and schemes that incentivise institutional delivery. This indicator tries to capture the percentage of institutional deliveries.
Indicator Computation	Direct Indicator
Unit of measurement	Percentage
Periodicity	5 years
Granularity	State Level

Indicator	Performance Grading Index
SDG	SDG 4- Quality education
Pillar	Growth
Theme	Government Effectiveness
Data Source	UDISE, 2020
Rationale of the Indicator	To understand the learning outcomes with very low availability of data, Performance grading index is the best way to assess the language and mathematic aptitute of children across all ages.
Indicator Computation	Direct Indicator
Unit of measurement	Composite Score
Periodicity	Annual
Granularity	State Level

Indicator	Proportion of population using safely managed drinking water services
SDG	SDG 6- Clean Water and Sanitation
Pillar	Growth
Theme	Government Effectiveness
Data Source	National Family Health Survey- 2015-16
Rationale of the Indicator	Access to clean drinking water is an essential service that is provided by the state. This indicator aims to understand what proportion of population has access to clean drinking water.
Indicator Computation	Direct Indicator
Unit of measurement	Percentage
Periodicity	5 years
Granularity	State Level

Indicator	Proportion of population using safely managed sanitation services
SDG	SDG 6- Clean Water and Sanitation
Pillar	Growth
Theme	Government Effectiveness
Data Source	National Family Health Survey- 2015-16
Rationale of the Indicator	Access to sanitation facilities is essential. Especiallly in women, it can result in several issues caused by unsafe menstrual practices leading to barriers in access to education and work. It can also lead to unsafe living environment and causes pollution. This indicator is trying to assess the accessibility to sanitation services to the population.
Indicator Computation	Direct Indicator
Unit of measurement	Percentage
Periodicity	5 years
Granularity	State Level

Indicator	Proportion of population with access to electricity
SDG	SDG 7- Affordable and Clean Energy
Pillar	Growth
Theme	Government Effectiveness
Data Source	National Family Health Survey- 2015-16
Rationale of the Indicator	Access to electricity can act as a barrier in access to education and professional engagemnets, this became even more prominent in post-COVID situation where several states had classes online and through television streaming. This indicator is trying to assess the proportion of population with access to electricity.
Indicator Computation	Direct Indicator
Unit of measurement	Percentage
Periodicity	5 years
Granularity	State Level

Indicator	Fiscal Surplus/ Deficit
SDG	SDG 8- Decent Work and Economic Growth
Pillar	Growth
Theme	Government Effectiveness
Data Source	RBI Handbook of Statsistics on Indian States, 2020
Rationale of the Indicator	This indicator measures the extent of government spending.
Indicator Computation	Direct Indicator
Unit of measurement	Percentage
Periodicity	Annual
Granularity	State Level

Indicator	States Own Tax Revenue Growth
SDG	SDG 8- Decent Work and Economic Growth
Pillar	Growth
Theme	Government Effectiveness
Data Source	RBI Handbook of Statsistics on Indian States, 2020
Rationale of the Indicator	Tax collection is a major source of revenue for the states. The revenue generated is put directly to use in developmental activities.
Indicator Computation	Direct Indicator
Unit of measurement	Percentage
Periodicity	Annual
Granularity	State Level

Indicator	Rural Non farm employment
SDG	SDG 2- Zero Hunger
Pillar	Growth
Theme	Regulatory Quality
Data Source	RBI Handbook of Statsistics on Indian States, 2020
Rationale of the Indicator	The surplus generated in the farm sector due to low profitability is a common phenomenon across the country supported by various literature. This indicator is constructed to asses the rural non farm employment. To see the extent of structural transformation.
Indicator Computation	Average of employment in secondary and tertiary sector
Unit of measurement	Percentage
Periodicity	Annual
Granularity	State Level

Indicator	Annual growth rate of NDP per capita
SDG	SDG 8- Decent Work and Economic Growth
Pillar	Growth
Theme	Regulatory Quality
Data Source	RBI Handbook of Statsistics on Indian States, 2020
Rationale of the Indicator	The growth rate of Net Domestic Product to measure the economic outcomes.
Indicator Computation	Direct Indicator
Unit of measurement	Percentage
Periodicity	Annual
Granularity	State Level

Indicator	Unemployment Rate
SDG	SDG 8- Decent Work and Economic Growth
Pillar	Growth
Theme	Regulatory Quality
Data Source	Annual Periodic Labour Force Survey, 2018-19
Rationale of the Indicator	To measure the extent of employment in a state. The onus of providing decent work and employment is on the state, thus, this indicator is an effective measure of governance in this regard.
Indicator Computation	Direct Indicator
Unit of measurement	Percentage
Periodicity	Annual
Granularity	State Level

Indicator	Manufacturing value added as a proportion of GDP and per capita
SDG	SDG 8- Decent Work and Economic Growth
Pillar	Growth
Theme	Regulatory Quality
Data Source	RBI Handbook of Statsistics on Indian States, 2020
Rationale of the Indicator	The value added is the net output from the manufacturing sector. The share in GDP is a direct measure of SDG goal 8.2 that promotes productivity and economic development.
Indicator Computation	Direct Indicator
Unit of measurement	Growth rate
Periodicity	Annual
Granularity	State Level

Indicator	Proportion of total government expenditure on infrastructure
SDG	SDG 9 : Build resilient infrastructure,promote sustainable industrialization and foster innovation.
Pillar	Growth
Theme	Regulatory Quality
Data Source	RBI Handbook of Statsistics on Indian States, 2020
Rationale of the Indicator	This indicator measures the state's initiatives through infrastructure creation which directly impacts on economic development.
Indicator Computation	Direct Indicator
Unit of measurement	Growth rate
Periodicity	Annual
Granularity	State Level

Indicator	Proportion of total Government expenditure on Agriculture and Allied Services
SDG	SDG 2- Zero Hunger
Pillar	Growth
Theme	Regulatory Quality
Data Source	RBI Handbook of Statsistics on Indian States, 2020
Rationale of the Indicator	Agriculture and Allied sector still employs more than 50% of the work force, thus government's initiative to cater to the agriculture sector becomes important from a governance perspective.
Indicator Computation	Direct Indicator
Unit of measurement	Growth rate
Periodicity	Annual
Granularity	State Level

Indicator	Renewable energy share in the total final energy consumption
SDG	SDG 7: Affordable and Clean Energy
Pillar	Sustainability
Theme	Government Effectiveness
Data Source	Central Electricity Authority, 2020
Rationale of the Indicator	Environment sustainability.
Indicator Computation	Direct Indicator
Unit of measurement	Percentage
Periodicity	Annual
Granularity	State Level

Indicator	Proportion of land that is degraded over total land area
SDG	SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss
Pillar	Sustainability
Theme	Government Effectiveness
Data Source	Desertification and Land Degradation Atlas of India, ISRO, GoI, 2011av-13
Rationale of the Indicator	Barren land is often nothing more than a liability and does not contribute to development in any way. This indicator is trying to understand what proportion of the total land cover consists of degraded land that.
Indicator Computation	Direct Indicator
Unit of measurement	Proportion
Periodicity	-
Granularity	State Level

Indicator	Forest area as a proportion of total land area
SDG	SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss
Pillar	Sustainability
Theme	Government Effectiveness
Data Source	India State of Forests Report, Forest Survey of India, 2019
Rationale of the Indicator	Environment sustainability.
Indicator Computation	Direct Indicator
Unit of measurement	Proportion
Periodicity	2 years
Granularity	State Level

Indicator	Percentage of households using clean cooking fuel
SDG	SDG 7: Affordable and Clean Energy
Pillar	Sustainability
Theme	Government Effectiveness
Data Source	National Family Health Survey- 2015-16
Rationale of the Indicator	Traditional cooking ranges (invloving burning of wood and constant exposure to the smoke) affect lung and heart health. It also is not a very sustainable mean as it requires collection of firewood, etc. There are schemes that promote the use of clean cooking fuel. This indicator is trying to measure the extend of coverage of clean cooking fuel in households.
Indicator Computation	Direct Indicator
Unit of measurement	Percentage
Periodicity	5 years
Granularity	State Level

Indicator	Percentage of Nitrogen fertilizers out of total N P K
SDG	SDG 12- Responsible Consumption and Production
Pillar	Sustainability
Theme	Regulatory Quality
Data Source	Ministry of Statistics and Programme Implementation, GoI, 2017
Rationale of the Indicator	Use of nitrogen fertilizers, through improves yield immediately, leads to degradation of the soil quality and makes the land barren in the long run. Use of these fertilizers also seeps throught the soil and contaminates the groundwater. This indicator is trying to estimate the percentage of nitrogenous fertilizers used with respect to total Nitrogen (N), Phosphorous (P) and Potassium (K) usage.
Indicator Computation	Amount of Nitrogenous fertilizers used/ Total NPK usage
Unit of measurement	Percentage
Periodicity	-
Granularity	State Level

Indicator	Solid waste generation and waste processing in the urban areas
SDG	SDG 12- Responsible Consumption and Production
Pillar	Sustainability
Theme	Regulatory Quality
Data Source	Indiastat, 2020
Rationale of the Indicator	Waste management is of prime importance, especially in desely populated regions. If there are no procedural measures to process the bulk of waste generated, it could lead creation of landfills that leave along lasting impact on the health of the population. This indicator is used to assess the measures undertaken to ensure proper and efficient waste disposal methods.
Indicator Computation	Direct Indicator
Unit of measurement	Percentage
Periodicity	Annual
Granularity	State Level

Indicator	Annual mean levels of fine particulate matter (PM10) in cities (population weighted)
SDG	SDG 11: Make cities inclusive, safe, resilient and sustainable
Pillar	Sustainability
Theme	Regulatory Quality
Data Source	Central Pollution Control Board, 2021
Rationale of the Indicator	High levels of PM10 in the environment have adverse and long lasting impact on the health of the population living in such environment. Reducing the concentration of these partculate matter becomes a responsibility of the state as in directly degrades the quality of health of the population. This indicator tries to capture the annual mean levels of PM10 in the cities.
Indicator Computation	(Total Waste Processed/ Total Waste Generated)*100
Unit of measurement	Percentage
Periodicity	Annual
Granularity	State Level

Indicator	Total Number of Anganwadis operating per 1000 population
Theme	Access
Data Source	LOK SABHA UNSTARRED QUESTION NO. 3980 and Census 2011
Rationale of the Indicator	This indicator will help in understanding whether the number of Anganwadi centres in the state is adequately addressing the requirement of the state
Indicator Computation	(State-wise Anganwadi centres operational during the last 5 year/ Total population of the State)*1000
Unit of measurement	
Periodicity	One year
Granularity	State Level

Indicator	Coverage of Pregnant Women and Lactating mothers as per the ICDS scheme
Theme	Coverage
Data Source	LOK SABHA UNSTARRED QUESTION NO. 1137
Rationale of the Indicator	ICDS scheme's primary beneficiaries are the pregnant women. Since the scheme envisages the betterment of the mothers, it is only rational to know whether the women of the reproductive age have been covered in the scheme or not
Indicator Computation	Total number of Pregnant women and Lactating mothers as beneficiaries of ICDS / Total eligible population (women of the reproductive age of 15-49)
Unit of measurement	Proportion
Periodicity	One year
Granularity	State level

Indicator	Beneficiaries covered in the Pre-school education
Theme	Coverage
Data Source	PIB Press Release and Census 2011
Rationale of the Indicator	95% of the brain development in a child happens till the age of 6. Pre-school education is the key to ensuring the child is school ready. As one of the prime objectives of the scheme it is important to assess whether, early childhood care and education are provided through the scheme
Indicator Computation	Total number of PSE beneficiaries/ Total eligible population (children from the age group of 3-6 years)
Unit of measurement	Proportion
Periodicity	One year
Granularity	State Level

Indicator	Actual Availability of Anganwadi Workers and Helpers against sanctioned number
Theme	Availability
Data Source	LOK SABHA UNSTARRED QUESTION No. 933
Rationale of the Indicator	To assess whether the state has ensured the availability of Anganwadi workers and helpers
Indicator Computation	[(Total number of AWW in position/-sanctioned) + (Total Number of AWH in position/sanctioned)]/2*100
Unit of measurement	Percentage
Periodicity	One year
Granularity	State Level

Indicator	Percentage utilisation of the scheme fund available
Theme	Utilisation
Data Source	OpenBudgets
Rationale of the Indicator	Utilisation of the allocated projet fund by the state is important for effective implementation of the scheme
Indicator Computation	(Total Expenditure/ otal Allocation)*100
Unit of measurement	Percentage
Periodicity	One year
Granularity	State Level

Indicator	Proportion of number of applicants who recieved job cards versus number of applicants who applied for job cards
Theme	Access
Data Source	MNREGA website
Rationale of the Indicator	This indicator would help in understanding the extent of access that households and applicants have to availing jobcards that are a requirement for requesting for employment under MGNREGS
Indicator Computation	Number of job cards issued/Number of appliactions for job cards
Unit of measurement	Proportion
Periodicity	Annually published data for five years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Proportion of Scheduled Caste persondays to that of total persondays generated
Theme	Coverage
Data Source	MNREGA website
Rationale of the Indicator	This indicator would help in understanding the extent of coverage of vulnerable groups within the beneficiaries
Indicator Computation	(SC beneficiaries / total beneficiaries)*100
Unit of measurement	Percentage
Periodicity	Annually published data for five years consolidated unsing the rolling median methodology
Granularity	State Leveal

Indicator	Proportion of Scheduled Tribe persondays to that of total persondays generated
Theme	Coverage
Data Source	MNREGA website
Rationale of the Indicator	This indicator would help in understanding the extent of coverage of vulnerable groups within the beneficiaries
Indicator Computation	(ST beneficiaries / total beneficiaries)*100
Unit of measurement	Percentage
Periodicity	Annually published data for five years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Proportion of female active workers to total active workers
Theme	Coverage
Data Source	MNREGA website
Rationale of the Indicator	This indicator would help in understanding the extent of gender diversity within the beneficiaries
Indicator Computation	(Female active workers/ total active workers)
Unit of measurement	Percentage
Periodicity	Annually published data for five years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Percentage of people who demanded employment to whom employment was provided
Theme	Coverage
Data Source	MNREGA website
Rationale of the Indicator	This indicator would help in understanding the rate of provision of employment to those who demanded employment. As MGNREGS is a scheme driven by demand from beneficiaries, this becomes important
Indicator Computation	(employment provided/ employment demanded)*100
Unit of measurement	Proportion
Periodicity	Annually published data for five years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Percentage utilisation of the scheme fund available
Theme	Utilisation
Data Source	Open budgets
Rationale of the Indicator	Utilisation of the allocated projet fund by the state is important for effective implementation of the scheme
Indicator Computation	(Total Expenditure/ Total Allocation)*100
Unit of measurement	Percentage
Periodicity	Annually published data for five years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Ratio of average wage received to notified wage
Theme	Utilisation
Data Source	MNREGA website
Rationale of the Indicator	This indicator would help in understanding to what extent the states are able to provide the promised wages to the beneficiaries
Indicator Computation	Wages given/ Established wage rate per state
Unit of measurement	Proportion
Periodicity	Annually published data for five years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Proportion of food grains allocated to each State to the number of children availing benefits under the scheme in the state
Theme	Access
Data Source	Mid-Day Meal Scheme website
Rationale of the Indicator	This indicator would help in understanding what amount of foodgrain is made available per student in the state. Higher the value ideally indicates that the nutritional intake per student is also higher
Indicator Computation	Average foodgrains allocated to the state/ total number of beneficiaries under MDMS in state
Unit of measurement	Proportion
Periodicity	Annually published data for four years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Dropout in Primary and Upper Primary in government schools
Theme	Coverage
Data Source	UDISE
Rationale of the Indicator	This indicator would help in understanding when there is reduction in dropout of students in schools. Reduction in dropouts is one of the objetives outlined in the mid-day meal scheme
Indicator Computation	(Dropout in Primary + Dropout in Upper Primary)/2
Unit of measurement	Percentage
Periodicity	Annually published data for four years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Gross Enrolment Rate in government elementary schools
Theme	Coverage
Data Source	UDISE
Rationale of the Indicator	This indicator would help in understanding when there is an increase in enrolment of students in schools. Increase in enrolment is one of the objetives outlined in the mid-day meal scheme
Indicator Computation	As is from source
Unit of measurement	Percentage
Periodicity	Annually published data for four years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Proportion of students recieving benefits under MDMS to total students enroled in schools
Theme	Coverage
Data Source	UDISE and LOK SABHA UNSTARRED QUESTION NO. 1528
Rationale of the Indicator	This indicator helps in understanding the extent of coverage of the beneficiaries of the scheme
Indicator Computation	Students covered under MDMS in the state/ Total enrolment in the state
Unit of measurement	Proportion
Periodicity	Annually published data for four years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Per capita expenditure
Theme	Availability
Data Source	UDISE and LOK SABHA UNSTARRED QUESTION NO. 1528
Rationale of the Indicator	Higher per capita expenditure would imply that more resources are available for the beneficiaries
Indicator Computation	Total expenditure/Number of student beneficiaries
Unit of measurement	
Periodicity	Annually published data for four years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Percentage utilisation of the scheme fund available
Theme	Utilisation
Data Source	LOK SABHA UNSTARRED QUESTION NO. 1528
Rationale of the Indicator	Utilisation of the allocated project fund by the state is important for effective implementation of the scheme
Indicator Computation	(Total Expenditure/ Total Allocation)*100
Unit of measurement	
Periodicity	Annually published data for four years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Number of Public Health Centres per population
Theme	Access
Data Source	National Health Profile and Census 2011
Rationale of the Indicator	This indicator would help analyse the extent of access population has to basic health facilities
Indicator Computation	Number of PHC / Total population
Unit of measurement	Percentage
Periodicity	Annually published data for four years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Number of Sub centres per population
Theme	Access
Data Source	National Health Profile and Census 2011
Rationale of the Indicator	This indicator would help analyse the extent of access population has to basic health facilities
Indicator Computation	Number of Sub centres/ Total population
Unit of measurement	Percentage
Periodicity	Annually published data for four years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Number of people attending NCD clinics
Theme	Access
Data Source	National Health Profile and Census 2011
Rationale of the Indicator	This indicator captures the extent of awareness among people to get themselves tested for NCDs as they should be understood as the next biggest challenge health systems in India would face.
Indicator Computation	NCD attendees/population
Unit of measurement	Percentage
Periodicity	Annually published data for four years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Targets & Achievement of Maternity and Child Health Activities (Immunisation) in India
Theme	Coverage
Data Source	National Health Profile (NHP)
Rationale of the Indicator	One of the objectives of the National Health Mission is immunisation achievment. This indicator captures the extent of achievement of the states
Indicator Computation	As is from data source
Unit of measurement	Percentage
Periodicity	Annually published data for four years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Proportion of deaths due to communicable diseases to total number of deaths
Theme	Coverage
Data Source	National Health Profile (NHP)
Rationale of the Indicator	This indicator would help in understanding the extend to which health systems in the state are able to control the spread of communicable diseases
Indicator Computation	Deaths due to malaria, chikungunya, kala-azar,acute ancephalitis, japanese encephalitis and dengue/ total registered deaths
Unit of measurement	Proportion
Periodicity	Annually published data for four years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Expenditure on Health: Per Capita, as share of Total Expenditure and as share of GSDP
Theme	Availability
Data Source	National Health Profile (NHP)
Rationale of the Indicator	This indicator helps in understanding funds available per person in the state that can be used to improve access to healthcare systems
Indicator Computation	As computed by data source
Unit of measurement	Proportion
Periodicity	Annually published data for four years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Proportion of Health Human Resourse in Community Health Centres, Primary Health Centres and Sub centres
Theme	Availability
Data Source	National Health Profile
Rationale of the Indicator	This indicator helps in understanding the availablity of health human resources with respect to the population in the state
Indicator Computation	Total number of rural health human resource/total number of PHC+CHC+subcentre
Unit of measurement	Proportion
Periodicity	Annually published data for four years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Percentage utilisation of the scheme fund available
Theme	Utilisation
Data Source	OpenBudgets
Rationale of the Indicator	Utilisation of the allocated projet fund by the state is important for effective implementation of the scheme
Indicator Computation	(Total Expenditure/ Total Allocation)*100
Unit of measurement	Percentage
Periodicity	Annually published data for four years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Ratio of number of schools with ramp access to the total number of schools
Theme	Access
Data Source	UDISE
Rationale of the Indicator	Differently abled students even after recieving admission to a school might not recieve access to schools due to lack of ramps
Indicator Computation	Number of schools with ramp access/ Total number of schools
Unit of measurement	Ratio
Periodicity	Annually published data for five years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Pupil Teacher Ratio
Theme	Access
Data Source	UDISE
Rationale of the Indicator	Lesser the number of students per teacher, greater the individual attention the student would recieve leading to better learning outcomes
Indicator Computation	Pupil Teacher Ratio as is from UDISE
Unit of measurement	Ratio
Periodicity	Annually published data for five years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Proportion of SC students enrolled as a proportion of total SC population in the age group 6-17
Theme	Access
Data Source	UDISE and Census 2011
Rationale of the Indicator	Higher enrolment of minority communities indicates higher equity in the distribution of scheme benefits
Indicator Computation	(SC enrolment/ Total enrolment from UDISE)/(SC population in age group 6-17/total population in age group 6-17 from Census)
Unit of measurement	Proportion
Periodicity	Annually published data for five years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Proportion of ST students enrolled as a proportion of total ST population in the age group 6-17
Theme	Coverage
Data Source	UDISE and Census 2011
Rationale of the Indicator	Higher enrolment of minority communities indicates higher equity in the distribution of scheme benefits
Indicator Computation	(ST enrolment/ Total enrolment from UDISE)/(ST population in age group 6-17/total population in age group 6-17 from Census)
Unit of measurement	Proportion
Periodicity	Annually published data for five years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Proportion of girls enrolled as a proportion of total enrolled population in the age group 6-17
Theme	Coverage
Data Source	UDISE
Rationale of the Indicator	Girl's literacy rates have been lower than their male counterparts, drop out rates have also been higher among girls. Hence the higher enrolment of girl children means that efforts are being made to reeduce this difference
Indicator Computation	(Girls enrolment/ total enrolment)
Unit of measurement	Proportion
Periodicity	Annually published data for five years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Net Enrolment Rate
Theme	Coverage
Data Source	UDISE
Rationale of the Indicator	Improving the overall education levels in the population is one of the objectives of the scheme, this indicator would capture the progress the state has made in increasing participation of population in education
Indicator Computation	Net Enrolment Rate as is from UDISE
Unit of measurement	Proportion
Periodicity	Annually published data for five years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Per capita expenditure of SSA and RMSA
Theme	Availability
Data Source	OpenBudgets and UDISE
Rationale of the Indicator	Higher per capita expenditure would imply that more resources are available for the beneficiaries
Indicator Computation	Total amount spent in RMSA and SSA/ Total number of students enroled in the age group 6-17
Unit of measurement	Proportion
Periodicity	Annually published data for five years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator	Percentage utilisation of the scheme fund available
Theme	Utilisation
Data Source	OpenBudgets
Rationale of the Indicator	Utilisation of the allocated projet fund by the state is important for effective implementation of the scheme
Indicator Computation	(Total Expenditure/ Total Allocation) *100
Unit of measurement	Percentage
Periodicity	Annually published data for five years consolidated unsing the rolling median methodology
Granularity	State Level

Indicator 1	Percentage deficit of doctors per million population against normative standards
SDG	SDG 3
Theme	Preparedness
Data Source	Directorate of State Health Services (National Health Profile 2020)
Rationale of the Indicator	Preparing the health workforce to work towards the health objectives is one of the most important challenges for a health system at the sub-national level. As a normative standard, the WHO has prescribed 1 doctor per 1000 population to provide adequate cover-age with primary care interventions. This indicator measures the percent-age deficit of the doctors in the state health workforce against normative standards
Indicator Computation	100 - ((Number of government allopathic doctors per million population/1000)*100)
Unit of measurement	Percentage
Periodicity	Yearly
Granularity	State Wise

Indicator 2	Percentage deficit of hospital beds per million population against normative standards
SDG	SDG 3
Theme	Preparedness
Data Source	Directorate of State Health Services (National Health Profile 2020)
Rationale of the Indicator	Hospital beds are an indicator of the availability of inpatient services. As a normative standard, the WHO prescribes 5 hospital beds per 1000 population to provide adequate coverage with primary care interventions. The percentage deficit of the hospital beds would give us an idea as to how each state performed with regards to ramping up of the health infrastructure
Indicator Computation	100 - ((Number of hospital beds per million population/5000)*100)
Unit of measurement	Percentage
Periodicity	Yearly
Granularity	State Wise

Indicator 3	Percentage allocation of state budget to heath
SDG	SDG 3
Theme	Preparedness
Data Source	State Budget Reports (2016 - 2020)
Rationale of the Indicator	The pandemic has brought the healthcare systems at the sub-national level into the limelight.The change in budget allocation over the past five years will be an important indicator to understand the priority health systems received before the pandemic indicating their level of preparedness to the pandemic
Indicator Computation	Average percentage allocation to health for the last 5 years
Unit of measurement	Percentage
Periodicity	Yearly
Granularity	State Wise

Indicator 4	Number of COVID 19 testing laboratories per million population
SDG	SDG 3
Theme	Containment
Data Source	Ministry of Health and Family Welfare 2020-2021
Rationale of the Indicator	The addition of testing laboratories will enhance the state's efforts to accurately identify, diagnose, report COVID 19 cases and also improve containment strategies to tackle the spread of the virus
Indicator Computation	Average number of COVID 19 testing laboratories functioning per million population over 12 months
Unit of measurement	Rate
Periodicity	Monthly
Granularity	State Wise

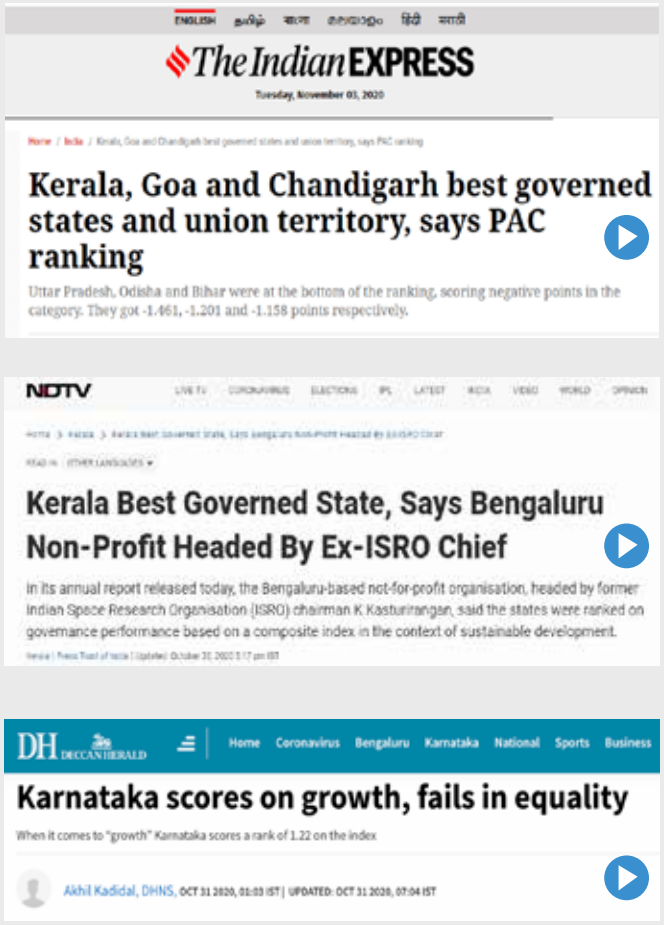
Indicator 5	Number of COVID 19 cases per million population
SDG	SDG 3
Theme	Containment
Data Source	Ministry of Health and Family Welfare 2020-2021
Rationale of the Indicator	The number of COVID 19 cases will enable states to indicate the burden of the disease and adopt suitable containment strategies to keep the virus spread under control. Poor containment efforts will lead to higher cases and will put further stress on the health system's response to the pandemic. However, the trends in cases depends upon the state's reporting efforts from time to time
Indicator Computation	Average number of COVID 19 cases reported per million population over 12 months
Unit of measurement	Rate
Periodicity	Monthly
Granularity	State Wise

Indicator 6	Number of COVID 19 tests conducted per million population
SDG	SDG 3
Theme	Containment
Data Source	Ministry of Health and Family Welfare 2020-2021
Rationale of the Indicator	Testing is a window to understand the spread of the virus in the population and effectively respond to the pandemic through tracing, treatment and isolation of contacts. Higher testing per capita indicates proactive containment efforts from the state enabling better detection of COVID 19 cases.
Indicator Computation	Average number of COVID 19 tests conducted per million population over 12 months
Unit of measurement	Rate
Periodicity	Monthly
Granularity	State Wise

Indicator 7	Number of COVID 19 deaths per million population
SDG	SDG 3
Theme	Containment
Data Source	Ministry of Health and Family Welfare 2020-2021
Rationale of the Indicator	The number of deaths related to COVID 19 reflects the capacity of the sub-national health systems to adopt suitable containment strategies and also provide effective health care in severly affected patients. However, the trends in deaths depends upon the state's reporting from time to time
Indicator Computation	Average number of COVID 19 deaths reported per million population over 12 months
Unit of measurement	Rate
Periodicity	Monthly
Granularity	State Wise

PUBLIC AFFAIRS INDEX
PAI
Governance in the States of India

Coverage for PAI 2020



The Indian EXPRESS

Tuesday, November 03, 2020

Kerala, Goa and Chandigarh best governed states and union territory, says PAC ranking

Uttar Pradesh, Odisha and Bihar were at the bottom of the ranking, scoring negative points in the category. They got -1.461, -1.201 and -1.158 points respectively.

NDTV

Kerala Best Governed State, Says Bengaluru Non-Profit Headed By Ex-ISRO Chief

In its annual report released today, the Bengaluru-based not-for-profit organisation, headed by former Indian Space Research Organisation (ISRO) chairman K Kasturirangan, said the states were ranked on governance performance based on a composite index in the context of sustainable development.

DH DECCAN HERALD

Home | Coronavirus | Bengaluru | Karnataka | National | Sports | Business

Karnataka scores on growth, fails in equality

When it comes to "growth" Karnataka scores a rank of 1.22 on the index

Akhil Kadidal, DHNS, OCT 31 2020, 01:03 IST | UPDATED: OCT 31 2020, 07:04 IST

malayalam

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മികച്ച ഭരണം: പിഎസി റാങ്കിങ്ങിൽ കേരളം ഒന്നാമത്; ഏറ്റവും പിറകിൽ യുപി

പ്രജಾವಾಣಿ

ಸುಸ್ಥಿರ ಆಡಳಿತ: ಐದನೇ ಸ್ಥಾನಕ್ಕೆ ಕರ್ನಾಟಕ

Kerala, Goa best governed states: PAC ranking

THE WEEK MAGAZINE

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Kerala, Tamil Nadu the best governed states; Uttar Pradesh at the bottom: PAC ranking

Kerala, TN, AP, K'taka stood in first 4 ranks in the large state category

By PTI

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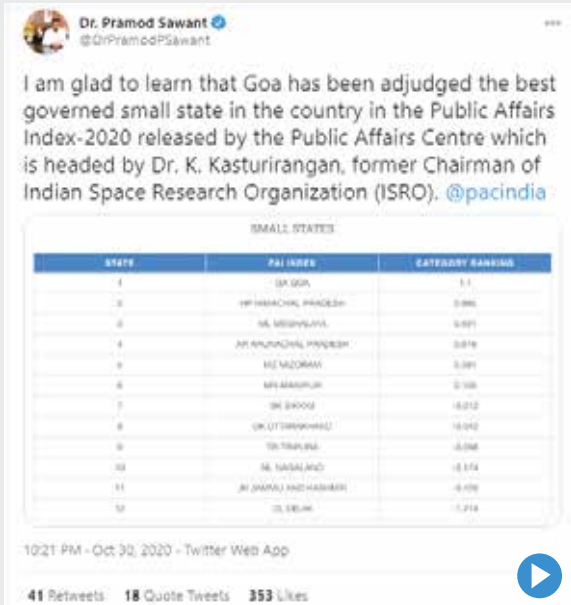

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Public Affairs Index
2020

Measuring governance is a challenge. This issue becomes increasingly complex especially in a diverse country like India, where each state is socially, culturally, economically and politically different. PAC thus identified three broad pillars namely Growth, Equity and Sustainability that encapsulate governance. From a development perspective, it is axiomatic that there must be synergies between all the three pillars. It is impossible to believe that two of the three pillars are enough, growth and sustainability without equity; growth and equity without sustainability; equity and sustainability without growth. **PAI 2021** is an amalgamation of 3 Pillars, 5 Themes, 14 SDGs and 43 indicators.

PAI is a conscious effort to present a scientifically sound, methodologically rigorous, and practically useful data-based framework to measure the quality of governance in the states of India, and rank them.

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