



Public Affairs Index

GOVERNANCE IN THE STATES OF INDIA

2020

3 Pillars | 5 Themes | 13 SDGs | 50 Indicators

Public Affairs Index - Governance in the States of India- 2020

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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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PREFACE



It is a paradox that only at a time of unprecedented disruption in the wake of COVID-19, there should be an upsurge of interest in data-based analytics - epidemiological and economic - whose subject-matter, often, is fully comprehensible only to a small group of experts. Yet, the realm that matters to us most, preceding the pandemic and regardless of it - the human development challenges across the country - and the data-based measurement of the quality and adequacy of the response of the states to them; appear not to have captured the mind space of policy makers, development practitioners and academics to the same degree. This is ironic because the states in India constitute the theatres of development praxis and what the states do and how, or what they fail to do and why; are concerns that can scarcely be exaggerated.

The Public Affairs Index (PAI), is an indispensable part of these concerns, and this fifth annual edition - PAI 2020 - from a data-based measurement perspective, serves as a kind of summation of the work that the Public Affairs Centre has been advancing for the past five years. It reflects, through a scientifically rigorous and methodologically sound data analytics framework, on certain central development problems at the subnational level - growth, equity and sustainability - especially questions of what is happening to disadvantaged and vulnerable geographies and populations, despite the best endeavours of the central and state governments and the problems that are endemic, endogenous, and chronic, even after considerable resources have been directed at resolving them. No analysis of the performance of the states can leave out those districts and communities that appear at the risk of being left behind.

Real obstacles stand in the path of a fuller understanding of these persistent inter-generational deprivation and loss of opportunity challenges, that appear to reproduce themselves, especially in parts, of some states. To begin with, the influence of a 'one size fits all' approach on our development outlook has been pervasive and the overwhelming majority of interventions, including centrally sponsored schemes, designed and implemented uncritically and mechanically, unwittingly perhaps, subverting the doctrine of objective pluralism. Yes, political economy collisions will occur from often, in a union of states of the kind India represents, sometimes resulting in an uneasy equilibrium, but one that under the circumstances must serve as the basis for cooperative federalism, in the quest for a just and equitable society.

PAI 2020 provides evidence-based insights on subnational governance, and in particular, drawing on government data, an assessment of the quality and adequacy of governance in the states. Two new dimensions on measuring governance have been introduced in this edition and will be of interest to the readers: first, the Delta Analysis that provides a separate pillar-level ranking of states on their recent performance (average five-year period 2015-20), and presents interesting results and rather different rankings of states when assessed without the weight

of legacy data and second, an overview of the disparities between the states that highlight the differing patterns of inequality across India and raises the question of why the poverty reducing impact of growth in some states has been more in other similarly placed states. Both these must give us pause and compel us to reflect on the economic and social transition that is underway in India and what its implications for future development praxis might be.

There is no apriori reason to suppose that PAI 2020 presents which is new, comprehensive or interesting. But those readers who take a deep dive into it will find just rewards. What it does present is an evidence-based assessment of human development and governance across the states in India. PAI 2020 will have served its purpose if it draws attention to the reality that is India, or even an approximation of it and therefore not to be set aside lightly. It will be better still, if the state governments are able to draw actionable insights from it, enabling them to do better in the years ahead. This will likely hasten the process of development convergence that is discernible. It is with this sense of humility and optimism, that the Public Affairs Centre presents the Public Affairs Index 2020.

G. Gurucharan

Director

Public Affairs Centre

RESEARCH TEAM



Gurucharan Gollerkeri is Director, Public Affairs Centre (PAC), Bangalore. 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 PAI 2020.



Aparna Sivaraman is a Programme Officer at the Public Affairs Centre, Bangalore. She is the Team Lead for PAI 2020 and a co-author of the PAI 2019 report. She has played a key role in developing the PAI 2020 model, data analysis and co-authoring the chapters. She was also responsible for managing the team and for ensuring veracity of the data. With a Bachelor's degree in Economics and a Master's degree in Public Policy, Aparna's research interests include qualitative and quantitative analyses in the areas of gender equality, migration, economic development and intellectual property.



Mrinalini Kabbur is a senior data analyst at the Centre for Open-Data Research (CODR), Public Affairs Centre (PAC). She provides data analysis and reporting support in various domains such as education, health, women & child development, food security and migration. She is adept with various statistical and machine learning algorithms for primary and secondary data like Exploratory and Confirmatory Factor Analysis, Structural Equation Modelling, Principal Component Analysis, Linear and Logistic Regression, Decision Trees, Random Forest and Cluster Analysis. She was responsible for the application of scientific techniques to arrive at the composite index - PAI 2020 and data analysis.



Samridhi Pandey is a Programme Officer at the Public Affairs Centre, Bengaluru. She has a Bachelors and Masters degree in Economics with a specialisation in development studies. She has worked on data analysis and co-authoring the chapters of PAI 2020. She is also part of the project on improving ICDS service delivery in the state of Karnataka. Her interest areas surround gender studies, education and economic development.



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Esha Daftari is a Graphic Designer. She oversees all design elements and brings in her experience of using graphics, photography and designing in making complex information as an easy to read experience based on the audience.

We would also like to place on record our thanks to **Dr. Haritha Pusarla**, Independent Expert who reviewed all the previous Reports of PAI. Credit goes to Dr. Haritha for writing the Chapter Evolution of PAI.

Our appreciation is due to **Akshay Ramesh More, Varun B.R** and **Harish Nalwade**, students from the National Law School for their sincere efforts in data collection and analysis. Thanks are also due to **Viyona Mohan** from Azim Premji University for her contribution to data analysis .

EXECUTIVE SUMMARY

The Public Affairs Index (PAI) is a data-based framework that measures the quality of governance at the subnational level and ranks the states of India on a Composite Index (CI). States are classified in two categories - large and small – using population as the criteria. PAI 2020 for the first time has also included Union Territories as a part of the rankings. Building on the standards set in PAI 2019, PAI 2020 takes forward the scientific rigour in the model, methodology and analysis. The report this year has incorporated new approaches along with the traditional indexing, making it an effective toolkit to assess the governance performance of the States and Union Territories in India.

Chapter I begins with the observation that in India's development endeavour, subnational governance is assuming a distinctly more significant role than before, more specifically on human development, one that is proximate and arguably more important than national governance. It emphasises the importance of states and adds that they are not to be seen as subalterns, but as the foundational institutional architecture of development governance in India. **The chapter highlights the results of PAI 2020 that serve to point out that national policy attention must focus on advancing the role of the states to generate a multiplier effect to spur India's development.** It circumscribes this imperative with the caveat that this can only come about if governance in India, especially development governance, demonstrates a paradigm shift from a centrifugal to a centripetal development praxis. The chapter stresses on the importance of the idea that states must be trusted, empowered through greater decentralisation and devolution and enabled to demonstrate that states do matter.

Chapter II details the model and the methodology used in the development of PAI 2020. **The methodological focus is on reliability - the proportion of variance attributable to the score of the latent variable, in this case governance and validity - whether the index measures what it is designed to measure.** The

approach remains the same as PAI 2019, with the three dimensions of sustainable development - growth, equity, sustainability - as the overarching goals of governance constituting the bases of measuring the performance of the states. Each of the three pillars is circumscribed by five governance praxis themes. These five governance themes have been categorised as- the Rule of Law, Government Effectiveness, Regulatory Quality, Control of Corruption, Voice and Accountability. These themes are further mapped into 13 Sustainable Development Goals as specified by the United Nations SDG Agenda of 2030. Below the SDG layer are 50 indicators that are used in generating the Composite Index.

The scientific rigour of the methodology is maintained in PAI 2020. The technique of pairwise correlation is used to identify the indicators that are the most statistically significant. The technique of Principal Component Analysis (PCA) has been 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 normalised 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.

Chapter III The Equity Principle underscores the importance of equity towards achieving balanced and sustainable development. From a development praxis perspective, therefore, the efforts of the states must focus on expanding the equality of opportunities if they have to achieve equality in outcomes. **In PAI 2020, the Equity Principle is explored through 23 indicators across economic, social, gender and legal representations.** In the equity pillar, Andhra Pradesh ranks first among the large states (0.651), closely followed by Kerala (0.628). It is interesting to note the gap between Kerala (ranked 2nd) and Chhattisgarh (ranked 3rd with a score of 0.259), is considerably large. Tamil Nadu which is

second in terms of the overall PAI ranking features 5th. The states of Meghalaya and Himachal Pradesh swapped places with each other, in 2020, with Meghalaya moving to first place with a score of 2.169 followed closely by Himachal Pradesh (2.020). Similar to the large states, there is a large gap in the scores of Himachal Pradesh at 2nd place and Manipur (1.504) at 3rd place. An interesting finding in the case of small states is the fact that almost all states have shown an improvement in the scores from the previous year. A state that has seen a drop in rank has been Mizoram which is down to the 10th rank this year from 5th in 2019, with a drop in the score from 1.087 to -0.237. In the Union Territories, Chandigarh tops the ranking with a score of 1.348. Daman & Diu and Jammu & Kashmir both with a score of 0.593. This is followed by Puducherry where a considerable gap in score is observed between Jammu & Kashmir (0.593) and Puducherry (0.098), while Lakshadweep places last with a score of -1.717.

Chapter IV The Growth Imperative assesses India's growth challenge and the concerns that need immediate attention. In PAI 2020, the indicators used for assessing the quality of growth are based on two themes: government effectiveness and regulatory quality. **The evidence from PAI 2020 points to the fact that technology-based growth or enhanced total factor productivity as a source of growth in the states is more sustainable over a long run.** In the case of the large states, similar to PAI 2019 scores, Kerala continues to lead the way in terms of growth rankings. The score of the state has also seen a marginal improvement from 1.308 in 2019 to 1.419 in 2020. Karnataka with a score of 1.219, has moved up from third place in 2019 to 2nd in PAI 2020. What is interesting is the fall of Haryana from 2nd ranking in 2019 to 7th in PAI 2020 with a score of 0.562. Tamil Nadu, which featured 8th in 2019 has moved to 3rd place this year with a score of 1.159, closely trailing Karnataka. Moving to the small states, Goa retains the first ranking with a score of 1.933 which is a drop from the score of 2.154 in 2019. Himachal Pradesh (0.491) attains second place and what is worth noting is the

gap between the scores of these two states, indicating considerable inequality in growth patterns. Meghalaya which ranks 3rd in the overall rankings finds its place in the 9th position of 11 with a score of -0.419. The bottom positions remain occupied by Nagaland and Mizoram, similar to 2019. Puducherry occupies the first rank with a score of 1.218 followed by Lakshadweep with a score of 1.064. Again, a large gap can be observed between the scores of Lakshadweep at 2nd rank with 1.064 and Daman & Diu (0.363). Towards the bottom are the UTs of Andaman & Nicobar Islands, Dadra & Nagar Haveli and Jammu & Kashmir with scores in the negatives.

Chapter V Sustainability as an Organising Principle addresses the indicators in measuring sustainability. It measures if the sustainable development efforts of the state governments are directed as the human development concerns of the present, as well as of the future. Starting with the large states, Karnataka which was 1st in the 2019 rankings has slipped to 5th this year with a significant drop in the scores from 1.45 in 2019 to 0.793 currently. Another similar drop is Andhra Pradesh which went from 4th in 2019 (0.471) to 7th (0.212) now. Kerala has jumped up a rank along with a significant increase in score (from 1.367 to 2.117). Tamil Nadu which was 3rd in 2019, has moved to 2nd this year with a score of 1.457. Chhattisgarh has moved up the ranking from 10th (-0.543) in 2019 to 4th position (0.840) this year. On the other hand, Bihar, which was 7th in last year's rankings has moved down to 14th this year with a score of -1.244, finding itself at the bottom of the rankings. At the bottom are the states of Bihar, Haryana, Odisha, Jharkhand and West Bengal. In the case of the small states, Goa, which was 5th in 2019, tops the rankings in 2020 with a score of 2.18 followed by Meghalaya which ranks 2nd. Manipur which ranked 2nd in 2019 finds itself in 8th position this year with a score of 0.053. Continuing the trend, Arunachal Pradesh which topped the rankings in 2019 finds itself at 9th in 2020 with a score of 0.018. Only 2 small states (Himachal Pradesh and Uttarakhand) have scores that are negative. One of the states that has made an improvement is Delhi which has moved

from the bottom in 2019 to 5th in PAI 2020. In terms of the Union Territories, Chandigarh leads the rankings with a score of 1.498, Lakshadweep ranks 2nd with a score of 0.664. At the bottom of the rankings are the UTs of Dadra & Nagar Haveli and Daman & Diu with scores of -1.01 and -1.186 respectively.

Chapter VI The Delta Analysis presents the results on state performance and ranking measured as the Delta value over the last five years from 2015-16 when the first PAI was released to 2019-20, covered by PAI 2020. It helps assess the progress made by the states on select human development indicators for which consistent data is available. The Delta Analysis identifies 13 indicators across the three pillars of Equity, Growth and Sustainability that are crucial both statistically and from the human development perspective. **Given the availability of data, trends were calculated and the growth rate achieved by each state was ranked. The rankings in terms of growth rate calculated was compared against the rankings in PAI 2020.** In the large states' category, Bihar has emerged as the state with the most growth in terms of equity indicators, despite being at the bottom of the PAI 2020 rankings in the equity pillar. In terms of the small states, Mizoram and Delhi, both states that are at the bottom of the PAI 2020 equity pillar feature as the states with the highest growth in the delta analysis. At the bottom of the delta rankings for equity is Kerala in large states category and in terms of small states Himachal Pradesh, which has been a consistent top performer in terms of equity finds itself at the bottom of the rankings in terms of growth rates for the equity pillar. In the case of the large states, Bihar again tops the rankings in the growth pillar of the delta analysis. Following Bihar are Odisha and Assam. In the case of the small states, Mizoram and Meghalaya, which are towards the bottom in the PAI 2020 growth rankings, have shown the highest growth in terms of the delta analysis. In the large states' category, Odisha and Haryana, which ranked towards the bottom in the PAI 2020 sustainability rankings, have shown the largest growth in terms of progress over the years. In the case of the small states,

Goa is a consistent top performer in both the PAI 2020 sustainability rankings as well as the delta rankings. Mizoram has shown the least growth in both the indicators.

Chapter VII The State of the States measures inter-state disparities and shows that some of the states are not in a position to participate in competitive federalism, quite simply, because they are hobbled by resource constraints - of capital and human resources - rooted in endemic poverty and chronic backwardness. Explaining Inter-State Disparities, attempts to answer the question on the possible causes for variations across various indicators of equity, growth and sustainability that results in such contrasting performances by the states. For the inter-state comparison, states have been classified into two categories- 14 traditionally high performing states and 15 traditionally low performing states. The classification was done on the basis of the scores in the PAI 2020 Index. **In both the high and low performing states, a common finding was the presence of high levels of inequality indicated by the negative significance of equity indicators. This reinforces the notion of the widening gap with the rich getting richer and the poor getting poorer.** Apart from the overall concern of inequality, the analysis also highlighted the gender inequalities persistent in the states which would serve as a barrier to be addressed in achieving sustainable development. The chapter also includes an analysis of convergence to understand if states are moving towards the path of steady growth over time. The results of the analysis indicate that while all states are moving towards achieving steady growth, albeit at differing paces, the role of female labour force participation is insignificant in the case of poor performing states.

Chapter VIII The Sense of an Ending synthesises the three major streams of sustainable development and ponders the macroeconomic transition occurring in India. The results when seen from a Pan-India perspective, are interesting and represent

a mixed bag. **Two conclusions emerge from the evidence from PAI 2020: first, that there is a slow but steady convergence between states on growth and equity; second, that some states have deeply entrenched inequality that must be addressed with single-minded policy focus. PAI 2020 places equal importance on the 3 pillars of equity, growth and sustainability.** The overall PAI 2020 rankings of the large and small states provide some interesting insights. Taking into account the various facets of governance, these rankings aim to hold up a mirror on the progress made by the states while providing direction on the potential areas of intervention.

Among the large states, Kerala tops the rankings yet again, followed closely by Tamil Nadu. While Kerala has improved performance in PAI 2020 with a score of 1.388 as compared to 1.011 in PAI 2019, Tamil Nadu's score has slipped from 0.823 in PAI 2019 to 0.912 in PAI 2020. Following Kerala and Tamil Nadu are Andhra Pradesh (0.531) and Karnataka (0.468) which are placed third and fourth respectively. Both Andhra Pradesh and Karnataka have shown an improvement in performance in PAI 2020. However, similar to PAI 2019, there is a considerable gap between Tamil Nadu, ranked second and Andhra Pradesh, ranked third, indicating that there does exist some regional disparities. It is interesting to note that continuing with the trend established in PAI 2019, the top four states in PAI 2020 are South Indian states. The bottom of the rankings features Haryana, Jharkhand, Bihar, Odisha and Uttar Pradesh, which is similar to PAI 2019, indicating that these states are yet to catch up completely with other well performing states. What is more concerning is that unlike the top performing states, all the states at the bottom of the rankings have seen a drastic decline in scores as compared to the previous year.

Among the small states, Goa continues to top the rankings with a score of 1.745. The state has shown large improvement in the score as compared to PAI 2019 (from 1.1 to 1.745). Following Goa is Meghalaya (0.797) which has moved from third position in the previous year. Himachal Pradesh follows Meghalaya, with a score of 0.725.

The state has seen a consistent drop in performance from PAI 2016, where it was ranked first to PAI 2019 where it ranked second, to now. The largest decline is seen in the case of Manipur which has moved from sixth in PAI 2019 to eleventh in PAI 2020. Delhi has remained at the bottom of the rankings. The national capital has however shown an improvement in scores from -1.214 in PAI 2019 to -0.289 in PAI 2020.

Among the Union Territories, Chandigarh emerges as the top performer with a score of 1.057. As seen in the large and the small states, there is a considerable gap in scores between Chandigarh and Puducherry (0.520), which is ranked second. At the bottom of the rankings in Jammu & Kashmir (-0.506) followed by Dadra & Nagar Haveli (-0.690).

Finally, to provide a Pan-India perspective, PAI 2019 presents a cluster analysis. One of the three clusters includes the states of Uttar Pradesh, Bihar, Jharkhand, Odisha and West Bengal. The cluster is characterised by poor performance in all the three pillars of equity, growth and sustainability. The bottom 5 large states as per the PAI rankings fall under this cluster. It is interesting to note that a majority of the aspirational districts identified by the NITI Aayog, too, fall under this cluster. Thus, **PAI 2020 has helped unravel the patterns of exclusion occurring in the development process in India. This should trigger more evidence-based research to find answers to what is an endemic problem.**

Finally, **Chapter IX** is an independent review of the evolution of the Public Affairs Index (PAI) from its inception in 2016 to the latest edition. The chapter situates PAI within the need for measuring governance and the uniqueness of PAI in developing a novel standard for governance measurement in the country.

CONTENTS

Chapter I- Why The States Matter	1
Chapter II- Model and Methodology	7
Chapter III- The Equity Principle	14
Chapter IV- The Growth Imperative	26
Chapter V- Sustainability as an Organising Principle	38
Chapter VI- The Delta Analysis	49
Chapter VII- The State of the States	55
Chapter VIII- The Sense of an Ending	61
Chapter IX- The Evolution of the Public Affairs Index	69
State Fact Sheets	77
Annexures	115
PAI 2020- Technical Note on Methodology	116
PAI 2020- Pillar Wise State and UT Rankings	119
PAI 2020- Theme Wise State Rankings	120
PAI 2020- Theme Wise Union Territory Rankings	122
PAI 2020- List of Pillars, Themes, SDGs and Indicators	124
PAI 2020- Notes and Adjustments	130
PAI 2019- Media Coverage	134
PAC Key Publications	136



Why The States Matter

"The Federation is a Union because it is indestructible. Though the country and the people may be divided into different States for convenience of administration, the country is one integral whole, its people a single people."

Dr. B.R. Ambedkar

In the Constituent Assembly on the draft Constitution

"When I use a word,' Humpty Dumpty said in rather a scornful tone, 'it means just what I choose it to mean — neither more nor less.'

"The question is," said Alice, "whether you can make words mean so many different things."

"The question is," said Humpty Dumpty, "which is to be master - that's all."

Lewis Carroll

Through the Looking Glass

PAI 2020 begins with the observation that in India's development endeavour, subnational governance is assuming a distinctly more significant role than before and more specifically on human development, one that is proximate and arguably, more important than national governance. Doubtless, several of the national initiatives have helped improve growth and advance equity in the country and a comparative assessment of states' performance helps explain that impact. Increasingly however, what the states do in the pursuit of the Sustainable Development Goals Agenda; climate change action that they advance and the measures they undertake to regulate economic activities and how they shape economic governance, influences not just the structure of the society and the economy, but potentially reconfigures the spatial development of the country. Assessing the performance of subnational units of governance is, therefore, as important for an analysis of comparative development, as it is to understand development progress in the aggregate. Situating the progress or the lack of it on economic reforms and measures to democratise development in a comparative framework to scale is important for India, not least, because there is a need to strengthen the country's capacity to overcome the limitations of small sample research designs; draw accurate causal inferences and better equip policy makers to respond to the uneven nature of the processes of social and economic transformation across geographies and populations. This also has important implications for developing a theory of change. State development policies and programmes and the measures of progress, represent contextual and diachronic data sets. Therefore, one problem in the

comparative analysis of subnational governance, is the question of whether quantitative changes, even if large enough, necessarily result in development outcomes that are qualitatively different.

The states in India encounter, sometimes as a result of the central government's initiatives, competing governance imperatives. For instance, improving the ease of doing business, including implementing far reaching labour reforms, to improve India's rankings on a World Bank index and presumably therefore, attracting private investments. On the other hand, in a country that does not have a universal and comprehensive social security net, they are compelled to protect the interests of labour. The growing informalisation of the contractual obligations in the employer- employee relations and the increasing vulnerability of workers are major concerns. Several subnational governments have responded to this dilemma through welfare provisioning rather than labour law enforcement, even as they draw on inter-state migrant labour that remains invisible and exerts less collective bargaining power. Take another case in point, the aim of doubling farmer incomes by 2022-23, a laudable declaration of intent. The report of the 'Committee on Doubling Farmers' Income' provides a birds-eye view of what could be done - a wish list. Since agriculture is a state subject, it is now left to the states to resolve the question of how to do it. Policy uncertainty on the agrarian question and the inadequate pace of agrarian reforms across India illustrate the divided state of mind in which state governments address the difficult task of envisioning the future of the Indian farmer.

A caveat on inter-state comparisons would be in order at the outset. The availability and quality of data present several limitations, including weak comparability of the primary data used for measuring the progress on the Sustainable Development Goals and the indicators used for measurement. Government data is predominantly supply-side driven, as a result, several of the tracking indicators adopted by the State governments are quantitative input-based and often do not reflect outcome-based qualitative assessment. The excessive emphasis on quantitative targets means that most departments are concerned more with compliance than with performance, more with inputs than with outcomes. Typically, the different composite indices that governments use, proceed on the basis of one of two heuristics: classification of data on the basis of the representations of aggregate statistics or on the basis of the divisions from which the data was extracted, usually department-based silos. The methodological issues that follow include the problem of subjectivity in the former, to determine as to when a quantitative change actually reflects something qualitatively interesting and the risk of missing important higher-level generalisations, in the latter. Yet, the importance and the impact of subnational governance on India's development trajectory has received considerably less academic attention than what the central government does or the changing state-market relations. PAI 2020 seeks to correct this by focusing on outcome indicators that have been crystalised through a Principal Component Analysis. While input, process indicators, and institutional indicators are important and have been considered, they do not influence the scores or the rankings. The details of the model and methodology are dealt with in a separate chapter,

besides providing a technical appendix that will be of interest to readers who wish to delve deeper into how the model is constructed. This introductory chapter sets out the theoretical and empirical basis for the scalar restructuring that is occurring in the states and serves as the starting point for the comparative assessment in the chapters that follow.

PAI 2020 uses data from government sources and applies standardised indicators to present a comparative assessment of how the quality and adequacy of public governance in the States have influenced the economy (growth) and social conditions (equity) and together, how they have influenced sustainable development. The evidence suggests that from a country perspective, there is much to be applauded. The measure of absolute poverty in many states have declined with economic growth, thus advancing equity, but there is considerable variation in the poverty-reducing impact and the sectoral composition of economic growth across states. Since the sectoral policy contours and the programmes implemented present a unified framework when seen from a Pan-India perspective, the research question is: what are the confounding factors that might represent the underlying causes for why a rate of growth that brings rapid poverty reduction in one state, can place at the risk of leaving vast numbers of the poor behind, in another. Simply put, why is growth advancing without equity in some states as compared to others? Regardless of the methodology applied, one must recognise that development, at its heart, is a political process, and therefore, the states are not subalterns- what they do and how they do it matters.

India represents a federal polity. The sharp differences in society and culture, levels of economic development, differing histories and not the least, the wide variations in governance capacities between the states throws up the methodological challenge that an aggregate country-level assessment of the state of human development may not be representative and might miss the nuances of the social and political experience in most of India. Indeed, the uneven character of the states can distort an otherwise fair record of progress on the important SDGs, with a few outlier states drowning out the progress made in most other states. Using state-level data to assess governance performance is empirically more meaningful and will likely yield insights that can feed into evidence-based praxis for the future. Yet, the diverse experiences of the states and the considerable variance in their development paths and trajectories, do point to some general enablers and barriers that need to be considered within the specific spatial, temporal and contextual uniqueness of each state. The results of the analysis that PAI 2020 presents helps understand better some of these broad trends that account for the variance in the performance of states, and are presented below:

- Sectoral composition of the state's economy influences the rate of urbanisation and therefore, both growth and equity
- Objective conditions of rural development influence capital accumulation or the flight of capital, slowing the growth drivers, resulting in fewer growth centres
- Differences in these two 'initial conditions' impacts human resource development and this accounts for a significant part of the long-run differences between states.

Why States Matter

PAI 2020 goes beyond the argument on why the weight of 'initial conditions' or legacy data matter to both growth and equity and attempts to unify these arguments in a formal model, that seeks to explain how conditions in the state combine with the quality and adequacy of public governance to foster a less pro-poor agricultural growth process, but a more pro-poor non-farm growth process? In sum, why the structural transformation in the economy and hence in society varies so significantly across the states of India. The weight of evidence from both large and small states point to what is already a stylised fact: that inequality impedes growth. Quite simply, to paraphrase **Gunnar Myrdal**, in the states that have less inequality ***"...an equalization in favour of the low-income strata was also a productive investment in the quality of people and their productivity"*** (Myrdal, 1988). From the perspective of future growth prospects, two conditions of inequality predominate and serve as differentiators between the states doing well and those doing poorly - the patterns of asset holding and the quality of human capital. This is no new argument but gains importance and bears repetition, for precisely that reason. It was in the 1950s, **Jacob Viner** wrote ***"The first requirements of high labour productivity under modern conditions are that the masses of the population shall be literate, healthy, and sufficiently well fed to be strong and energetic."*** (Viner, 1953). Despite over 70 years of independence for some states it remains axiomatic that the more the number of landless people and the less the quality of human capital, the poorer are the economic prospects and graver the risk of vast numbers of people being left behind. There should be little doubt, what separates the better performing states from the laggards is

the synergy between good governance practices and human development. Another clear marker for state performance on equity, but less for growth, was the rural-urban divide extant in the states. The results for states with a greater divide typically present a dual economy in which the surplus labour from the farm sector is absorbed in the non-farm sector. While this enables intra-state migration as a livelihood adaptation strategy, the migrant workers often face unemployment, or end up in low-paid informal sector employment.

Another factor accounting for vast differences in the performance of states, arises most directly from the governance structure in the states - the nature and extent of the devolution revolution - the transfer of autonomy and financial powers from the state governments to the local governments. Despite the 73rd and 74th Amendments to the Constitution, the practice of decentralised governance demonstrates that India's Local Government Compass is of colonial vintage. States are navigating the local self-government landscape using old maps drawn at a different time and for a different purpose. Meanwhile, the rural areas and urban agglomerations that are traverse have changed, but the normative map has not. In principle, the constitutional amendments accorded constitutional status recognition to the third tier of governance by the Rural and Urban Local Bodies (RLB and ULBs). In reality, it has only added functional responsibilities without bestowing additional financial powers on them. However, within the framework of the third tier of governance envisaged in the constitution, some states have implemented bold and progressive reforms to make the devolution revolution real and

operational. It is precisely those States that have done so that also demonstrate better governance performance on all three pillars - Equity, Growth and Sustainability - when governance quality is measured on a Composite Index such as the PAI 2020. It is no coincidence that those states that have strong and effective RLB-ULB, rank higher than other states in the assessment for the financial year 2019-20.

The performance of the states as evidenced by the data analysis in PAI 2020, demonstrates the limits of the central government in influencing development outcomes, governance quality or the policy focus in the states. This is especially so, when different political parties govern the centre and the states at the same time, with the unfortunate result that the politics of development often renders it a negative sum game. Regardless of these transactional processes, it appears axiomatic that the quality of governance in the states is predicated on two substantive parameters: the quality of institutional structures of governance and the standards, processes and templates established and the effectiveness of the implementation of programmes defined by the use of technology for the delivery of services and supported by effective public grievance redress processes. The states ranking high on the three pillars stand out on both these parameters. Conversely, those states that rank low are also those that suffer from a considerable shortage of technical and administrative skills; yet ironically, with higher centralisation manifesting in an overdependence on the bureaucracy and a much poorer decentralisation of resources and powers in development planning.

Based on the data analysis presented in the chapters that follow, it would be fair to say that national policy attention must turn to advancing the role of the states to generate a multiplier effect to spur India's development. This can only come if governance in India, especially development governance demonstrates a paradigm shift from a centrifugal to a centripetal development praxis. The states must be trusted, empowered through greater decentralisation and devolution, and enabled to demonstrate that the states do matter:

- In India's federal structure state governments constitute significant political forces and can play a transformative role in advancing sustainable human development. The thrust clearly must be on modernising governance system especially in the states that are consistently underperforming, and enhancing the capacity to govern, as a reform priority in the ensuing years
- The states are constitutionally mandated with key responsibilities including maintenance of law and order; inclusive human development covering education, health and livelihoods and social protection for the disadvantaged and vulnerable populations
- To do this, data-based decision making must constitute the central principle and must be mainstreamed as a policy priority on a government-wide basis. There is much work to be done on the production and use of public data, by state governments, to promote effective, efficient and transparent public policies.

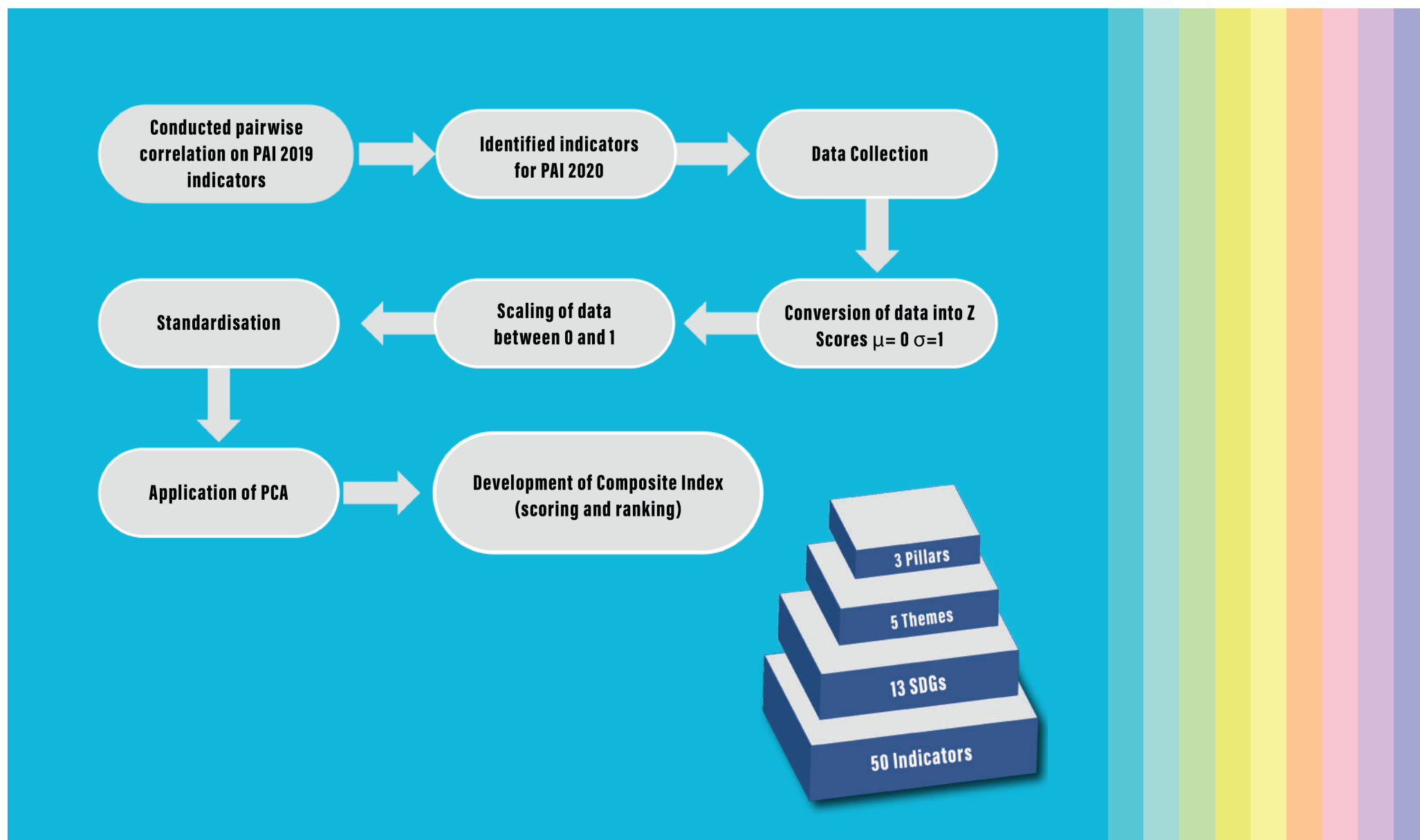
The role played by Dr BR Ambedkar, the architect of the Constitution of India, needs special mention here. There is no better touchstone on the challenges of advancing human development in India than **Dr Ambedkar's** address to the Constituent Assembly during the debate on the constitution and

we quote: *"We must make our political democracy a social democracy as well. Political democracy cannot last unless there lies at the base of it, social democracy. What does social democracy mean? It means a way of life which recognises liberty, equality and fraternity as the principles of life. These principles of liberty, equality and fraternity are not to be treated as separate items in a trinity. They form a union of trinity in the sense that to divorce one from the other is to defeat the very purpose of democracy... We must begin by acknowledging the fact that there is complete absence of two things in Indian Society. One of these is equality. On the social plane, we have in India a society based on the principle of graded inequality which we have a society in which there are some who have immense wealth as against many who live in abject poverty... In our social and economic life, we shall, by reason of our social and economic structure, continue to deny the principle of one man one value. How long shall we continue to live this life of contradictions? How long shall we continue to deny equality in our social and economic life?"*

Dr Ambedkar's exhortation on the eve of India becoming a republic is relevant even today and, in more ways than one, remains the principal human development challenge that we as a people need to respond to. PAI 2020, is an effort to help this

process. It must be read in the wider context of the efforts of Public Affairs Centre to build a scientific, sustainable and reliable model for developing data-based frameworks that can support progressive development praxis in India.





Model And Methodology

“The history of the word Sankhyā shows the intimate connection which has existed for more than 3000 years in the Indian mind between ‘adequate knowledge’ and ‘number.’ As we interpret it, the fundamental aim of statistics is to give determinate and adequate knowledge of reality with the help of numbers and numerical analysis.”

P C. Mahalanobis

In the Sankhyā, Indian Statistical Institute, (1933)

Then you should say what you mean, the March Hare went on.

I do, Alice hastily replied; “at least I mean what I say, that’s the same thing, you know.”

Not the same thing a bit! said the Hatter.

Lewis Carroll

Alice in Wonderland

This chapter begins by emphasising that PAI 2020 strives to systematically collect, collate, standardise, analyse and interpret data on a wide gamut of governance issues from government data sources. If measuring governance is a challenge, data is in the context of the states, a bigger challenge. Data gaps and the unevenness of data impacts both the choice of indicators and the use of data. The methodological focus in PAI 2020 was on reliability - the proportion of variance attributable to the score of latent variable, in this case governance and validity - whether the index measures what it is designed to measure. The effort was to enhance the statistical rigour and power to test the hypothesis or the theory of change of PAI 2020 at all levels - pillars, themes and the SDGs. The inherent qualitative nature of governance makes this a complex exercise, but PAI 2020 achieves this in substantial measure. This chapter elaborates on the methodology that was followed in building the model.

The importance of measuring governance has been emphasised, especially with the advancement of and the progress towards the Sustainable Development Goals 2030 Agenda. The use of publicly available data for measuring governance serves two distinct purposes. First, it allows for an indicator-based comparison of states that relies on data generated by the government. Such a comparison helps facilitate healthy competition amongst the states. Secondly, such a data-driven assessment provides the states with analyses of specific indicators that will need to be focussed on for evidence-based decision making. Since 2016, the effort of the Public Affairs Centre has been to generate value-added analyses to help the states build on good governance practices in

different aspects of development praxis. The next chapter provides a brief narrative of the evolution of the Public Affairs Index (PAI) over the last five years. PAI 2019, constituted a watershed. It was 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 on their annual performance. The same approach is followed in the latest edition of the PAI 2020.

PAI 2020 seeks to highlight the fact that a holistic assessment of public governance must necessarily consider outcome indicators that measure the performance of the states as well as process indicators that measure how these outcomes are achieved. The importance of PAI 2020 is two-fold: first, the fact that in its theoretical and philosophic formulation, it centres on the principle that development is in essence a rights-based socio-political issue and therefore government’s focus must be on those who are disadvantaged or vulnerable and secondly, to ensure that no one is at risk of being left behind. This in practice means ensuring processes that eliminate discrimination and bias in addressing the needs of communities within communities; second, the fact that it is anchored in providing ‘actionable knowledge’ to the states on what they might consider by way of interventions to improve governance outcomes. The substantive use of measuring the quality of governance in the model lies in the remarkable specificity of the problems and the opportunities that it points to for each state, no matter its rank. This helps in highlighting the urgent need for enforcing the rule of law, to prevent egregious acts of administrative apparatus of the state and hold it to

account - preventing gender-biased sex selection at birth for example. Above all, such an exercise enables states in evaluating efforts to support reform and in informing decisions about what reforms to implement and how. The PAI 2020 model is predicated on measuring governance as a process that creates objective conditions for a three-tier autonomy for all citizens: rights-based entitlements, aspiration-based economic opportunities and capacity-based agency for civic participation just like the previous editions.

Structure of PAI 2020

Measuring governance becomes increasingly complex in a diverse country like India, where each state is socially, culturally, economically and politically different. PAC, in PAI 2019, 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 to achieve sustainable development in the truest sense, growth and sustainability without equity; growth and equity without sustainability; equity and sustainability without growth.

The three pillars - Growth, Equity and Sustainability – constitute the constructed variables for the index. Thus, it is important to identify variables of interest to measure these constructed variables. The five themes under these pillars that serve as the variables of interest include the well-established World Governance Indicators (WGI).

1.  **Voice and Accountability (VA):**
Extent to which a state's citizens are able to participate in the governance process not as mere beneficiaries but as agents of change
2.  **Government Effectiveness (GE):**
Adequacy and quality of public services, the quality and the capacities of the civil service and the quality of and capacities for policy formulation and programme implementation
3.  **Regulatory Quality (RQ):**
Ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development and for the allocation of common property resources
4.  **Rule of Law (RL):**
Extent to which agents have confidence in and abide by the rules of society and in particular the quality of contract enforcement, policing and the maintenance of law and order
5.  **Control of Corruption (CC):**
Extent to and the modes by which the exercise of public power and authority for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests, can be prevented.

PAC has also incorporated the relevant Sustainable Development Goals (SDGs) in the model to align PAI with global standards. PAI 2020 includes thirteen 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 15: Life on Land |
|  | SDG 16: Peace, Justice and Strong Institutions |

The last tier of the model is the most crucial part that measures each of the variables of interest. PAI 2020 has identified 50 indicators that would help in defining the constructed variables that measure Governance. In line with PAC's efforts to ensure that all facets of governance are represented in

Model And Methodology

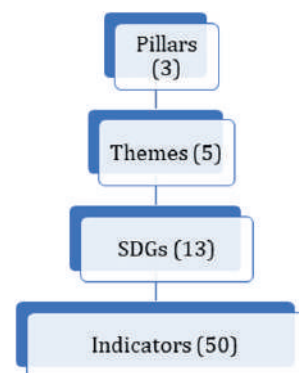
the calculation of PAI, a detailed review of existing indicators from 2019 was undertaken. The objective of the exercise was to ensure that all indicators are standalone and that no indicator is omitted from the model. Based on this activity, a total of 8 new indicators were added and 3 indicators were removed from the model for PAI 2020. The revisions to the indicator list are summarised below. The details of the indicators are provided in the pillar-wise chapters and in Annexure (List of Pillars, Themes and SDGs).

New indicators included

1. Utilisation of Nirbhaya Fund
2. Proportion of Population (out of the total eligible population) Receiving Social Protection Benefits Under Maternity Benefit: included under Proportion of Population Covered by Social Protection
3. Immunisation Achievement
4. Institutional Delivery
5. Average Population Served per Government Allopathic Doctor: included under Health Worker Density
6. Forest Area as a Proportion of Total Land Area
7. Percentage of Households Using Clean Cooking Fuel
8. Tree Cover.

Indicators removed or merged

1. Tax GDP Ratio
2. Implementation of Business Reforms Action Plan
3. Number of Commercial Bank Branches per 100000 Adults
4. Palma Ratio: Urban and Rural combined



Measuring the quality of governance at the sub-national level assumes significance due to the roles and responsibilities conferred on the states as per the Constitution of India. The diversity present in the country also means that a one-

size fit all policy is not the solution for sustainable development, placing more focus on the states to develop and promote policies at the sub-national level to ensure 'good governance'. The PAI rankings enable a clear vision for the states to look on the indicators and themes that require immediate attention.

By adapting the themes from the World Governance Index, PAI 2020 provides a global standard for the measurement of the quality of governance in Indian states by maintaining a parallel with the Sustainable Development Goals of 2030 established by the United Nations which provides a common agenda for development. While the SDGs provide countries with targets and indicators to measure performance, they are at a global level and must be contextualised for the Indian development perspective. The identification of indicators for the measurement of the SDGs is undertaken by the Ministry of Statistics and Programme Implementation (MoSPI) and the Niti Aayog, Government of India which also coordinates the efforts of the Central and State governments and institutions.

PAI 2020 aims to deliver prescriptive measures as well to the states with a deeper level of understanding by including Union Territories and calculating the PAI score for UTs as well. PAI 2020 is the first attempt by PAC to measure governance among the UTs.

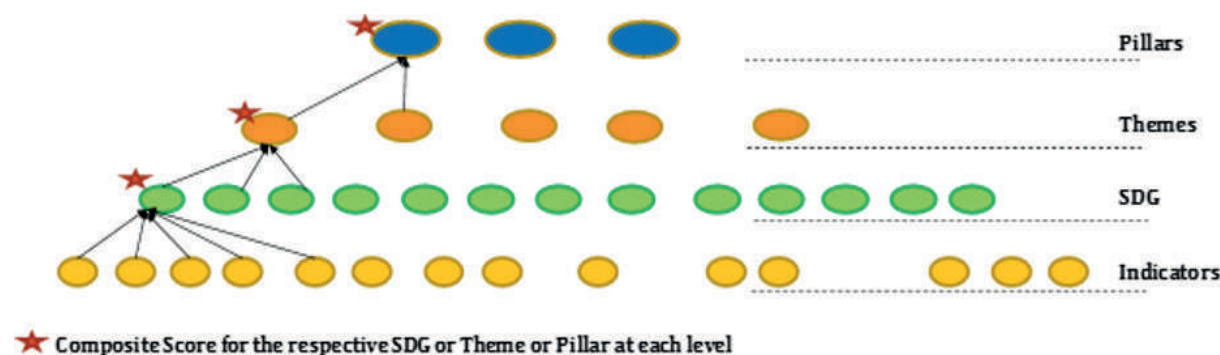


Figure 2: Calculating the Composite Index

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:

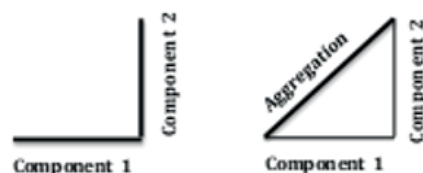
1. Calculating the components that make up the Composite Index

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



Manhattan Distance: Aggregation = Component 1 + Component 2

Euclidean Distance: Aggregation is the diagonal distance

Euclidean Distance tends to subdue small differences in values whereas Manhattan Distance highlights small differences in scores.

Hence a variation of Manhattan Distance used for Aggregation of the Principal Components

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

Figure 3: Explanation of Manhattan Distance and Euclidean Distance

Model And Methodology

PAI 2020 uses a variation of “[Manhattan Distance](#)” where each principal component is divided by the proportion of variance explained by it. This method reduces the bias in the calculation of the Composite Index introduced by the spread of the data or large variance in data. Large variance in data tends to space out the scores with higher values tending to skew the Composite Index towards a high rank. This situation presents a bias to states which score very high in a few indicators compared to a large set of low performing indicators when compared with another state whose scores are well above average on most of the indicators. In other words, this variation in aggregation ensures states performing above average in most of the indicators are ranked higher than states that perform very well in one single indicator.

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 2020.

Thus, the PAI 2020 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 2020 methodology is both robust and sensitive since it –

- 4) Provides a mechanism to decompose the index at each level – pillars, themes and respective SDGs.

Using the above methodology, the following chapters in the report delve into the individual pillar level analysis and the overall PAI 2020 rankings.

- 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



States

Pillar

Theme

SDG

Indicators

Equity



Voice and Accountability



Proportion of population covered by social protection

Prevalence of malnutrition amongst children below 5 years

Participation rate in organized learning (one year before the official primary entry age)

Average Annual Drop-out rate at secondary level

Proportion of seats held by women in (a) state legislatures and (b) local governments

Utilisation of Nirbhaya Fund

Palma Ratio of Household Expenditure in Urban and Rural India

Proportion of urban population living in slums



Government Effectiveness



Infant Mortality Rate (IMR)

Gender Parity Index (Elementary)

Rural Indebtedness

Farmer's/ Cultivators suicide per HHs

Expenditure in social sector



Rule of Law



Number of victims of intentional homicide per 100,000 population

Unsented 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

Cases Pending in District Courts



Regulatory Quality



Worker Population Ratio (Female) (WPR)



Control of Corruption

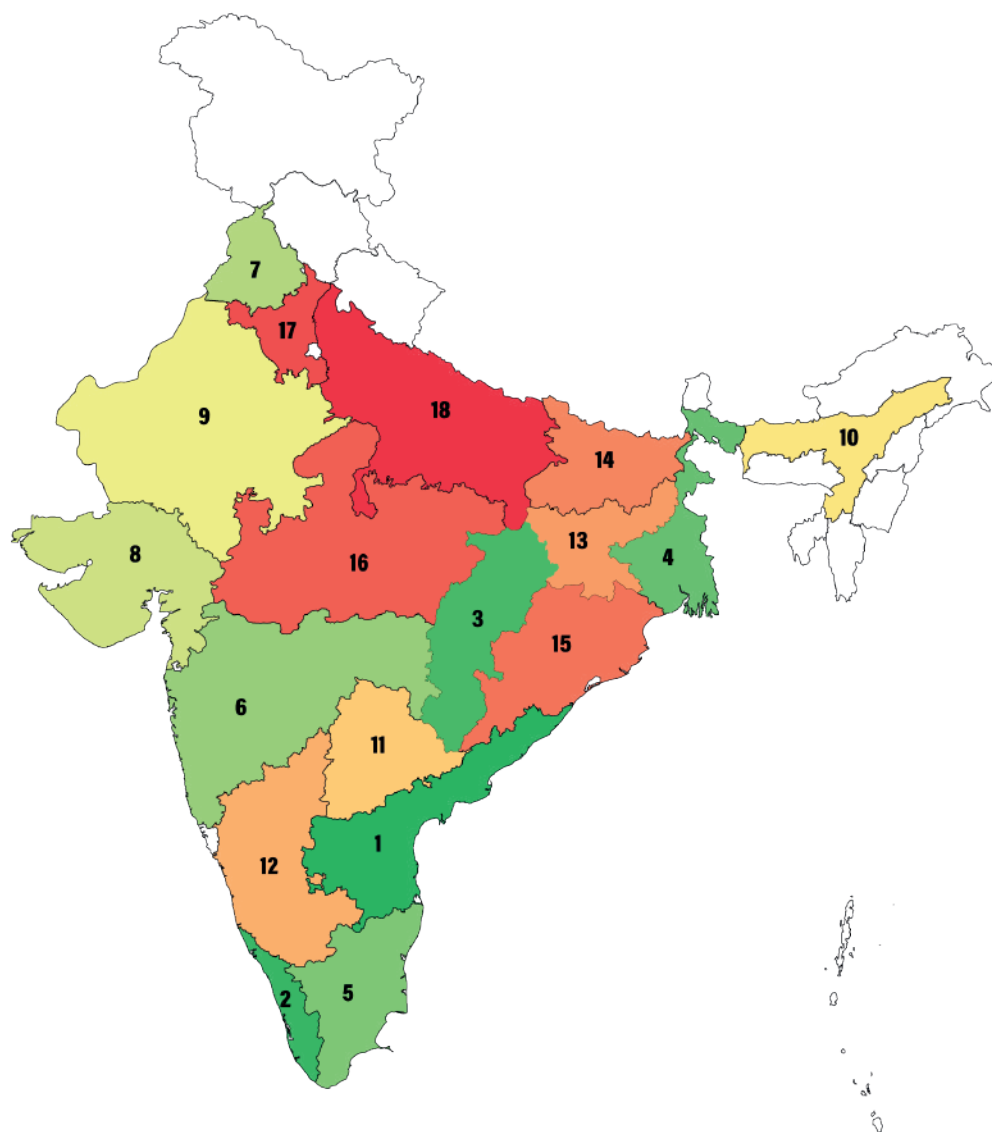


No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered

Union Territories

Theme	SDG	Indicators
 Voice and Accountability	1	Proportion of population covered by social protection (IGNOAPS, IGNDPS, IGNWPS, Maternity Benefit)
	2	Prevalence of malnutrition amongst children below 6 years
	4	Participation rate in organized learning (one year before the official primary entry age)
	5	Average Annual Drop-out rate at secondary level
	10	Proportion of seats held by women in (a) state legislatures and (b) local governments
	11	Utilisation of Nirbhaya Fund
 Government Effectiveness	10	Palma Ratio of Household Expenditure in Urban and Rural India
	11	Proportion of urban population living in slums
 Rule of Law	3	Infant Mortality Rate (IMR)
	5	Gender Parity Index (Elementary)
	16	Number of victims of intentional homicide per 100,000 population
	16	Unsented detainees as a proportion of overall prison population
	16	Incidence of Crimes against SC and ST
	16	Child Sex ratio
	16	Crimes against children
	16	Dowry deaths per 10 lakh population
 Regulatory Quality	16	Rapes per 10 lakh population
	16	Cases Pending in District Courts
 Control of Corruption	10	Worker Population Ratio (Female) (WPR)
	16	No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered

The Equity Principle



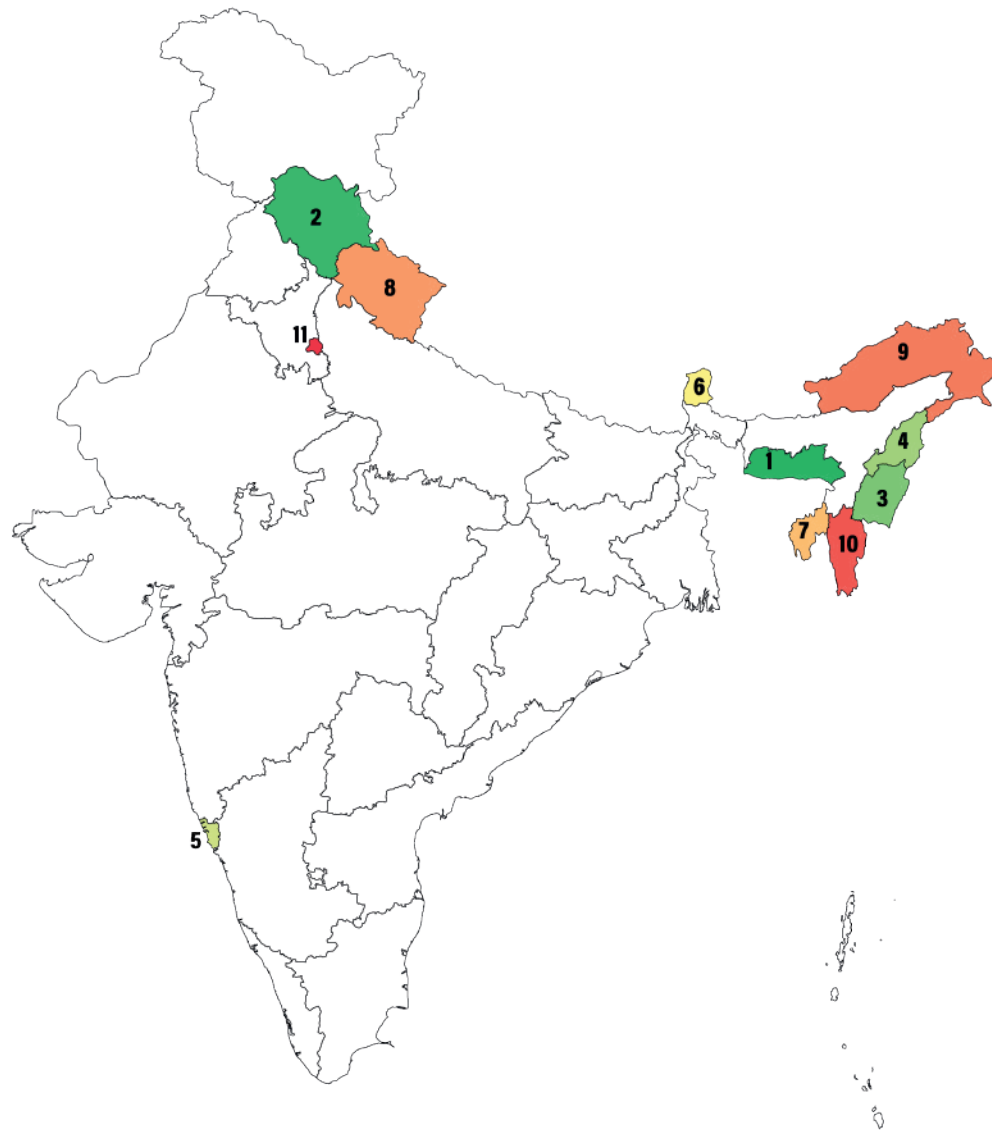
Rank	Large States	Index
1	Andhra Pradesh	0.652
2	Kerala	0.629
3	Chhattisgarh	0.26
4	West Bengal	0.134
5	Tamil Nadu	0.118
6	Maharashtra	0.004
7	Punjab	-0.052
8	Gujarat	-0.059
9	Rajasthan	-0.226
10	Assam	-0.279
11	Telangana	-0.569
12	Karnataka	-0.609
13	Jharkhand	-0.64
14	Bihar	-0.891
15	Odisha	-1.155
16	Madhya Pradesh	-1.232
17	Haryana	-1.273
18	Uttar Pradesh	-1.844

Highest Index Value

Lowest Index Value



EQUITY



Rank	Small States	Index
1	Meghalaya	2.17
2	Himachal Pradesh	2.021
3	Manipur	1.505
4	Nagaland	1.171
5	Goa	1.123
6	Sikkim	0.904
7	Tripura	0.183
8	Uttarakhand	-0.032
9	Arunachal Pradesh	-0.175
10	Mizoram	-0.238
11	Delhi	-1.601

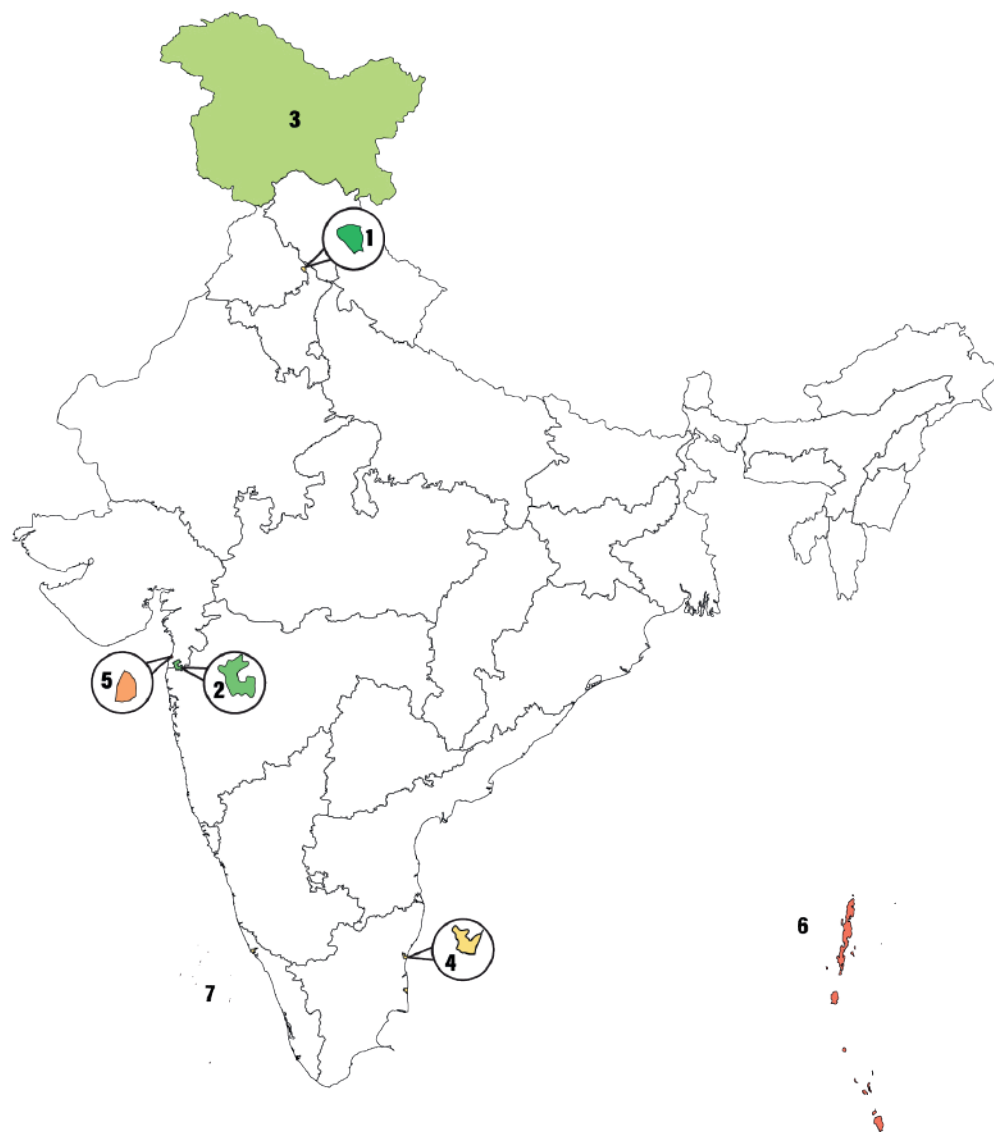
Highest Index Value

Lowest Index Value



EQUITY

The Equity Principle



Rank	Union Territory	Index
1	Chandigarh	1.349
2	Daman & Diu	0.594
3	Jammu & Kashmir	0.56
4	Puducherry	0.099
5	Dadra & Nagar Haveli	-0.152
6	A & N Islands	-0.731
7	Lakshadweep	-1.718

Highest Index Value

Lowest Index Value



EQUITY

"No doubt we have to have bigger projects, bigger industries... but it is a matter of the highest importance that we look to the common man, the weakest in society."

Lal Bahadur Shastri

"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 Carroll

Alice in Wonderland

Let us begin with an axiom: Equality is the basis for a free society and therefore you cannot have the one without the other.

In practice though, it is easy to complain about inequality, but hard to agree on what kind of equality we want. In the human development context, do we envision equality where we start in life, or at where we arrive? It is harder still, to determine what needs to be done to change systemic behaviour in the community or society, in ways that make it easier not harder, for a citizen to advance in life. **There is evidence to show that the equity principle - whether a person gains access or is denied access to opportunities - matters and that social structure can be oppressive, rendering one neither equal nor free.** How does equity or its absence impact the development process? What kinds of inequality matter and what drives them? These are important questions, the answers to which might help recognise that the persistent and pernicious inequalities - in populations and geographies - across the states in India are better understood as symptoms of a deep-rooted structural problem in India's society and economy. In the final analysis, the states must concern themselves with inequalities that are, as Rousseau argues, 'established, or at least authorised' (Discourse on the origins and foundations of inequality among men, Jean Jacques Rousseau, 1754), by a tacit acceptance by society that turns them into an oppressive hierarchy.

From a development praxis perspective, therefore, the efforts of the states must focus on expanding the equality of opportunities if they have to achieve equality in outcomes. From a governance perspective, this implies improved access to, better

coverage of, and the enhancement in the quality and adequacy of public services intended for the disadvantaged and vulnerable populations. The progress in human development must concern us as much with the challenges of everyday life that the marginalised populations - women, migrants, scheduled castes and tribes, minorities, the old and the disabled - encounter as the long-term implications of economic and social deprivation. If we are to break from the historical narrative, of the haves having more and the have-nots continuing to face health poverty, education poverty and wage poverty; governance at the sub-national levels needs to bring together the factors that potentially can affect a step-change.

The data from governments across states drawn in PAI 2020, shows that many people have little hope for a better future. Lacking entitlement, opportunities, or purpose, they are at a risk of being left behind watching helplessly from the sidelines, as economic development unfolds and they see the divide widen and others pull ahead to the ever growing prosperity. There can be little doubt that in India's development trajectory, millions have come out of poverty, indeed, the growing middle class is testimony to this progress. Yet, many more have neither sustainable livelihood avenues nor the resources to reclaim the locus of control over their lives, to breakout of the inter-generational cycle of poverty that binds them. It is important to recognise that economic inequality in India is exacerbated by several other inequities of gender, caste, region, and religion. It is unfortunate but true that wealth, especially family wealth determines a person's place in society. Worse still, those who control capital, control the political economy of development.

The Equity Principle

The states in India are the theatres of development action, and need to take responsibility to create objective conditions that will help expand for all people a three-tier autonomy: access to rights-based entitlements; opportunities for economic and social advancement; and capabilities to fulfil their aspirations for the future. PAI 2019, demonstrated the intimate and direct relationship between equity and growth. Using a data analytics-based clustering approach, it showed that all states that had low levels of equity were also those that had low levels of growth, and were regionally contiguous. Inequalities - the evidence was across sectors - in these states, besides eroding human dignity, have little to do with rewarding hard work, educational attainment or entrepreneurial risk-taking. This was the consequence of sub-optimal governance, often rooted in the social power structure and the political economy of development extant. In real world terms this lowers social cohesion and diminishing trust in government and its institutions; impedes economic growth potential and productivity inclusiveness; and constrains people from attaining their full capabilities at work and in life. It often widens the distance between development decision-making and the aspirations of those most in need of social protection and allows politics, power and pelf to shape decisions for the narrow self-interests of select groups.

The evidence from PAI 2020 shows some progress across states to overcome certain deprivations including access to school education, though the transition rate after secondary schooling remains a concern as do learning outcomes and in the expansion of the coverage of basic health services, though the under investment in the primary health

care system needs policy attention. There is cause for cautious optimism, people at the bottom of the pyramid are now reaching the initial stepping stones of a capability-based human development process. Yet, looking at those who own capital, command resources, or have access to political power, it is clear that disparities are widening in those factors that are emerging as the most important for the future - quality education at all levels, advanced health care and access to digital resources. The spectre of the climate crisis, and far-reaching technological change point to those well positioned today, going farther ahead tomorrow.

On the threshold of the third decade of the 21st century, the states must consider a new set of capabilities that will be fundamental to achieving the Sustainable Development Goals by 2030; and will constitute the necessary conditions to address the challenges that lie ahead. If in the ensuing decade the states fail to expand equity and democratise development, they will likely render fragile the very foundations of India's development edifice and reproduce a new generation of inequalities.

In PAI 2020, the Equity Principle is explored through 23 indicators across economic, social, gender and legal representations. All these indicators are considered for each state to generate the equity index - one of the three alongside growth and sustainability - to assess the varying degrees of equity in the states. It is foremost, an indicator of the degree of democratising development that the state has enabled. The unique feature of the equity index value is that it is the point at which equality shifts from distributive justice to relational equity. These 23 indicators represent a range of human

activities or endeavours including subtler subjects like the prevalence of malnutrition to the gross subjects like the number of cases concluded by the Anti-Corruption Bureau as a percentage of number of cases registered. The equity pillar in PAI 2020 is generated on the basis of five themes: Voice and Accountability, Government Effectiveness, Rule of Law, Regulatory Quality and Control of Corruption; thus, capturing the multidimensional manifestation of equity or its absence, in the states of India as done in the rest of the world.

In the Pan-India context, equity should not be confused with equality. Equity views the development process with the lens of a bottom-up approach that portrays both equity in the access to opportunities as well as the equity or the lack of it, in the ownership of wealth and assets. The five themes that circumscribe the equity principle are the subjects of public discourse; narratives that centre on: crimes against women highlighting the urgent need for deep community engagement to dismantle patriarchal attitudes that either sanction or tolerate such crimes; poor learning outcomes of the school going students, pointing to the urgent need to radically alter the pedagogical processes to make them learner centric; and several other rights-based entitlements that represent the daily struggles of the under privileged, requiring an empathetic and efficient governance response at the subnational levels. PAI 2020 endeavours to marshal data from government sources, analyse, measure and interpret it and provide a framework for the states to understand what they have done well and where they can do better. PAI 2020 also follows an outcome-based approach that helps benchmark the development status from the perspective of those

most in need of social protection and help from the state; and seeks to provide insights into the proximate causes as well as the underlying causes for the particular nature and trajectory of development of a state. The aim simply, is to help enhance the equity dimensions of public governance in the states.

Overall Rankings

In the equity pillar, Andhra Pradesh ranks first among the large states (0.651), closely followed by Kerala (0.628). It is interesting to note the gap between Kerala (ranked 2nd) and Chhattisgarh (ranked 3rd with a score of 0.259), is considerably large. Tamil Nadu which is second in terms of the overall PAI ranking features 5th. This is also a large drop for the state which was placed first in the equity pillar in 2019. The potential reasons for this drop could be the following. Tamil Nadu ranks second last in indicator on the proportion of seats held by women in state legislatures and local governments, 3rd last in terms of rural indebtedness indicator and is the worst performer in terms of the number of ACB (Anti-Corruption Bureau) cases disposed as a percent of the total cases registered. Data from the Tamil Nadu Election Commission indicates that while women participation in Panchayat level politics is high with 277160 women holding positions in urban and rural governance, only 15% are interested in joining mainstream politics. This is largely due to the male-dominated party structures which impede women's participation in most cases (India Spend, 2019). In the 2019 Lok Sabha elections, only 3 women MPs were elected and incidentally all 3 were first time runners. For the state to advance in gender equality in decision making, there is a need to ensure that women are

able to enjoy significant decision-making power in politics. Another area of concern for the state is the large corruption especially in the cases of schemes like the PM Kisan Yojana. In the single district of Salem, over 10700 people posing as farmers have been identified who have been availing benefits of the scheme in the place of the small and marginal farmers. As per the scheme's official guidelines, every small and marginal farmer in the state is eligible for a minimum payment of Rs 6000 by the state which is a small step to protect farmers from distress and bridge the urban rural divide. This is of concern for the state since corruption at the local level is also an indicator that has been identified as an area of improvement for the state. In a few other indicators such as Utilisation of Nirbhaya Fund, Palma Ratio of Household Expenditure in Urban and Rural India, Proportion of urban population living in slums and Expenditure in social sector, the state ranks at the bottom of the rankings which could be a reason for the slip in the position and is indicative of the areas where the state would need to look at improving. Continuing with the poor performance in terms of rural indebtedness the state has witnessed 427 farmer suicides in 2019 as per the National Crime Records Bureau which could be the reason for the poor performance in the Palma Ratio as well. The state has only utilised 3% of the funds available in the Nirbhaya scheme but crimes against women remain a concern for the state.

Similarly, Andhra Pradesh, which ranks 1st in 2020, was 9th in the previous year, a sharp improvement. Similar to 2019, Bihar, Madhya Pradesh, Odisha and Haryana find themselves at the bottom of the rankings with the only difference being the fact that the

scores for these states are significantly lower than their score in 2019. A state which finds itself at the bottom of the equity ranking is Uttar Pradesh, which has an equity score of -1.843 as compared to -0.388 in 2019. The states of Karnataka and Telangana which were at the bottom of the rankings in 2019 have jumped places this year to 12th and 11th place respectively.

Uttar Pradesh being the worst performer in the overall PAI 2020 rankings sees the worst performance in the crime related indicators especially dowry deaths, cases pending in district courts and corruption cases. Interestingly, these were the same indicators that the state could not favourably address in PAI 2019 as well, indicating that the state must prioritise and implement policies to address these issues. Gender inequality remains a concern across the country but is a major concern in the case of Uttar Pradesh. In 2017, while the country registered a total of 7466 cases of dowry deaths, 2524 (34%) were from Uttar Pradesh itself. In 2018 as well, a similar number of cases were registered which is larger than any of the other states by a huge margin. 15.7% of total crimes against women registered across the country are from Uttar Pradesh, indicating that the state needs to pay serious attention in implementing legislations like the Dowry Prohibition Act that address crimes against women. The government in the state must consider the design and implementation of state specific schemes to tackle the issue which is currently absent. Additionally, the state also has a high pendency rate in cases in the district court which can be attributed to the large number of cases of dowry deaths which includes long legal battles. The state has also registered a

The Equity Principle

record number of complaints of corruption in the Public Distribution Scheme with 328 of the 807 complaints coming out of Uttar Pradesh. While media reports are indicative of corruption in the state, there is no official data on the nature of cases and the reason for corruption. Andhra Pradesh which has stepped up to 1st position in the equity index has improved its performance in almost the same indicators which Uttar Pradesh has struggled with. The state has utilised 39% of funds available under the Nirbhaya fund in 2019. However, the state still falls behind in terms of gender parity in elementary education and rural indebtedness where it is the worst performer amongst all the states. The state also needs to ensure that the YSR Rythu Bharosa scheme designed for the support of farmers is implemented correctly reduce rural indebtedness.

While Karnataka and Telangana have also shown progress, the states still need to focus on indicators such as secondary level dropout rates and inequality in the rural sector especially in the case of Telangana. In Karnataka there has been a delay in the release of funds by the state for the Pradhan Mantri Kisan Yojana which has had an impact on rural indebtedness. This is also strengthened by the fact that Karnataka has recorded the highest number of farmer suicides in 2019 with 2405 cases. The state needs to pay attention to the implementation of relief schemes for farmers to reduce rural indebtedness. In the case of Telangana, there has been a fall in social sector expenditure by 8% between 2018-19 and 2019-20 which is a cause for concern. Further, the percentage of population covered under the Indira Gandhi protection schemes for senior citizens, widows and persons with disabilities is low compared to other

states which Telangana must look into. The biggest concern is the non-utilisation of funds under the Pradhan Mantri Awaz Yojana (PMAY) where the central government has asked the state to return funds allocated in 2016-17 due to non-allocation as per government records. While the state was to construct 70674 houses under the PMAY scheme, no houses were constructed as per the records in the central government database. The implementation of the scheme is crucial since the state has a high population living in urban slums.

In the case of the small states, the rankings in the equity pillar for 2020 are similar to those in 2019, with a few states changing places. The states of Meghalaya and Himachal Pradesh swapped places with each other; in 2020, with Meghalaya moving to first place with a score of 2.169 followed closely by Himachal Pradesh (2.020). Similar to the large states, there is a large gap in the scores of Himachal Pradesh at 2nd place and Manipur (1.504) at 3rd place. An interesting finding in the case of small states is the fact that almost all states have shown an improvement in the scores from the previous year. A state that has seen a drop in rank has been Mizoram which is down to 10th in this year from 5th in 2019, with a drop in the score from 1.087 to -0.237. Similar to last year, Delhi finds its place in the bottom of the ranking with a score of -1.600. There is also a considerable gap in the scores of Delhi (-1.600) and Mizoram (-0.237) indicating considerable inequity. The sharp decline in the ranking of Mizoram can be attributed to its performance in the following indicators such as the proportion of population covered by social protection, gender-based indicators suggesting an existing gender disparity in the state and crime against the

children which the state has failed to address since last year. In the case of Delhi which also finds itself at the bottom of the equity rankings, the state has the largest population of urban poor living in slum settlements and ranks the worst in terms of crimes against SCs and STs. This indicates the importance of strengthening the rule of law in the state and ensuring better accountability.

In 2019, Delhi registered 3715 cases of kidnapping and abduction of women, 1215 cases of rape and 153 cases of dowry deaths. Further, 1736 violations of the POCSO Act have also been reported in Delhi. These statistics indicate that safety of women and children remain a huge concern in the national capital and must be addressed effectively. Another area of concern in Delhi is the growing urban slum population. The lack of manpower has been cited as the biggest reason for the inefficiency of the Delhi Urban Shelter Improvement Board which functions under the Mukhya Mantri Awaz Yojana. The government may look at providing the DUSIB with greater manpower and autonomy for effective functioning.

Moving to the Union Territories, Chandigarh tops the ranking with a score of 1.348. It is interesting to note that scores of UTs are better than those of the large states. Following Chandigarh is Daman & Diu and Jammu & Kashmir both with a score of 0.593. This is followed by Puducherry where a considerable gap in score is observed between Jammu & Kashmir (0.593) and Puducherry (0.098). At the bottom of the rankings is Lakshadweep with a score of -1.717.

Correlation Analysis

The correlation coefficient between the equity index and PAI 2020 index is 0.651, from 0.57 in 2019. This indicates that the performance in the equity index has positively increased in all states in India.

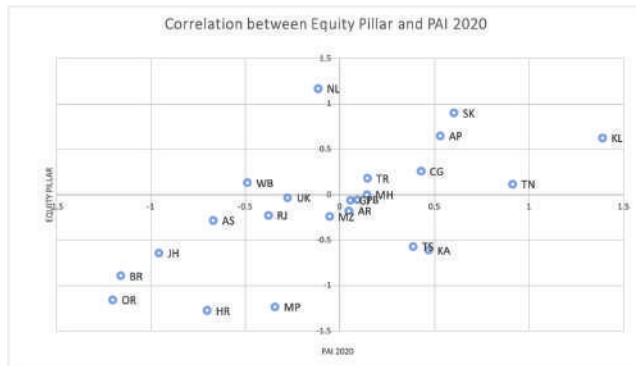


Figure 1: Scatter plot of correlation between Equity Index and PAI 2020

In the scatter plot above the x axis represents the Equity Index and the y axis represents the PAI 2020 score. With Goa showing a significant positivity in both the indices, previous year champions Himachal Pradesh and Meghalaya have occupied a better result in the equity index than the PAI 2020 index. However, UP has interchanged positions with Delhi by occupying the extreme left quadrant of the graph with an equity score of -1.843.

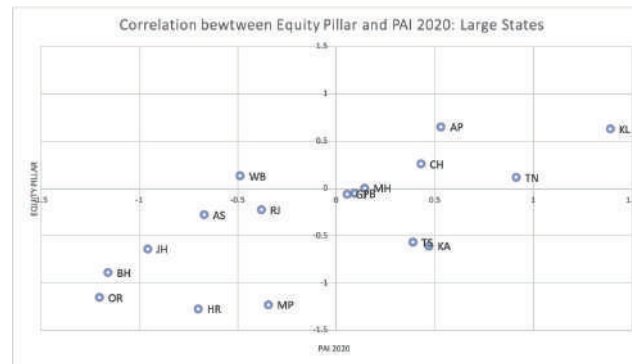


Figure 2: Scatter Plot of correlation between Equity Index and PAI 2020- Large States

For large states the correlation coefficient of the equity index with the PAI 2020 score is calculated to be 0.765, which indicates a highly positive correlation. The large states have remarkably improved from last year's figure of 0.3 to 0.765, which also means the betterment of governance in these states (Figure 2). Kerala has outperformed other states in terms of Equity Index with an equity score of 1.388, whereas Uttar Pradesh takes bottom left corner yet again. For small states, Meghalaya scores 2.170 in

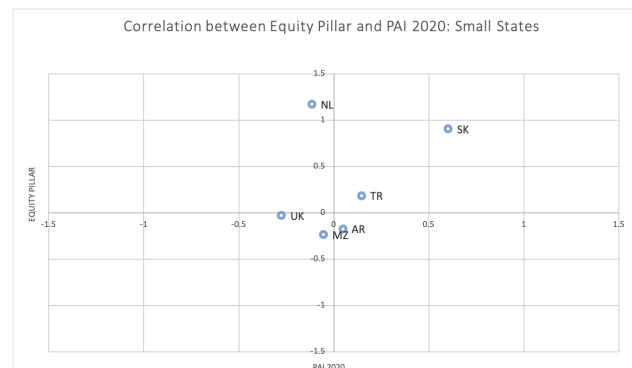


Figure 3: Scatter Plot of correlation between Equity Index and PAI 2020- Small States

Equity Index and tops the chart, while Himachal Pradesh follows with 2.020, indicating the presence of good governance, while Delhi struggles with -1.6. (Figure 3)

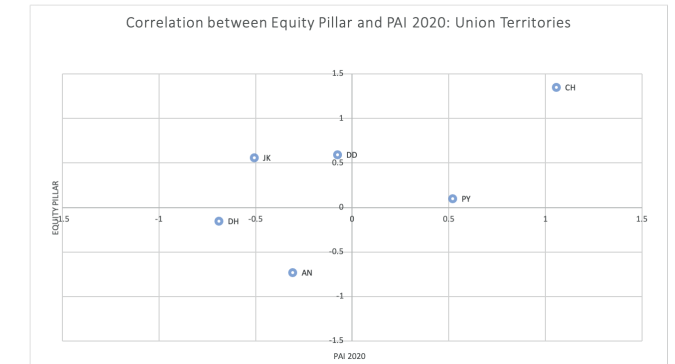


Figure 4: Scatter plot of Correlation between Equity Index and PAI 2020- UTs

Similarly, for the first time the PAI 2020 report includes Union territories in which Chandigarh shows positive results in the indices while Dadra and Nagar Haveli is in the bottom with -0.1514993 score in the equity index leaving a larger room for improvement as shown in the Figure 4 above.

To provide states with a more nuanced insight of the specific SGDs and indicators that influence performance within each pillar, PAI 2020 has also undertaken a correlation analysis of the SDG scores of the indicators under the equity pillar with the scores of the equity pillar. This analysis will help to understand the driving factors that influence the scores under equity and the potential differences in influencing factors between large states, small states and Union Territories.

The Equity Principle

Starting with the large states, a strong positive correlation is observed in the case of three SDGs, namely, SDG 3 under Government Effectiveness and SDG 10 under Regulatory Quality and 16 under Rule of Law. The highest correlation is observed between SDG 16 and the equity pillar with a score of 0.718 and includes indicators on crimes and the justice such as crimes against women, children, social minorities, the proportion of undertrials and efficiency of district courts. Another strongly correlated SDG is SDG 3 which prioritises Infant Mortality Rates as a strong indicator of equity among states. The final SDG is SDG 10 which refers to the gender aspect of the worker population in the state economy.

In the case of small states, there are three SDGs that display a strong correlation with the overall equity scores which include SDG 11 under Voice and Accountability, SDG 16 under Rule of Law and SDG 10 under Regulatory Quality. SDG 11 focuses on the proportion of population in urban slums indicating the inequality between rich and poor within the so-called urban growth centres. What is interesting to note is that SDG 10 and 16 are common between both large and small states indicating that crimes against marginalised communities, delivery of justice and gender equality in the workforce may be both the drivers and areas of focus in terms of improving equitable development.

Finally, in the case of Union Territories, there are two SDGs that show a strong correlation with the overall equity pillar score which are SDG 5 under Government Effectiveness and SDG 16 under Control of Corruption. The stronger correlation is in the case of SDG 5 which focuses on the gender parity in

elementary education indicating that the access to education at the crucial years, particularly for girls is a defining driver of equity in the Union Territories. The other SDG that shows a strong correlation is SDG 16 which addresses the total number of cases disposed under the Anti-Corruption Bureau as a proportion of cases registered.

Large states (Correlation coefficients)		Small states (Correlation coefficients)		Union Territories (Correlation coefficients)	
SDGs	Equity Index	SDGs	Equity Index	SDGs	Equity Index
SDG3 (GE)	0.589584	SDG11 (VA)	0.749794	SDG5 (GE)	0.866819
SDG16 (RL)	0.717818	SDG16 (RL)	0.694487	SDG16 (CC)	-0.79429
SDG10 (RQ)	0.499562	SDG10 (RQ)	0.663664		

Table 1: SDG Level Correlation Coefficients

Legend



GE- Government Effectiveness



VA- Voice and Accountability



RL- Rule of Law



RQ- Regulatory Quality



CC- Control on Corruption



SDG 3 – ‘Ensure healthy lives and promote wellbeing for all at all ages’



SDG 5 – ‘Achieve gender equality and empower all women and girls’



SDG 10 – ‘Reduce inequality within and among countries’



SDG 11 – ‘Make cities and human settlements inclusive, safe, resilient and sustainable’



SDG 16 – ‘Promote just, peaceful, and inclusive societies’



States

Theme

SDG

Indicators



Government Effectiveness



Proportion of total Government expenditure on Agriculture and Allied Services

Health worker density
Immunisation achievement
Institutional delivery

ASER Index
Net Enrolment Ratio at Elementary (1-8)
Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30

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)

Percentage of school teachers professionally qualified

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

Annual growth rate of real GSDP per capita
Unemployment Rate
Proportion of households with an account at a bank
Manufacturing value added as a proportion of GDP and per capita

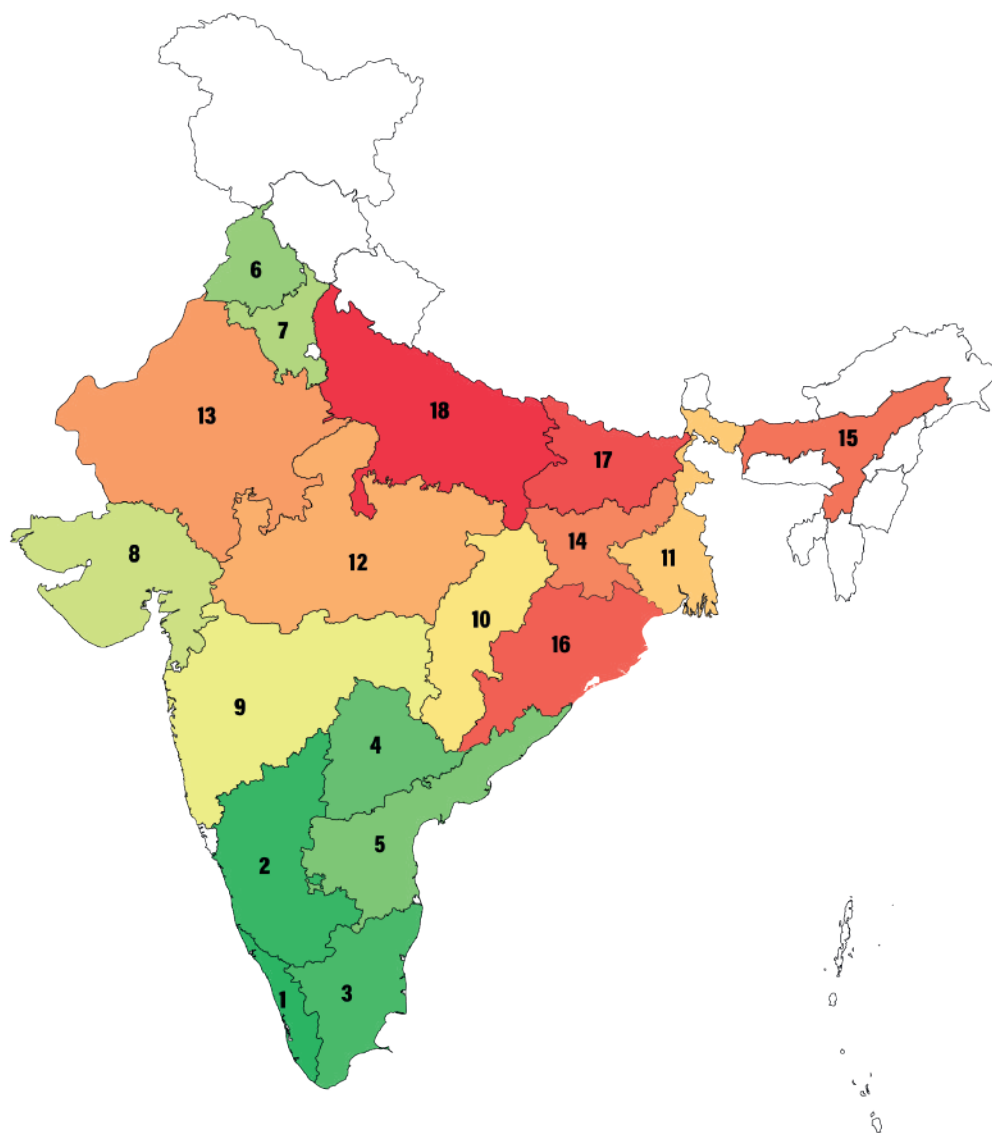
Proportion of total government expenditure on infrastructure

Number of Buses per 10 lakh population

Union Territories

Theme	SDG	Indicators
 Government Effectiveness		Immunisation achievement Institutional delivery Average population served per govt allopathic doctor
		Net Enrolment Ratio at Elementary (1-8) Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30 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 hand-washing facilities (as per the WASH indicator definitions) Percentage of school teachers professionally qualified
		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		Unemployment Rate Proportion of households with an account at a bank
		Number of Buses per 10 lakh population

The Growth Imperative



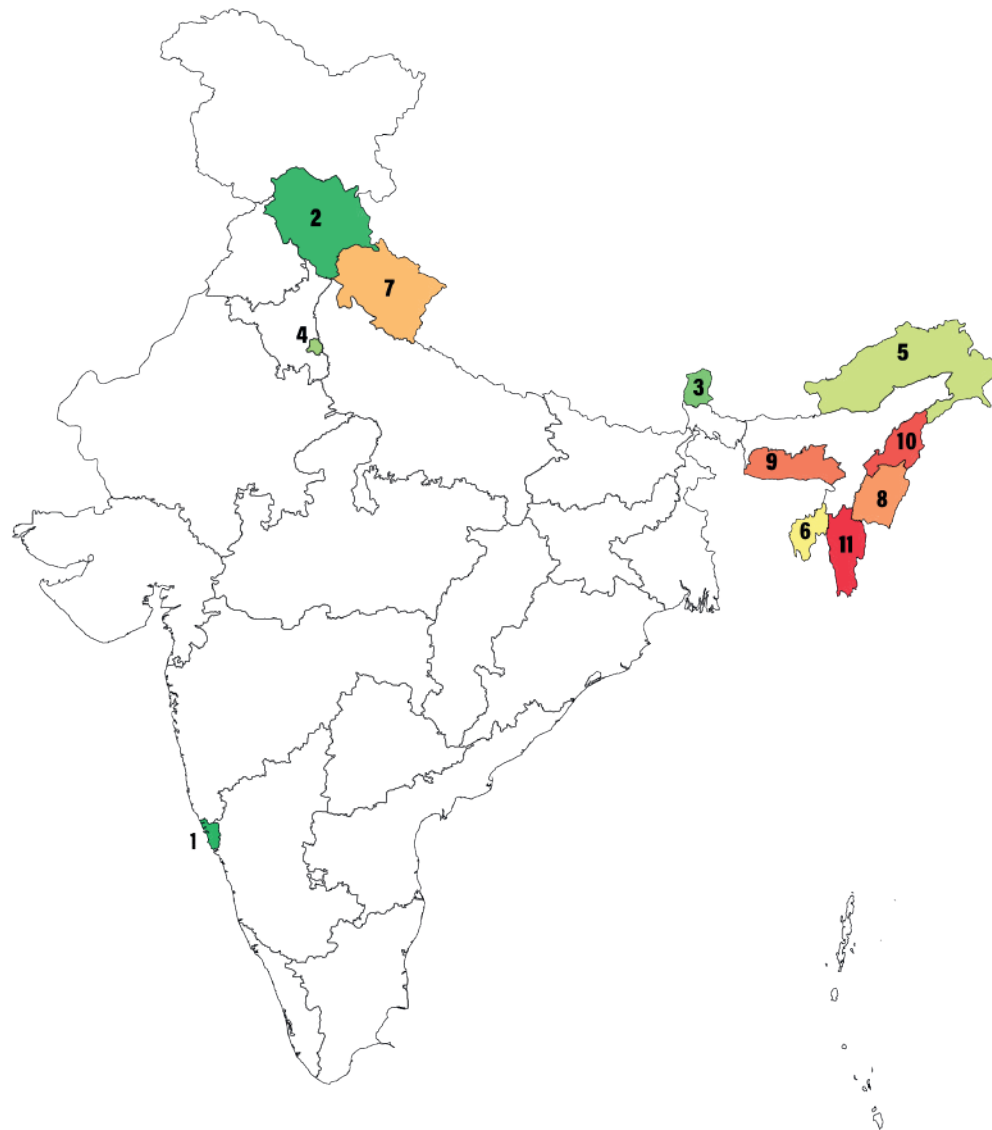
Rank	Large States	Index
1	Kerala	1.42
2	Karnataka	1.22
3	Tamil Nadu	1.159
4	Telangana	0.784
5	Andhra Pradesh	0.729
6	Punjab	0.726
7	Haryana	0.563
8	Gujarat	0.512
9	Maharashtra	0.265
10	Chhattisgarh	0.188
11	West Bengal	0.04
12	Madhya Pradesh	-0.032
13	Rajasthan	-0.235
14	Jharkhand	-0.836
15	Assam	-1.026
16	Odisha	-1.054
17	Bihar	-1.34
18	Uttar Pradesh	-1.386

Highest Index Value

Lowest Index Value



GROWTH



Rank	Small States	Index
1	Goa	1.934
2	Himachal Pradesh	0.492
3	Sikkim	0.313
4	Delhi	0.299
5	Arunachal Pradesh	0.299
6	Tripura	0.186
7	Uttarakhand	-0.181
8	Mizoram	-0.38
9	Meghalaya	-0.42
10	Nagaland	-1.588
11	Manipur	-2.648

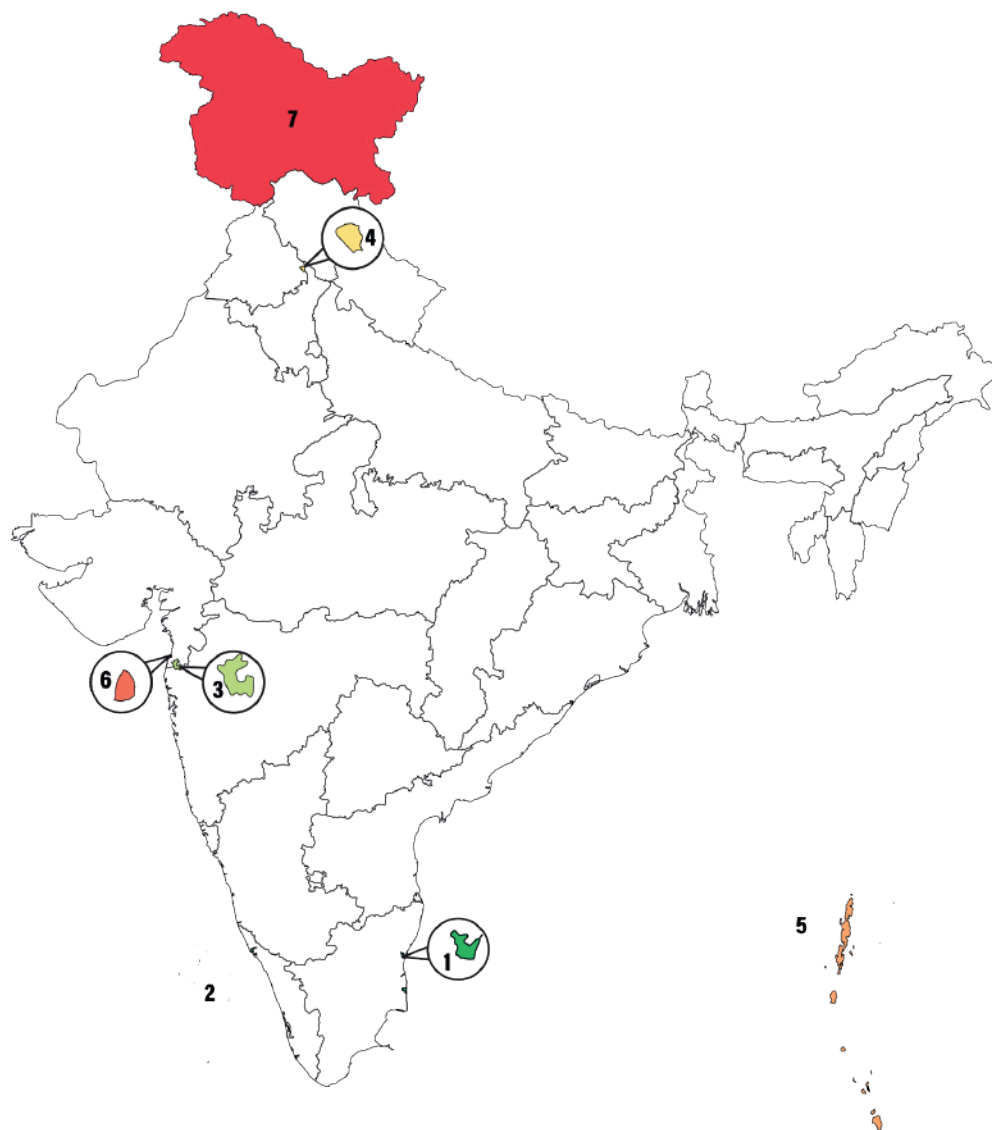
Highest Index Value

Lowest Index Value



GROWTH

The Growth Imperative



Rank	Union Territory	Index
1	Puducherry	1.219
2	Lakshadweep	1.065
3	Daman & Diu	0.364
4	Chandigarh	0.327
5	A & N Islands	-0.725
6	Dadra & Nagar Haveli	-0.909
7	Jammu & Kashmir	-1.34

Highest Index Value

Lowest Index Value


GROWTH

"History shows that where ethics and economics come in conflict, victory is always with economics. Vested interests have never been known to have willingly divested themselves unless there was sufficient force to compel them."

Dr B.R Ambedkar

"It takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!"

Lewis Carroll

Alice in Wonderland

Let us begin with first principles: Growth means the quantitative expansion in the material dimensions of an economy. Development means the qualitative improvement in the structure, composition and capabilities in society. Simply put, a society can develop, from greater knowledge of purpose even if its economy seems not to grow at all. Conversely, economic welfare gains can be more than offset by a decline in the quality of life, induced by the widespread embrace of meretricious good or by deterioration in the natural eco-system. The states must therefore concern themselves with an increase in economic welfare that advances total welfare. From a public governance perspective this concern must not be seen as the domain of the government alone, but the responsibility of the governance triumvirate - the state, the market and the community. The challenge in subnational governance is to create conditions for the harmonious balance in the roles and responsibilities: the state as the policy maker and regulator; the private sector as the driver of innovation and entrepreneurial risk-taking and the community contributing to productivity inclusiveness and sustainable consumption.

In the past two decades, India's economic success despite the occasional downturn, has been remarkable by any standards. While much credit is legitimately claimed by and given to the neo-liberal government policy - of liberalisation and privatisation - less recognised is the role of innovation and technology in a few sectors dramatically increasing total factor productivity. While adopting the right policies is doubtless, a necessary condition for economic success, the institutional framework for knowledge as capital and hence the importance of human capital development in the economic development

constitutes the sufficient condition, a process that cannot be overemphasised. A second factor, no less important, arising as the consequence of the first, is the breadth and depth of productivity inclusiveness that a state has been able to achieve, a reflection of the productivity -inclusiveness relationship: the lower the degree of productivity inclusiveness, the greater the inequity. A caveat would, however, be in order: the sectoral composition of the state's GSDP and the initial conditions, in tandem influence the economic growth in each state and in turn determine the growth of reduced consumption poverty.

The evidence from PAI 2020 points to the fact that technology-based growth or enhanced total factor productivity as a source of growth in the states is more sustainable over a long run. **The states that have performed well on the economic growth pillar are characterised by two features – firstly, they are technologically more advanced and secondly, their economic productivity dispersed across a greater number of growth centres and a wider spectrum of activities.** It is no coincidence, then, that the top five ranking states on the growth pillar and four of the top five high performers on the equity pillar are South-India States. PAI 2020 shows, from a Pan-India perspective, how geographic asymmetry of knowledge-based capital and the growing digital divide, is resulting in a skewed development trajectory that is driving internal migration on the one hand and perhaps unleashing a winner-takes-all growth dynamic in key sectors, with long-term implications for regional balance and sustainability. This is having a two-fold effect, of compounding inequality across states and worse still across the districts in the states and the diversion (or the cannibalisation by) of investment

and human resources to the more developed states and away from those that need them the most. **The lesson that PAI 2020 points to is that, the rise in cumulative inequity is adversely affecting human capital accumulation in the backward states and especially in the disadvantaged populations.**

PAI 2020 also points to a clustering of states along two distinct paths. In the more developed states, economic governance is directed at creating an enabling environment and objective conditions on the ground for economic growth: a progressive policy framework, a balanced regulatory oversight, spatially distributed and good infrastructure and efficient administrative processes that support the ease of doing business; thus, enabling private sector development and promoting innovation and entrepreneurship. These are also States that have leveraged the power of technology to improve public service delivery. In the second cluster of poor performing states are the backward states, where governments remain the dominant players in economic development and are characterised by a non-existent private sector. The state governments rely excessively on a public investment-led growth model that brings with it, intrinsic constraints. In these states, delivery of social services and utilities is also entirely in the government domain. When viewed over time, there is evidence to suggest that a significant divergence in the quality of social development and the pace of economic growth is emerging between the two groups of states. A good question to ask is whether the poor performing states, despite the equalisation resource transfers enabled by the Centre and the various finance commissions will be able to catch-up in the foreseeable future.

Two policy implications are worth noting: First, from a Pan-India standpoint, the NITI Aayog would do well to reframe the federal competitiveness framework, especially to understand the poor human capital accumulation in these states and what might be done. It is clear that equalising resource transfers appears to do little, but reinforce and reproduce the conditions that circumscribe chronic backwardness. Second, the states need to recognise there is no guarantee that the benefits of higher growth will automatically be shared across the population. Ensuring productivity inclusiveness will require a deeper understanding of how inequity plays out across states, firms and between individuals. Human capital accumulation and hence economic growth is predicated on expanding access to skills necessary to keep pace with the demands of the market, and avoid the skill mismatches that are contributing to the productivity slowdown. The evidence from PAI 2020 also points to the need for a more coherent strategy in the states to ensure: a better managed labour markets, promote job quality, reduce informality, enable the mobility of workers and the portability of skills and the inclusion of underrepresented groups such as women in the work force.

India's growth story has been quite bumpy since independence. It took nearly 60 years for the economy to reach the 1 trillion mark and in 2019 according to the IMF's World Economic Outlook, India has finally crossed the 3 trillion mark. The slowdown of the Indian economy was visible in the last quarter of the year 2019 and was gradually consuming various geographies across sectors. This downward slide has worsened due to the COVID-19 pandemic which has brought important economic growth

drivers to a halt. While the phased unlocking of the economy has begun, its effect on growth depends as much on how quickly firms and individuals respond as on the effective implementation of the stimulus packages that the governments - at the centre and in the states - are unveiling.

In PAI 2020, the growth pillar is built on the indicators used for assessing the quality of governance are based on two themes: government effectiveness and regulatory quality. In their essence they capture the objective conditions extant in the states, that influence economic performance, innovation, and entrepreneurship. They also reflect the entry and exit barriers, tell the story of the major sectors of the economy and how each is affected by the quality and adequacy of governance. The Indian subcontinent is struggling with poor performance in social indicators to keep up the tag of a developing economy with an HDI ranking of 129 out of 189 countries and 0.647 as the index. Several other transactional issues like the effects of the implementation of GST and its compliance requirements, thus impacting the growth of the manufacturing sector; the low-level equilibrium trap that the primary sector (agriculture and allied activities) which also provides employment to more than 50% of the work force, finds itself in; and more recently, the crippling effects of the COVID-19 pandemic and the lockdown in its wake on hospitality, travel and tourism, and the retail services verticals of the services sector, are combining to pose serious economic growth challenges and are exerting considerable fiscal stress on the resources of the states.

PAI 2020 therefore also considers the performance of the states on well-established fiscal management indicators – GSDP growth, the state's own tax revenue, fiscal deficit/surplus, and the unemployment rate. While the centre plays an important role in directing policies to advance economic growth, the states are, as we have observed in the earlier chapters, the theatres of development action. How well the states have responded to the challenges they face and the policy coherence and coordinated action that they have demonstrated is what are measured by the 21 indicators covered under the growth pillar of PAI 2020.

Overall Rankings

In the case of the large states, similar to PAI 2019 scores, Kerala continues to lead the way in terms of growth rankings. The score of the state has also seen a marginal improvement from 1.308 in 2019 to 1.419 in 2020. Closely following Kerala is Karnataka with a score of 1.219 which has moved up from third place in 2019. What is interesting is the fall of Haryana which was 2nd in the rankings in 2019 to 7th in PAI 2020 with a score of 0.562. Tamil Nadu, which featured 8th in 2019 has moved to 2nd place this year with a score of 1.159, closely trailing Karnataka. Interestingly, all the states in the top 5 positions in the growth index are South Indian states, similar to the rankings in the Sustainability pillar in 2019. States that have seen a dip in performance include Maharashtra and Madhya Pradesh. However, the bottom rankings are similar to 2019, with the states of Assam, Odisha, Bihar and Uttar Pradesh forming the bottom of the list, albeit with a shuffle in the positions as compared to the previous year. However, it must be noted that the scores of

all these states in the bottom have also improved as compared to last year.

Haryana which was the 2nd rank holder in the growth pillar in PAI 2019 has slipped to the 7th rank in PAI 2020. This can be attributed in part to the state's struggle with the unemployment rate since last year which has put the state in the bottom 2 performers amongst the large states. The state has an unemployment rate of 43.2% which is higher than the national average of 23.5% as per estimates of by the Centre for Monitoring Indian Economy (CMIE). The state must look into the implementation of schemes such as the Saksham Yuva Yojana which was launched in 2019 to generate employment opportunities for the youth in the state. Crimes against women is another area of concern for Haryana with the state declared as the 'rape capital' of India. Haryana registered 12381 cases of violence against women in the in 2018. The state, which is the launch pad of the Beti Bachao Beti Padhao Scheme must focus on effectively implementing the schemes designed to prevent crimes against women such as the Durga Shakti Vahini scheme, the dedicated helpline for women's safety and the Mahila Police that has been instituted. While the state has developed a 3-point action plan to tackle crimes against women in public places and in mass transport, its success can only be measured in terms of the implementation. The state which has one of the poorest child sex ratios in the country reported 1839 cases under the POCSO Act in 2019 which is a cause of concern.

Tamil Nadu on the other hand has seen a sharp increase in the growth pillar by moving from rank 8 last year to rank 3 this year. Last year Tamil Nadu ranked amongst the bottom 3 states in terms of

Proportion of total Government expenditure on Agriculture and Allied Services which has been one of the indicators that has seen an improvement in performance the previous year. The state has also maintained the 2nd rank in the net enrolment ratio in elementary education and has topped the rankings in terms of pupil teacher ratio amongst the large states. The state made an allocation of Rs 200 crores as interest waiver for agriculture loan repayment in the state budget in 2020. This may be one of the reasons for the state's improved performance and the effectiveness of the scheme may help to reduce rural indebtedness and farmer suicides. Similarly, the state also announced Rs 10,111 crores for government primary schools and Rs 11,131 crores for government secondary schools which is a good move towards improving educational infrastructure in the state.

Karnataka is another state that has improved its ranking in the growth pillar by maintaining its position in the top 3 states in terms of number of institutional deliveries and in improving the expenditure in the infrastructure which has helped the state move up in terms of growth rankings. However, the proportion of bank account holders still remains an issue for the state with the rankings among the bottom 3 similar to previous year. The Karnataka government has announced the construction of six inter-connected elevated corridors in Bengaluru estimated at Rs 15285 crore over a period of four years. The government had also announced the purchase of 4236 new buses for the state which can be used to improve infrastructure. However, the state must ensure uniform distribution of resources to safeguard development in other districts as well.

The Growth Imperative

Madhya Pradesh has slipped in the growth rankings potentially due to the state's inability in improving the net enrolment ratio. Additionally, the state has also faced difficulties in increasing expenditure on infrastructure and an increased fiscal deficit, indicating that Madhya Pradesh state finances may not be showing the desired growth. While there have been several schemes instituted in Madhya Pradesh to promote education, the results are poor as observed from the poor learning outcomes. Some of the schemes that the state should focus on are the Samagra Siksha Abhiyan, Mukhyamantri Medhavi Vidhyarthi (Chhatra) Yojana and the Rashtriya Uchchatar Shiksha Abhiyan (RUSA) among others. On the fiscal side, the state's estimated fiscal deficit in 2019-20 was Rs 32106 crores (3.34% of GSDP) which is a steep increase from Rs 26780 crores (3.2% of GSDP) in 2018-19.

Maharashtra has seen a dip in most of the indicators by 1 or two places which has resulted in its overall dip in performance in terms of growth.

Moving to the small states, Goa retains the first ranking with a score of 1.933 which is a drop from the score of 2.154 in 2019. Following Goa is Himachal Pradesh (0.491) and what is worth noting is the gap between the scores of these two states, indicating an inequality in growth patterns. Delhi, which was 3rd in the 2019 rankings has now slipped to 4th place with Sikkim climbing up from 6th to 3rd in the rankings. Meghalaya which ranks 3rd in the overall rankings finds its place in the 9th position of 11 with a score of -0.419. The bottom positions remain occupied by Nagaland and Mizoram, similar to 2019.

Sikkim's stark rise in the growth pillar may be because of the state's remarkable improvement in terms of fiscal deficit, moving to 4th position from being an outlier in the previous year. The state has been the best performer in terms of pupil teacher ratio which also may be the drivers of improved performance. However, the state needs to still improve performance in terms of net enrolment ratio and health worker density. Sikkim has one of the poorest health worker density with only 38 doctors per 10,000 population. This may be attributed to poor payment of state government doctors with 10 of the 40 Sikkim Public Service Commission appointed doctors declining service due to poor pay. The state must focus on improving healthcare infrastructure, specially payment of health human resources. Another interesting fact on Sikkim is that the majority of policy focus is towards infrastructure, green energy and tourism at the cost of human development indicators.

Among the Union Territories, Puducherry occupies the first rank with a score of 1.218 followed by Lakshadweep with a score of 1.064. Again, a large gap can be observed between the scores of Lakshadweep at 2nd rank with 1.064 and Daman & Diu (0.363). Towards the bottom are the UTs of Andaman & Nicobar Islands, Dadra & Nagar Haveli and Jammu & Kashmir with scores in the negatives. Interestingly, these three UTs also occupy the bottom position in the overall rankings as well.

Correlation Analysis

The correlation between the Growth Index and the PAI 2020 score for all states came out to be 0.726 remarkably higher than the last year's value of 0.489 i.e. from being weakly positively correlated to

showing a strong positive correlation. The Growth Index includes various parameters which suggest that there has been an increase or improvement in those indicators. Goa being a small state has excelled this category with growth index as 1.933, while Uttar Pradesh still struggles at the bottom of the climb with -1.385 as the growth Index (as shown in Figure 1)

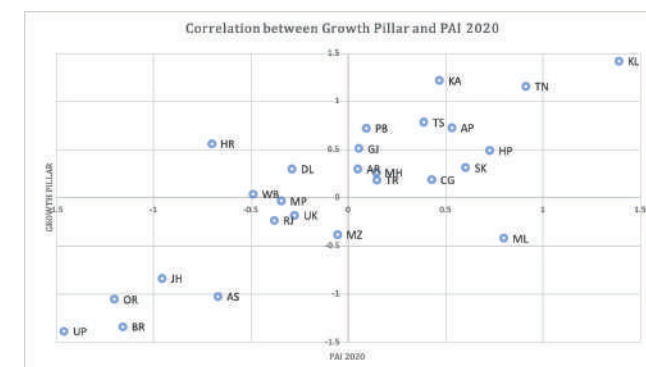


Figure 1: Scatter plot of correlation between Growth Index and PAI 2020

For large states the correlation coefficient is 0.905 which is again higher than last year's 0.77, suggesting improvement in the growth indicators where Kerala has again excelled in growth index scoring a 1.419 (as shown in fig. 2). Kerala, Tamil Nadu and Karnataka lead the way in the correlation between growth and the overall index, indicating that their performance may be largely driven by growth parameters. While most of the other large states are scattered across the middle, the states of Assam, Bihar, Uttar Pradesh, Odisha and Jharkhand all find their place towards the far end indicating a negative correlation.

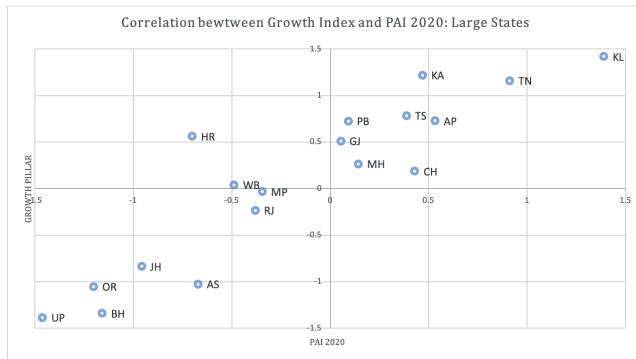


Figure 2: Scatter Plot of correlation between Growth Index and PAI 2020- **Large State**

For smaller states, the correlation coefficient is 0.690 while Goa is the highest performing, Manipur is at the bottom with -2.647 (as shown in Figure 3). It is interesting to note the clear divide between Goa and the rest of the small states, with Goa appearing far above all the other states in the category. This is also an indication of the difference in the impact of growth on overall governance in the case of small and large states. At the bottom are the states of Manipur and Nagaland, bunched at the far end.

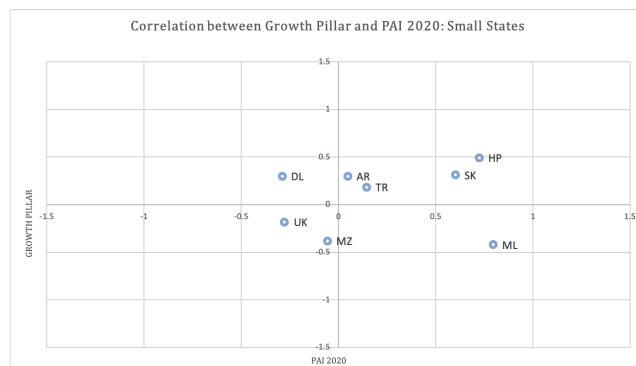


Figure 3: Scatter Plot of correlation between Growth Index and PAI 2020- **Small States**

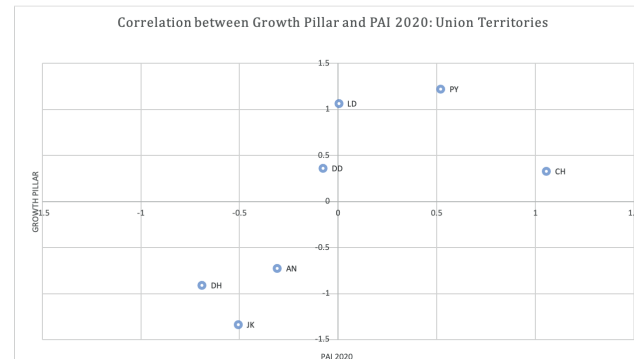


Figure 4: Scatter plot of Correlation between Growth Index and PAI 2020- **UTs**

In the case of Union Territories, there is a correlation coefficient of 0.680, very similar to the small states. However, the UTs appear more scattered apart than the small states. Puducherry leads along with Delhi, Andaman & Nicobar Islands and Jammu and Kashmir present at the bottom negative corner indicating a negative correlation.

To provide states with a more nuanced insight on the specific SDGs and indicators that influence performance within each pillar, PAI 2020 has also undertaken a correlation analysis of the SDG scores of the indicators under the growth pillar with the scores of the growth pillar. This analysis will help to understand the driving factors that influence the scores under growth and the potential differences in influencing factors between large states, small states and Union Territories.

In the case of large states, strong positive correlations have emerged in 5 of the theme level SDGs covering SDGs including 3 (Good Health and Well Being), 4 (Quality Education), 6 (Clean Water and Sanitation), 7 (Clean and Affordable Energy) and 11 (Sustainable Cities and Communities). The strongest correlation is observed in the case of SDG 7 under the theme of Government Ef-

fectiveness. This includes the indicator which measures the proportion of population with access to electricity. Following closely with a correlation coefficient of 0.809 is SDG 11 under the theme of Regulatory Quality that looks at the state's transport infrastructure in terms of number of buses. This also ties in with the findings of PAI 2019 which emphasised on the creation of public infrastructure facilities. Next is SDG 3 under Government Effectiveness with a correlation coefficient of 0.713 which focuses on healthcare infrastructure in terms of average health workers in proportion to population, the extent of immunisation achievement in the state and the number of institutional deliveries. All these are indicative of the current and future healthcare facilities in the state. The other strongly correlated SDGs are SDG 4 and SDG 6, both under the theme of Government Effectiveness. In the case of SDG 4, the indicators include those on school infrastructure and capacity in terms of learning outcomes, facilities, enrolment and well qualified school teachers. Under SDG 6, the parameters of access to safe drinking water and sanitation facilities have been deemed important from the perspective of growth.

Moving to the small states, a strong positive correlation is observed in the case of four theme level SDGs, namely SDG 6 under Government Effectiveness and SDGs 8, 9 and 11 under the theme of Regulatory Quality. The strongest correlation coefficient was observed in the case of SDG 8 (Decent Work and Economic Growth) (0.799) which focuses on indicators relating to the percentage of unemployment in the state, the annual growth rate of GSDP, the contribution of manufacturing to the overall GDP and households' access to financial services. Following this is the SDG 6 with a correlation coefficient of 0.743 that deals with the access to clean drinking water and sanitation as mentioned above. Other strongly correlat-

The Growth Imperative

ed SDGs include SDG 9 (0.700) and 11 (0.500) which focus on parameters of government's budgetary expenditure on infrastructure and the proportion of buses in the state.

Finally, in the case of Union Territories, only two SDGs appear strongly correlated which are SDG 6 and 7 under Government Effectiveness, both of which have been discussed above. What is interesting to note is that SDG 6 appears as a strong correlation across all three categories, large states, small states and Union Territories indicating that a strong focus on improving access to basic infrastructure in terms of clean drinking water and sanitation facilities can improve performance in the growth pillar.

Large States (Correlation coefficient)		Small States (Correlation coefficient)		Union Territories States (Correlation coefficient)	
SDGs	Growth Index	SDGs	Growth Index	SDGs	Growth Index
SDG3 (GE)	0.713021	SDG6 (GE)	0.743475	SDG6 (GE)	0.608897
SDG4 (GE)	0.613822	SDG8 (RQ)	0.799588	SDG7 (GE)	0.865982
SDG6 (GE)	0.542957	SDG9 (RQ)	0.700515		
SDG7 (GE)	0.89825	SDG11 (RQ)	0.500512		
SDG11 (RQ)	0.809583				

Table 1: SDG Level Correlation Coefficients

Legend

	GE- GE- Government Effectiveness		SDG 3 – ‘Ensure healthy lives and promote wellbeing for all at all ages’
	RQ- Regulatory Quality		SDG 4 – “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”
			SDG 6 – ‘Ensure availability and sustainable management of water and sanitation for all’
			SDG 7 – ‘Ensure access to affordable, reliable, sustainable, and modern energy for all’
			SDG 8 – ‘Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all’
			SDG 9 – ‘Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation’

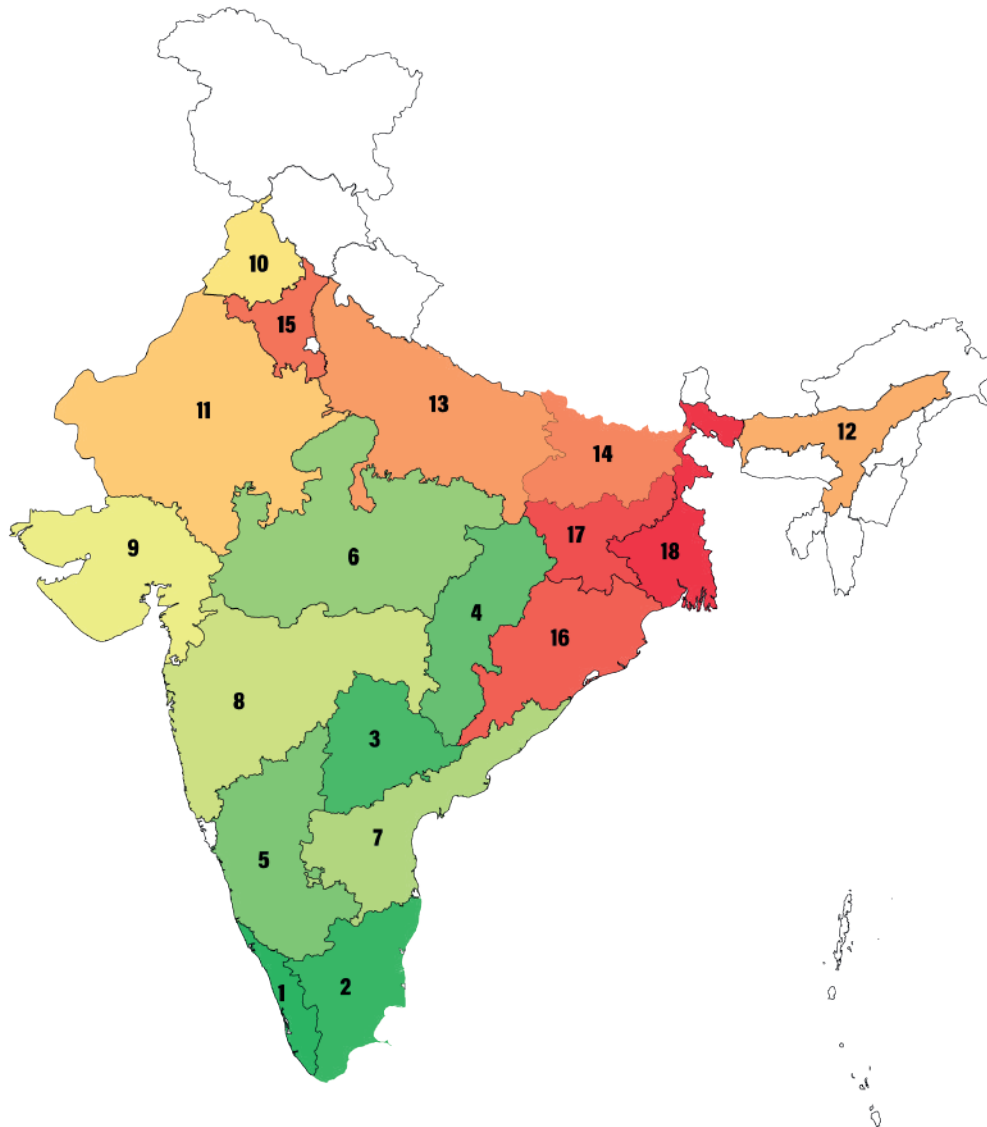


States			
Theme		SDG	Indicators
 Sustainability	 Government Effectiveness	 7 AFFORDABLE AND CLEAN ENERGY	Renewable energy share in the total final energy consumption Percentage of households using clean cooking fuel
	 Regulatory Quality	 15 LIFE ON LAND	Forest area as a proportion of total land area Proportion of land that is degraded over total land area Tree cover
		 11 SUSTAINABLE CITIES AND COMMUNITIES	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		Renewable energy share in the total final energy consumption Percentage of households using clean cooking fuel Forest area as a proportion of total land area Proportion of land that is degraded over total land area Tree cover
 Regulatory Quality		Solid waste generation and waste processing in the urban areas Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

Sustainability as an Organising Principle

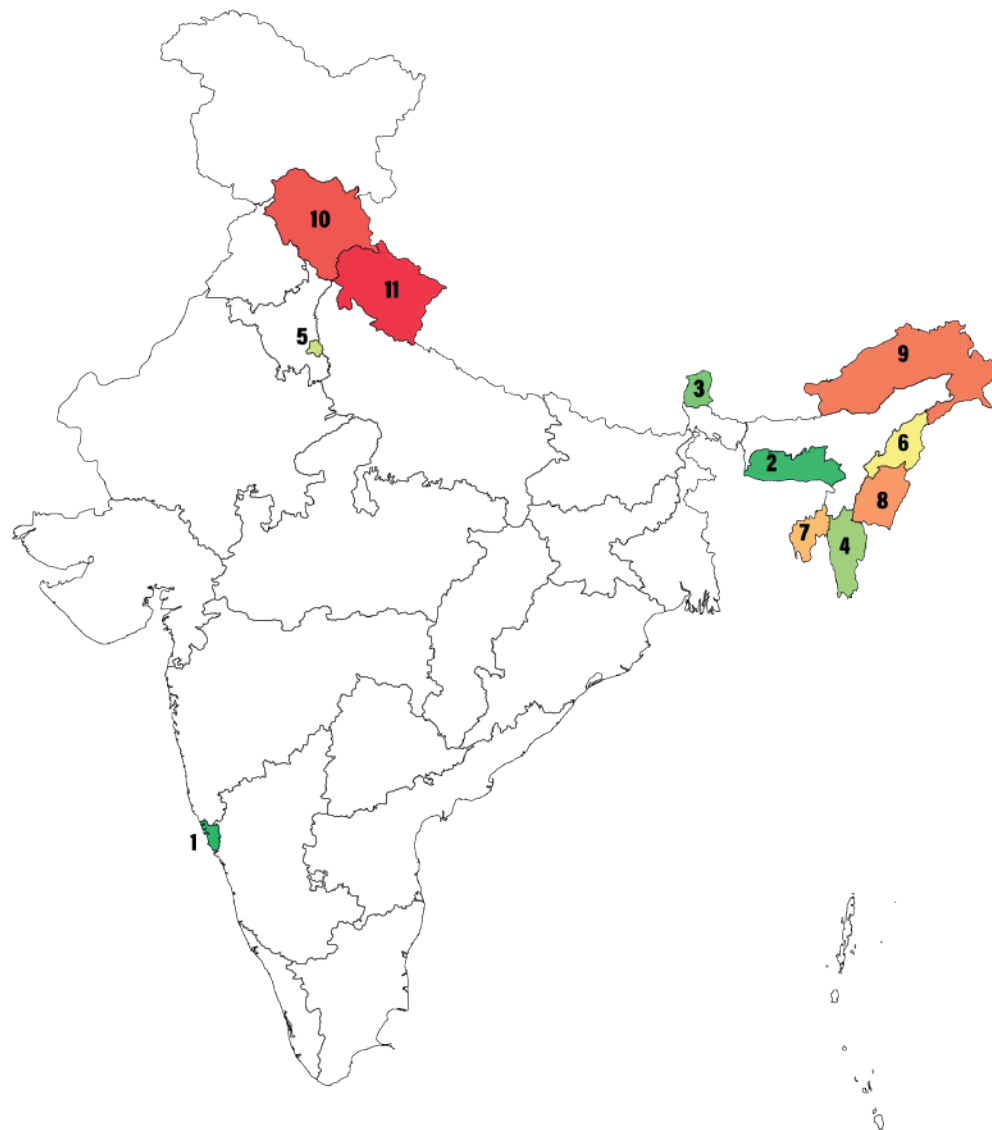


Rank	Large States	Index
1	Kerala	2.118
2	Tamil Nadu	1.458
3	Telangana	0.948
4	Chhattisgarh	0.841
5	Karnataka	0.793
6	Madhya Pradesh	0.23
7	Andhra Pradesh	0.231
8	Maharashtra	0.16
9	Gujarat	-0.294
10	Punjab	-0.4
11	Rajasthan	-0.679
12	Assam	-0.708
13	Uttar Pradesh	-1.155
14	Bihar	-1.245
15	Haryana	-1.393
16	Odisha	-1.396
17	Jharkhand	-1.398
18	West Bengal	-1.641

Highest Index Value

Lowest Index Value

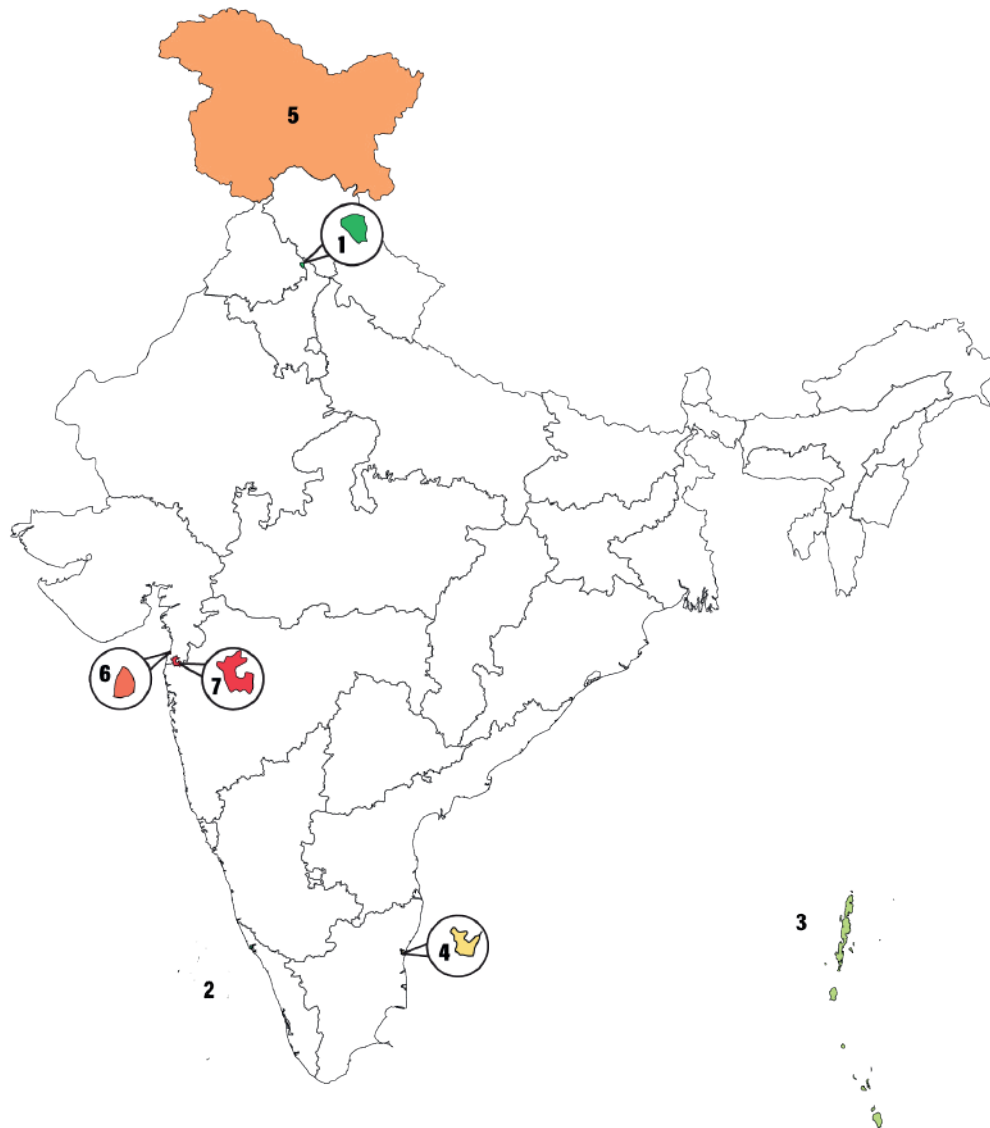

SUSTAINABILITY



Rank	Small States	Index
1	Goa	2.181
2	Meghalaya	0.64
3	Sikkim	0.591
4	Mizoram	0.451
5	Delhi	0.435
6	Nagaland	0.069
7	Tripura	0.068
8	Manipur	0.054
9	Arunachal Pradesh	0.019
10	Himachal Pradesh	-0.338
11	Uttarakhand	-0.62

Highest Index Value Lowest Index Value

Sustainability as an Organising Principle



Rank	Union Territory	Index
1	Chandigarh	1.498
2	Lakshadweep	0.665
3	A & N Islands	0.532
4	Puducherry	0.244
5	Jammu & Kashmir	-0.74
6	Dadra & Nagar Haveli	-1.011
7	Daman & Diu	-1.187

Highest Index Value

Lowest Index Value


SUSTAINABILITY

"The earth, the air, the land and the water are not an inheritance from our fore fathers but on loan from our children... Earth provides enough to satisfy every man's need but not every man's greed."

Mahatma Gandhi

"I wonder if the snow loves the trees and fields, that it kisses them so gently? And then it covers them up snug, you know, with a white quilt; and perhaps it says, 'Go to sleep, darlings, till the summer comes again.'"

Lewis Carrol

Alice in Wonderland

Let us begin with basics. We have only one earth, for now. Intrinsic to the sustainability principle, is the idea of the universality of the development process across time, space and peoples. The concerns include the precipitous decline in the environment and ecology, with several species of flora and fauna rendered extinct or threatened with extinction. Equally, the concern is with the current state of society marked by visible and unconscionable social and economic inequities and the fragile foundations of the prospects for human development in the future. Sustainability as the organising principle, is the bridge that connects the present with the future and one that must be crossed within and between generations to eliminate bias and asymmetry. Simply put, it is a prerequisite, if one is to achieve the full capabilities of human development, now and in the future. From a development governance perspective, it reflects the belief that the interests of and the prospects for the human development of future generations must not be compromised by the overexploitation and abuse of the stock of natural resources and global commons. Yet, it is important to recognise that sustainability in the future would be rendered much less likely if deprivation remains widespread in the present. The sustainable development efforts of the state governments must therefore be directed as the human development concern of the present, as well as of the future. The foundational task of the states, to establish conditions for sustainable development, is however, constrained by the political economy framework of the development discourse that has been dominated.

Over the last three decades, the political leadership, the civil service, academia and the private sector,

with some exceptions, have demonstrated a preoccupation with the production of commodities and services, material progress and financial success with human development, developing human capabilities or the quality of life. This excessive focus on maximising material progress of the individual or wealth in the aggregate, is an intrinsic flaw in what is increasingly emerging as the elusive quest for a sustainable development path. It fails to recognise the sage advice of Aristotle from over two millennia ago, when he wrote 'Wealth is evidently not the good we are seeking; for it is merely useful and for the sake of something else' (Aristotle, The Nicomachean Ethics). The second and an instrumental flaw in the 'maximise incomes' approach is the more complex question of cause and effect. While it is true that in theory, should the average per capita national income be higher, it ordinarily follows that the human development indicator values, on an average is likely to be higher. In the real world however, this association is confounded by other nonlinear factors, two of which bear mentioning: when the policy focus has been growth rather than distribution and when the rise in private incomes are not garnered as resources to strengthen public services such as health care and education.

It is in this philosophic backdrop that the idea of sustainable development, was first articulated as an ethic of universal responsibility by the Brundtland Commission Report – 'Our Common Future' (WCED, 1987), which defined it as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of 'needs,' in particular the essential needs of the world's poor, to which overriding

Sustainability as an Organising Principle

priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs" (WCED, 1987, p. 43). Since then, despite the remarkable influence of the concerns of inter-generational sustainability, the world running out of natural resources and facing a crisis, appears to most policy makers as a distant, perhaps even a surreal future. Meanwhile, the portents of climate change and the effects of extreme climate events—droughts and floods—have only exacerbated the problem. The evidence that environmental decline clearly poses danger to sustainable human development abounds, yet, if one wanted a stark reminder of the urgency with which states need to act on the basic tenets of sustainability, one need to read the NITI Aayog's 2019 report on the state of water in India. It points to the risk of some Indian cities running out of drinking water in the foreseeable future. This is not a predestined outcome; the impending crisis can be averted if the states address sustainability concerns in substantive ways. While this appears an easily understood proposition, its practice is more complex; and fraught with uncertainty arising from an inadequate understanding of climate systems, varying stress specificity of climatic zones, multiple socio-economic pressures.

The ethical practice of sustainability cannot be left to the market alone. The market does not represent the future and the profit motive drives the maximisation function to appropriate as much of the surplus that it can in the present, with scant regard to preserving the natural resources for the future. It is in this context that the states have to play an important role of a trustee of the natural resources or common property resources and that of an ef-

fective regulator to prevent excessive and unethical exploitation of natural resources, by individuals, the community or the private sector. Two specific themes emerge as the fundamental governance prerequisites for governments to play these roles effectively: Regulatory quality and government effectiveness. From a public policy perspective, it is important to arrive at a generally accepted view of what one understands by the term sustainable development and therefore what it is that the states must strive to preserve. The focus of PAI 2020 is on governance praxis with regard to the preservation of common property resources and the upkeep of global commons. It asks the question: What must the states strive to preserve and sustain? Seen from an outcome perspective, the states must sustain all the natural resources necessary to sustain the capacity of well-being or a generally defined standard of living for the people at present as also people in the future. The focus therefore in governance action is in the preservation of natural capital - encompassing all in nature - that provide human beings with well-being, including natural resources, environmental amenities, and the pollution absorptive capacity of the environment. Efforts must also be aimed at reinforcing adaptation measures at the household and community levels.

A sense of urgency must inform state-level responses to sustainable development simply because, India has nearly 835 million people living in rural areas and over 450 million migrants (Census 2011). Their livelihoods depend on climate-sensitive sectors like agriculture, forestry and fisheries and on natural resources such as water, grasslands, and bio-diversity. The adaptive capacity of rain-fed agriculture is low. Groundwater, soil and bio-diversi-

ty are under stress due to socio-economic factors. Climate change is exacerbating the degradation of resources. There is evidence to suggest decrease in crop yields as temperature increases, high emission of greenhouse gases and short crop durations impacting produce quality. The severity and chronicity of droughts are increasing, especially in vast contiguous semi-arid regions. Together they are jeopardising livelihoods and compelling climate change driven migration. Yet, adaptation interventions have received much less attention than they should and as a result, vulnerable households and communities bear the brunt of the unmitigated sustainability risks. States would do well to devote significant policy attention to build partnerships with academia and research organisations on climate science. In particular to climate modelling and predictive analysis, vulnerability analysis and impact assessment and developing a policy framework for mitigation and adaptation measures. Just as sustainability action cannot be left to the market alone, it cannot be achieved by government alone. Community responses to sustainability must be engendered to ensure that sustainable production and consumption becomes a community ethic. It is time for the states to recognise that mitigation action is a global public good and needs impetus; adaptation is a local public good and is therefore equally necessary.

The role of the state governments then, in advancing sustainable development, as the catalyst and arbiter triggering a multiplier effect, is paramount. What bears assessment are two specific points of interventions: first, the modes by which it creates incentives and disincentives for individual responsibility, ex-ante rather than ex-post, in preserving natural

resources and reinforcing community-based collective action for sustainability that subordinates individual interest to universal interest. How effectively the states are able to provide a framework that connects local action to adapt to sustainability challenges, and the role of community-based institutions in enabling sustainable development practices across domains will determine government effectiveness. The structure of incentives and disincentives, including innovative fiscal instruments will be key to mobilising collective action. Secondly, the success of sustainable development action depends on community agency; therefore, the state governments need to mediate the incentives for individual and collective action. A key effort will be to enable community-based institutions in segueing the impact of external interventions into adaptive and sustainable community practices that are context-specific and resource sensitive, as integral to long term sustainability. Thus, the governance imperatives in the pursuit of sustainable development, for the states in India will include: protecting the environment, preserving and improving the material, and advancing equity. The sustainability ethic is in turn, in the case of each state, influenced by the nature of society and polity, the advance in the state of knowledge and technology and the state of play in civil society or non-state actors enforcing social accountability.

The states are the theatres of development action in India. As the NITI Aayog points, India achieving the sustainable development 'is contingent on the performance of our States and Union Territories. Given the federal structure of India, States are crucial to India's progress, as they are best placed to put people first and ensure that no one is left be-

hind. State and local governments also play a pivotal role in implementing development programmes by almost spending seventy per cent more than the central governments. State governments are, therefore, essential stakeholders if the SDGs are to be realised in India, as well as globally' (SDG India Index and Dashboard, 2019-20, NITI Aayog). It is in this background that PAI 2020 reviews the governance imperatives at a subnational level to assess the performance of the states on the sustainability pillar. PAI 2020 aims at measuring the stake that various states have in performance of indicators such as renewable energy sources, forest degradation, solid waste generation and annual mean levels of particulate matter. For certain states it would be interesting to know on their performance in these basic indices as they struggle to keep up with their growth dynamics without causing much harm in either of the indicators. With judicious use of resources, one can ensure that sustainability is promoted across the states. Long term economic growth and development should not come at the cost of short-term gains more than instant results the long terms ones are more reliable they ensure a sense of security. The changes that are being brought in the society along with the passage of generations must ensure the same environment for development.

Overall Rankings

Starting with the large states, there are some significant changes in the rankings as compared to 2019. The most notable is in the case of Karnataka which was 1st in the 2019 rankings but has slipped to 5th this year. There is also a significant drop in the scores from 1.45 in 2019 to 0.793 currently. Another similar drop is Andhra Pradesh which went from

4th in 2019 (0.471) to 7th (0.212) now. What this has resulted in is the changing of last year's pattern, where the Southern states appeared at the top of the rankings. Kerala has jumped up a rank along with a significant increase in score (from 1.367 to 2.117). Tamil Nadu which was 3rd in 2019, has moved to 2nd this year with a score of 1.457 showing considerable gap between the top two states. Another state that has shown an improvement in performance is Chhattisgarh, moving up the ranking from 10th (-0.543) in 2019 to 4th position (0.840) this year. On the other hand, Bihar, which was 7th in last year's rankings has moved down to 14th this year with a score of -1.244, finding itself at the bottom of the rankings. At the bottom are the states of Bihar, Haryana, Odisha, Jharkhand and West Bengal. What is worth noting is that this is similar to the scenario in 2019 with the exception of Bihar which was discussed above. Further, the scores of the bottom 5 states are lesser than in 2019, indicating weaker performance in indicators of sustainability over the past year in these states.

Interestingly, in the large state category, Bihar has slipped to the 14th rank which can be attributed to Bihar's decreasing forest cover which is a matter of concern along with poor performance in terms of households using clean cooking fuel. Combined poor performance in both these indicators can affect the pollution level and air quality of the state and further deteriorate performance in the long run in terms of sustainability. In Bihar, instead of directly providing gas cylinders the Government is providing cash transfers into the accounts of the beneficiaries. This is resulting in little accountability since there is no way to check if the money is actually being used to acquire an LPG cylinder.

Sustainability as an Organising Principle

This might encourage the usage of wood fire as the primary cooking fuel leading to declining performance of the state in the clean cooking fuel indicator. This stagnant uptake of LPG can also be a contributor to the poor air quality. The Patna Urban Agglomeration has also reported that several citizens continue cooking with wood fire or cow dung cakes.

Karnataka which was the best performer in the states in terms of sustainability has slipped down in the rankings possibly due to the solid waste management situation in the state which is worse than the previous year. A similar situation can be observed in Andhra Pradesh as well. While Karnataka has an integrated solid waste management policy under the 1986 Environment Protection Act, solid waste management continues to remain a problem area for the state with only 32% solid waste processing currently occurring. Apart from this indicator, Karnataka's drop in performance can be attributed to stagnant performance in other sustainability indicators where other states have shown improved performance.

Chhattisgarh has moved up to rank 4 by working on major indicators of sustainability but still needs to focus on moving to renewable sources for sustainable living. While the Chhattisgarh government has instituted the Chhattisgarh State Renewable Energy Development Agency (CREDA) which has developed several policies to encourage solar energy consumption, its uptake continues to remain a cause of concern for the state. The state must look into understanding why the policies implemented have not shown the desired results.

In the case of the small states, there is a similar disruption in the rankings from 2019. Goa, which was 5th in 2019, tops the rankings in 2020 with a score of 2.18. As is the trend observed in the case of the large states, there is a copious gap between the scores of Goa and Meghalaya which ranks 2nd. Manipur which ranked 2nd in 2019 finds itself in 8th position this year with a score of 0.053. Continuing the trend, Arunachal Pradesh which topped the rankings in 2019 finds itself at 9th in 2020 with a score of 0.018. What is interesting to note is that unlike the large states where more than half the states had scores on the negative spectrum, only 2 small states (Himachal Pradesh and Uttarakhand) have scores that are negative. One of the states that has made an improvement is Delhi which has moved from the bottom in 2019 to 5th in PAI 2020. Arunachal Pradesh has slipped drastically since last year's PAI sustainability pillar index where it was the best performer amongst the small states. Arunachal Pradesh appears in the lower bracket of rankings in every indicator raising a concern over the declining tree cover, renewable energy usage indicating the need for a focussed policy intervention. Arunachal Pradesh has lost 276 sq. km of forest cover in 2019.

As per the India State Forest Report 2017, Arunachal Pradesh added 374 sq. km of very dense forest, lost 398 sq. km of moderately dense forest and 252 sq. km of open forest, which brings it at a total loss of 276 sq. km of forest cover. While there is a need for policy interventions that will focus on protecting forest cover of the state, there is also a need for increased citizen participation in facilitating solid waste management in the state. This will contribute towards improving performance under the Swachh Bharat Mission.

Delhi however has shown improvements in some indicators but still fails to address poor air quality. While the Delhi government has taken proactive measures such as the odd-even policy and a parking fee hike, the problem of air pollution remains a major concern. There is a need for long-term and effective policy making to address the pollution concern in the national capital. On a positive note, the total forest cover of Delhi in 2019 was 195.44 sq. km (13.8% of geographic area), with a marginal increase of 3 sq. km in 2020. This could be an effective measure to counter some part of the air pollution in Delhi.

Finally, in terms of the Union Territories, Chandigarh leads the rankings with a score of 1.498 which is comparatively lower than the top-ranking states in both the large and small states category. Lakshadweep ranks 2nd with a score of 0.664, a little behind the score of Chandigarh. At the bottom of the rankings are the UTs of Dadra & Nagar Haveli and Daman & Diu with scores of -1.01 and -1.186 respectively.

Correlation Analysis

This year the sustainability index and PAI 2020 score have yielded a correlation coefficient of 0.877 which is higher than that of last year (0.761). This means that the overall sustainability has been significantly impacted in a positive way and will thus impact the governance as well and vice versa. Goa being the leader on the sustainability pillar has retained 2.18 as the sustainability score, Uttar Pradesh which ranked at the bottom, also fell in the last place in terms of sustainability with a score of -1.154.

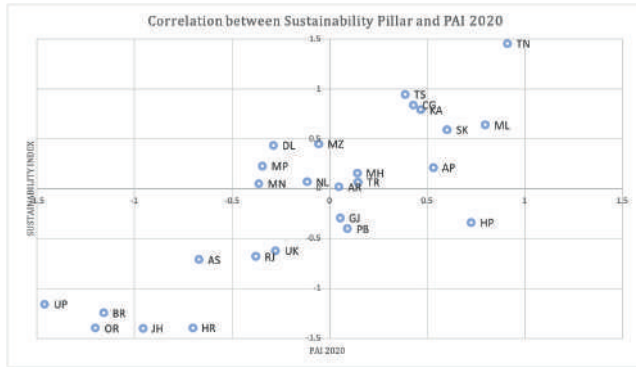


Figure 1: Scatter plot of correlation between Sustainability Index and PAI 2020

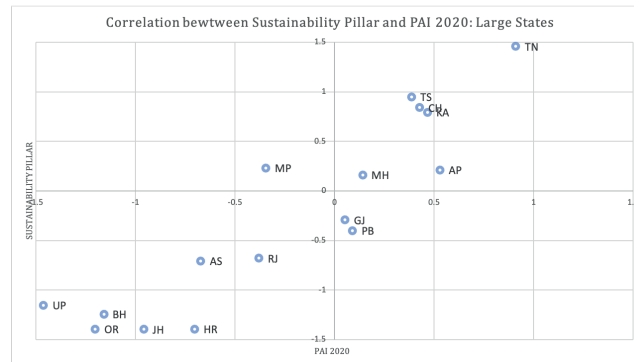


Figure 2: Scatter plot of correlation between Sustainability Index with PAI 2020- **Large States**

For large states, the correlation coefficient stands at 0.9113, which is a significant hike from last year's estimates. Though the last rank holder is already established, it is no surprise to see Kerala top this chart as well with a score of 2.118 in the sustainability Index. For small states, the correlation coefficient is 0.747 (similar to last year's estimates), where Uttarakhand has been the low performing state with a sustainability score of -0.619.

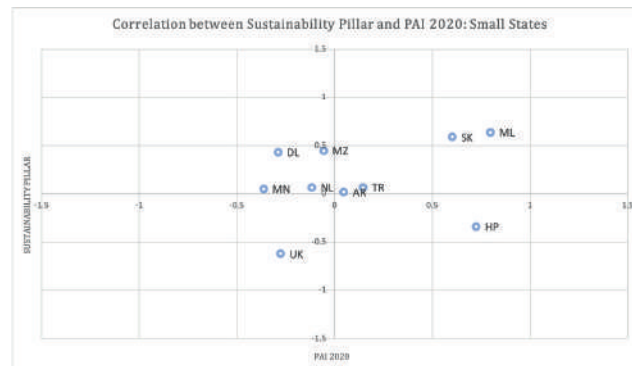


Figure 3: Scatter plot of correlation between Sustainability Index with PAI 2020- **Small States**

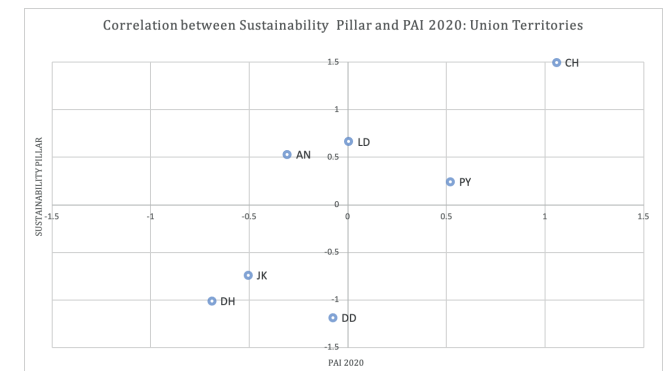


Figure 4: Scatter plot of correlation between Sustainability Index with PAI 2020- **UTs**

Similarly, for the Union Territories, the correlation coefficient for the sustainability index and the PAI 2020 score is calculated to be 0.743. Chandigarh has again resurfaced with the best sustainability score, but Daman and Diu have the lowest in this category (-1.186).

Sustainability as an Organising Principle

To provide states with a more nuanced insight of the specific SDGs and indicators that influence performance within each pillar, PAI 2020 has also undertaken a correlation analysis of the SDG scores with the scores of the sustainability pillar. This analysis will help understand the driving factors that influence the scores under sustainability and the potential differences in influencing factors between large states, small states and Union Territories.

Among the large states and the Union Territories, it is observed that all three SDGs, namely SDG 7, 11 and 15 show a strong positive correlation with the sustainability pillar indicating that all the indicators are important from the governance perspective. Among the three however, there is a difference in the magnitude of correlation in the case of large states and the Union Territories.

In the case of large states, the indicators under SDG 11(0.862) focus on solid waste generation and waste management and pollution in cities. Closely following SDG 11 are the indicators under SDG 7 (0.605), which cover the consumption of renewable energy and usage of clean cooking fuel in households. In the case of Union Territories, all the three SDGs have high correlation with the highest being with SDG 7 (0.859), followed by SDG 15 (0.700) which includes the indicators on forest and tree cover and the land degradation in states.

However, in the case of small states, only one SDG exhibits a high degree of correlation which is SDG 15 which has a correlation coefficient of 0.704, indicating that parameters on forest and tree cover and land usage are drivers of sustainability in the small states.

Large States (Correlation coefficient)		Small States (Correlation coefficient)		Union Territories States (Correlation coefficient)	
SDGs	Sustainability Index	SDGs	Sustainability Index	SDGs	Sustainability Index
SDG7 (GE)	0.605222	SDG15 (GE)	0.704969	SDG7 (GE)	0.858693
SDG15 (GE)	0.559581			SDG15 (GE)	0.700566
SDG7 (RQ)	0.862024			SDG7 (RQ)	0.631178

Legend



GE- Growth Effectiveness



RQ- Regulatory Quality



SDG 7 – ‘Ensure access to affordable, reliable, sustainable, and modern energy for all’



SDG 15 – ‘Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.’

Pillars



Equity

Indicators

Prevalence of malnutrition amongst children below 6 years

Participation rate in organized learning (one year before the official primary entry age)

Rapes per 10 lakh population

Incidence of Crimes against SC and ST

Crimes against children

Dowry deaths per 10 lakh population

Immunisation achievement

Average Annual Drop-out rate at secondary level

Net Enrolment Ratio at Elementary (1-8)

Annual growth rate of real NDP per capita

Unemployment Rate



Growth



Sustainability

Percentage of households using clean cooking fuel

Renewable energy share in the total final energy consumption

The Delta Analysis

"No people whose word for 'yesterday' is the same as their word for 'tomorrow' can be said to have a firm grip on the time."

Salman Rushdie
Midnight's Children

"There is no use in comparing...between one day and the next; you must allow a reasonable interval, for the direction of change to show itself."

Lewis Carroll

Let us begin with a simple question: In discussions on India's future development trajectory and its prospects in the foreseeable future, which states come to mind - Maharashtra, Gujarat, Kerala, Telangana, Andhra Pradesh, Tamil Nadu, and Karnataka, perhaps - mostly the traditional high performing states? Many other states that are considered backward, seldom figure in the discussions as potential contributors to India's progress. In other words, some of these traditional laggard states are at risk of being forgotten, of being left behind. Such a Pan-India discourse misses two important dimensions of measurement of progress: First, the pre-existing conditions of development of a state and therefore the weight of legacy data in generating higher values. This often masks the slowing down or a slide in their performance. Second, the Delta values - the percentage change in progress from the previous year to the current year value - that show how some of the traditional backward states have performed better, are growing faster and catching up. Some of these states with a low base, but a young population, can well emerge as the growth drivers for the country over a medium term. There is a caveat however. There is need to understand how exactly these new growth states are performing and help them assess whether the development actions they are taking are enabling them to reach the target end point. It is in this respect that, some of the initiatives of the NITI Aayog - the Aspirational Districts Programme, SDG India Index and the State Health Index - are noteworthy. They help the less recognised states celebrate the relative accomplishment, no matter how small and this in turn can motivate the states to improve their performance.

This chapter of PAI 2020, presents the results on state performance and ranking measured as the delta value over the last five years from 2015-16, when the first PAI was launched, to 2019-20, covered by PAI 2020. It helps assess the progress made by the states on select human development indicators for which consistent data is available. It provides insights into what aspects of development and which state, need attention and helps the states escalate the issue. Increasing focus on borderline objectives helps directed interventions before it is too late. PAI 2020 Delta values also help point out what is on track so that the state can concentrate on the indicators which they are falling behind. Delta values actually serve as indicators for overall state performance. The aim of this chapter is to use Delta values to inform and guide the states, while reducing uncertainty. In sum, it aims to neutralise the weight of the past in the assessment of subnational governance, making it more open, objective and providing answers to three current concerns: how are the states performing currently; what do the states need to know now; and what do they need to do moving forward. PAI 2020 does this by showing the quantum of progress made towards a measurable goal. The importance of the PAI 2020 Delta values is two-fold: first, to measure the progress made by the states, specifically pointing to if a particular state is ahead or behind; second, to measure the distance to a goal by pointing to how far ahead or behind a state is from the target. In essence, this chapter provides a standard base measure to a value, a target measure or value and a threshold or goal on the basis of which to evaluate the current value and status of a metric against a defined target.

Development in Indian states has rarely been uniform. This is largely a result of the differences in economic, cultural, social and political factors that have shaped the way in which states have grown since the time of Independence. Understanding that not all states possess the same development capacities and trajectories is crucial because policies and programmes designed, especially in light of the 2030 SDG Agenda, should focus on facilitating context and region specific development. The interlinkages between equity, growth and sustainability, as highlighted in PAI 2020, are significant in influencing the development pathways of the states. However, it must be kept in mind that the manner in which these interlinkages manifest in the real world are different for different states. While some states such as Kerala, Tamil Nadu and Himachal Pradesh have witnessed consistent overall development, states like Bihar, Delhi and Uttar Pradesh have been consistent poor performers. However, simply relegating these states to the bottom does not in any way serve the agenda of achieving sustainable development. At the juncture of only ten years to holistically achieve the SDG 2030 Agenda, India will do well to pause and assess performance, both current as well as of the past to understand where the country stands and in particular where the states are headed.

It is with this intention that PAI 2020, in the fifth year, decided to undertake the exercise to understand if states are making progress in terms of equity, growth and sustainability and whether this progress is impacting year on year performance. With this objective, PAI 2020 identified 13 indicators across the three pillars of Equity, Growth and Sustainability that are crucial both statistically and

from the human development perspective. Given the availability of data, five or ten year trends were calculated and the growth rate achieved by each state has been ranked. The rankings in terms of growth rate calculated has been compared against the rankings in PAI 2020.

To measure the change in terms of equity, the indicators selected include, prevalence of malnutrition amongst children, participation in organised learning, rapes and dowry deaths, rate of crimes against Scheduled Caste and Scheduled Tribes and crimes against children.

State	Equity
Bihar	0.892
West Bengal	0.429
Gujarat	0.366
Madhya Pradesh	0.155
Tamil Nadu	-0.093
Odisha	-0.172
Karnataka	-0.286
Jharkhand	-0.535
Haryana	-0.658
Assam	-0.680
Chhattisgarh	-0.695
Rajasthan	-0.802
Uttar Pradesh	-0.930
Maharashtra	-1.107
Kerala	-1.173
Punjab	-1.578

In the large states category, Bihar has emerged as the state with the most growth in terms of equity

indicators, despite being at the bottom of the PAI 2020 rankings in the Equity pillar. The state has shown improvements in reducing malnutrition, a fact observed in PAI 2019 as well, along with being a top performer in the number of children enrolled in organised learning under the ICDS programme. However, the state still lags behind in crucial equity indicators such as crimes against Scheduled Caste and Scheduled Tribes, crimes against children and dowry deaths. Another state that has shown an improved performance is Madhya Pradesh that is ranked fourth in the delta rankings but features among the bottom in the PAI 2020 equity rankings. Similar to Bihar, the state has shown growth in terms of reduction in malnutrition and a continued poor performance in terms of crimes against SC/ST and rapes. The state however, has shown a poor growth rate in the participation rate in organised learning and an increase in cases of dowry deaths over the years. The state has shown a decrease in crimes against children over the past five years. Odisha too has been a state that has shown an improvement in performance in equity indicators over time.

At the bottom of the delta rankings for equity is Kerala, indicating that the state has shown the least growth in terms of equity indicators in the time period studied. This is contrary to Kerala's performance in all editions of the Public Affairs Index, where the state has ranked first. The stagnant growth of the state can be attributed to the indicators of reduction in malnutrition where the state has been among those with the least malnutrition, participation in organised learning, increase in the cases of crimes against SCs and STs and children and cases of rapes. These are causes for concern in the state and must

The Delta Analysis

State	Equity
Mizoram	2.144
Delhi	1.590
Manipur	1.453
Arunachal Pradesh	1.347
Meghalaya	1.256
Tripura	0.747
Nagaland	0.622
Sikkim	0.000
Himachal Pradesh	-0.185
Goa	-0.485
Uttarakhand	-1.623

State	Growth
Bihar	1.945
Odisha	1.142
Assam	0.719
Chhattisgarh	0.592
Jharkhand	0.269
West Bengal	0.252
Haryana	0.206
Kerala	-0.045
Punjab	-0.221
Karnataka	-0.223
Uttar Pradesh	-0.343
Rajasthan	-0.588
Maharashtra	-0.950
Gujarat	-0.998
Madhya Pradesh	-1.012
Tamil Nadu	-2.020

be addressed. The state has however seen a reduction of cases of dowry deaths which may be either due to an actual reduction in the number of cases or underreporting. Other states that have seen average rankings in the delta analysis are Maharashtra and Chhattisgarh which rank high on equity in PAI 2020. States like West Bengal and Tamil Nadu have seen consistent growth in terms of equity indicators. However, Uttar Pradesh continues to remain a cause for concern, featuring at the bottom of both the delta as well as PAI 2020 rankings on equity. The state has seen the least growth in all the indicators used in the analysis.

In terms of the small states, Mizoram and Delhi, both states that are at the bottom of the PAI 2020 Equity pillar feature as the states with the highest growth in the delta analysis. Mizoram has shown a consistently good performance in all the indicators used in the delta analysis except in the case of dowry deaths where the state is among the bottom in terms of growth. 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.

Himachal Pradesh, which has been a consistent top performer in terms of equity finds itself at the bottom of the rankings in growth rates. The state has seen an increase in crime and gender related indicators over the years. A state that features at the bottom in both the PAI 2020 and delta equity rankings is Uttarakhand which has shown a drastic increase in both crimes against women (rapes and dowry deaths) and crimes against SCs and STs. The state has also performed poorly in terms of crimes against children and children who are malnourished.

In terms of the Growth pillar, the indicators that have been considered for the delta analysis include the states' unem-

ployment rate, the National Domestic Product (NDP) per capita, the net enrolment ratio, dropout rate and the percentage of children immunised in the state.

In the case of the large states, Bihar again tops the rankings in the growth pillar of the delta analysis. Following Bihar are Odisha and Assam. Interestingly all the three states feature at the bottom in the Growth pillar of PAI 2020. In terms of unemployment rate, both Assam and Bihar feature as states which have seen reductions in unemployment over the period of time studied. Odisha, however, features towards the middle in reduction of unemployment. The reverse is seen in the case of NDP per capita, an indicator where both Bihar and Assam have seen the least growth. Bihar and Odisha have both shown the greatest increase in net enrolment ratio at the elementary level, a fact that was recorded in PAI 2019 as well. However, Bihar falters in terms of dropout rates which is a cause for concern in the state. Both Odisha and Assam are among the top performers in this indicator. All the three states have shown a consistent increase in the percentage of children immunised, a positive sign towards achieving growth in the states. Jharkhand is another state that has performed well in the delta analysis but features in the bottom in the PAI 2020 growth rankings. The state has seen improved performance in NDP per capita, net enrolment ratio at the elementary level and an increase in immunisation. The state however, still needs to improve performance in reducing both unemployment and dropout rates.

The Delta Analysis

State	Growth
Tripura	2.886
Meghalaya	0.562
Mizoram	0.391
Delhi	0.237
Goa	0.137
Sikkim	0.125
Uttarakhand	-0.154
Nagaland	-0.311
Arunachal Pradesh	-0.398
Manipur	-0.503
Himachal Pradesh	-1.697

Kerala and Karnataka, which feature at the top of the PAI 2020 growth rankings, are eighth and tenth respectively in terms of delta performance. This indicates to the fact that the states may be experiencing stagnating growth which must be corrected. Another state that has shown poor growth is Gujarat which is towards the bottom in terms of delta ranking. The state, which showed the highest growth in unemployment along with high NDP per capita in PAI 2019, continues to hold the position indicating a need for serious intervention to curtail the pattern of jobless growth. Similar to the equity pillar, Uttar Pradesh features among the bottom in the delta analysis of growth indicators as well.

The worst performer in terms of a delta in the Growth pillar is Tamil Nadu which occupies the last position in the delta rankings. The state, which ranks third in the PAI 2020 Growth pillar has the lowest growth in terms of net enrolment ratio at the elementary level and immunisation of children in the state. Tamil Nadu also shows an average growth in terms of reduction in unemployment rate and growth of NDP per capita, which has caused the poor performance in the delta rankings.

In the case of the small states, Mizoram and Meghalaya, which are among the bottom in the PAI 2020 growth rankings, have shown the highest growth in terms of the delta analysis. Both the states have shown a reduction in unemployment rate over time. While Mizoram has also shown growth in terms of NDP per capita, Meghalaya is one of the few states that has shown negative growth in NDP per capita. Both states have recorded an increase in net enrolment at the elementary level and a reduction in dropout rates. However, in the case of immunisation, while Meghalaya has shown an increase in the percentage of children immunised, Mizoram lags behind.

Manipur features in the bottom in terms of both the delta performance and in the PAI 2020 growth rankings. The state performs poorly in terms of reducing unemployment rates, increasing NDP per capita and tackling dropout rates.

The state that has seen the biggest change is Himachal Pradesh. The state, that ranks second in the PAI 2020 growth rankings has the least growth in the delta rankings. This can be attributed to a low rate of reduction in unemployment, low growth in net enrolment at the elementary level and poor rates of immunisation. The state however, has shown growth in terms of increased NDP per capita and reduction in dropout rates.

Moving to the Sustainability pillar, the indicators included in the analysis are the percentage of households using clean cooking fuel and the renewable energy consumption as a percentage of total energy consumption in the state.

In the large states category, Odisha and Haryana, which ranked towards the bottom in the PAI 2020 sustainability rankings, have shown the largest growth in terms of progress over the years. Both states are among the top in both the indicators with considerably high rates of growth. What is interesting in terms of sustainability is the fact that states like Tamil Nadu, Kerala and Karnataka, that are among the top in the PAI 2020 sustainability rankings, have also shown consistent growth in the indicators over the years. Another state that has shown considerable progress is Jharkhand, though it is still a poor performer in terms of the PAI 2020 rankings. The state is among the top in terms of both the indicators considered for analysis.

State	Sustainability
Odisha	1.885
Tamil Nadu	1.245
Haryana	0.926
Karnataka	0.781
Kerala	0.728
Jharkhand	0.720
Uttar Pradesh	0.622
Chhattisgarh	0.354
Punjab	0.108
West Bengal	0.056
Madhya Pradesh	-0.086
Rajasthan	-0.149
Bihar	-0.339
Gujarat	-0.477
Maharashtra	-0.579
Assam	-0.946

The Delta Analysis

State	Sustainability
Goa	2.010
Delhi	0.884
Tripura	0.306
Manipur	-0.476
Uttarakhand	-0.482
Sikkim	-0.597
Nagaland	-0.748
Himachal Pradesh	-0.893
Arunachal Pradesh	-0.934
Meghalaya	-1.404
Mizoram	-2.514

In the case of the small states, Goa is a consistent top performer in both the PAI 2020 sustainability rankings as well as the delta rankings. States that have shown fluctuating performance are both Meghalaya and Mizoram which feature among the top in the PAI 2020 rankings but have the least growth over time, While Meghalaya's poor rankings can be attributed to a poor uptake in clean cooking fuel among households, Mizoram has shown the least growth in both the indicators.

This exercise and the results from it stress the importance of not only measuring current development but also identifying states that have either been making progress over the years or are stagnating. PAI 2020 believes that this analysis will be significant not only to highlight states that have made progress but are not yet best performers but also point to states which may need to reconsider development strategies to break off from the stagnant performance. It must be noted that the states of Andhra Pradesh and Telangana have not been included in the analysis due to Telangana's formation in 2014 and the resultant non-availability of time series data.

Pillars	Indicators
 Equity	Proportion of population covered by social protection
	Prevalence of malnutrition amongst children below 6 years
	Average Annual Drop-out rate at secondary level
	Proportion of urban population living in slums
	Rural Indebtedness
	Rapes per 10 lakh population
	Incidence of Crimes against SC and ST
	Worker Population Ratio (Female) (WPR)
	Farmer's/ Cultivators suicide per HHs
	Palma Ratio of Household Expenditure in Urban and Rural India
	Expenditure in social sector
 Growth	Proportion of total Government expenditure on Agriculture and Allied Services
	Immunisation achievement
	Net Enrolment Ratio at Elementary (1-8)
	Proportion of population using safely managed drinking water services
	Proportion of population using safely managed sanitation services
	Unemployment Rate
	Proportion of population with access to electricity
	Manufacturing value added as a proportion of GDP and per capita
	Number of Buses per 10 lakh population
	Annual growth rate of real GSDP per capita
	Proportion of total government expenditure on infrastructure
	States Own Tax Revenue Growth
 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)

The State of the States

"We need to see that one specific thing that is hampering the development of a district and address the issue."

Prime Minister Narendra Modi

Speech at the National Legislators Conference, 2018

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

Lewis Carroll

Alice in Wonderland

A good question to begin with is whether the objective conditions for development across the states of India are conducive to competitive federalism that the NITI Aayog aspires to foster? Consider these facts: On the Human Development Index (HDI), India ranks 129 among 189 countries (UN HDI Report, 2019). On inequality-adjusted HDI (IHDI), India's rank drops to 130. On gender-based inequality, India ranks 122 out of 162 as per the gender inequality index. A part of the aggregate score that determines India's rank is influenced by what the states in India do or fail to do. The greater part of the rank that results in the HDI and other similar global rankings is simply that some of the states are not in a position to participate in competitive federalism, quite simply because they are hobbled by resource constraints - of capital and human resources - rooted in endemic poverty and chronic backwardness, despite the efforts of the Centre and the State Governments concerned. Since the HDI is also a measure of multidimensional poverty, it is important to focus on those states that are skewing the national aggregate performance and address the emerging factors - technology, climate change, and gender - of inequality. India faces a long road to a more equitable HDI across states, certainly longer than the road to a \$ 5 trillion economy. There is need to understand better why economic growth has not had a poverty reducing impact in some states relative to other similarly placed states. A sense of urgency must circumscribe the response to these persistent inequalities, if the government's emphasis on 'Sabka Saath, Sabka Vikas' is to translate to reality. The evidence on the variations in IHDI across the states, relative to global averages, suggests that the inequality in human development is significantly more pronounced in India than elsewhere in the world. If

there is just one principle one needs to draw from the UN-HD report, it must be to recognise the loss in percentage in HDI due to inequality, especially high from both education and health. Therefore, measuring development outcomes alone, without reference to the measurement of inequalities, will mask the performance of individual states. This chapter of PAI 2020, aims to examine, in brief, the impact of inequalities within the states on human development outcomes of individual states and provides a broad picture of inter-state disparities and how they add another layer of complexity in India's quest for a just and equitable society.

A diverse country with varied cultures and multifarious factors that affect individual development of the states requires an interstate comparison to assess inequality. In the previous chapter, it was observed that traditionally non-performing states like Bihar, Odisha, and Assam among others, have seen an improvement in development outcomes whereas traditionally better performing states like Kerala, Karnataka, and Maharashtra among others have seen a stagnant growth rate across all three pillars of equity, growth and sustainability. The question to ask is what factors influence such results. This analysis attempts to answer the question on what can be the possible causes for variations across different indicators of equity, growth and sustainability that results in such contrasting performances by the states, resulting in significant disparities between them. There is no doubt that the pillars are inter-connected, each has an impact on the other in one way or another. For example, equity alone cannot be a great measure to assess the level of development across the states and the factors of growth and sustainability must be con-

sidered as well. It can be expected that the traditionally high performing states (those that have followed an increasing path of growth over the years) would continue to traverse the path of sustainable growth with reduction in the negative performing indicators, while on the other hand the traditionally low performing states would show improvement in development outcomes.

Data and Methodology

The analysis highlights the impact of the three pillars of equity, growth and sustainability and their interdependent nature on the traditionally high and low performing states of India. The indicators have been selected on the basis of their significance in measuring development. The analysis takes into consideration the effect of Growth and Sustainability indicators on the Equity pillar, the effect of Equity and Growth indicators on the Sustainability pillar, and the effect of Equity and Sustainability indicators on the Growth pillar. This approach provides an analysis that is consistent.

For the inter-state comparison, states have been classified into two categories- 14 traditionally high performing states and 15 traditionally low performing states. The classification has been done on the basis of the scores in the PAI 2020 index¹.

- High performing states: Goa, Kerala, Tamil Nadu, Meghalaya, Himachal Pradesh, Sikkim, Andhra Pradesh, Karnataka, Chhattisgarh, Telangana, Tripura, Maharashtra, Punjab, Gujarat
- Low performing states: Arunachal Pradesh, Mizoram, Nagaland, Uttarakhand, Delhi,

Madhya Pradesh, Manipur, Rajasthan, West Bengal, Assam, Haryana, Jharkhand, Bihar, Odisha, Uttar Pradesh

For each pillar, indicators of consequence that have an impact on the pillar and focus on the human development aspect of sustainable development were identified. The results of the cross-sectional regression analysis are provided.

Analysis

In the case of the small states, Goa is a consistent top performer in both the PAI 2020 sustainability rankings as well as the delta rankings. States that have shown fluctuating performance are both Meghalaya and Mizoram which feature among the top in the PAI 2020 rankings but have the least growth over time, While Meghalaya's poor rankings can be attributed to a poor uptake in clean cooking fuel among households, Mizoram has shown the least growth in both the indicators.

This exercise and the results from it stress the importance of not only measuring current development but also identifying states that have either been making progress over the years or are stagnating. PAI 2020 believes that this analysis will be significant not only to highlight states that have made progress but are not yet best performers but also point to states which may need to reconsider development strategies to break off from the stagnant performance. It must be noted that the states of Andhra Pradesh and Telangana have not been included in the analysis due to Telangana's formation in 2014 and the resultant non-availability of time series data.

High Performing States			
Independent Variables	Dependent Variables		
	Growth	Equity	Sustainability
Proportion of population covered by social protection	-0.19*	-	-
Prevalence of malnutrition amongst children below 6 years	-0.08	-	-
Average Annual Drop-out rate at secondary level	-0.26**	-	-
Proportion of urban population living in slums	0.23**	-	-0.97*
Rural Indebtedness	-0.21*	-	0.75*
Expenditure in social sector	0.02	-	-
Rapes per 10 lakh population	-0.56***	-	-
Worker Population Ratio (Female) (WPR)	-0.17*	-	-
Renewable energy share in the total final energy consumption	0.22**	-	-
Percentage of households using clean cooking fuel	0.47***	-0.05	-
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)	0.22**	0.21	-
Proportion of total Government expenditure on Agriculture and Allied Services	-	-	0.19
Net Enrolment Ratio at Elementary (1-8)	-	0.01	-
Proportion of population using safely managed drinking water services	-	-	-0.54
Proportion of population using safely managed sanitation services	-	-	0.76**
States Own Tax Revenue Growth	-	-0.59*	-
Unemployment Rate	-	-0.02	-
Farmer's/Cultivators suicide per HHs	-	-	1.97**
Proportion of population with access to electricity	-	-	-1.44*
Manufacturing value added as a proportion of GDP and per capita	-	-	0.56**
Number of Buses per 10 lakh population	-	-	0.72***
Constant	0.57***	0.51	0.85**
R-squared	0.997	0.432	0.968

¹ Telangana has been dropped as a state due to the state's severance from the state of Andhra Pradesh in 2014 and Jammu and Kashmir has been included in the category of Union Territories.

The trajectory of growth in the traditionally better performing states has been prominent due to several factors. One of the major factors is that these states are growth centers and house large numbers of labour migrants. These growth centers have a positive impact on the revenue generation of the state and encourage the demand for skilled employment. States like Maharashtra, Karnataka, Kerala and Tamil Nadu have seen a sustainable growth rate over the years. Additionally, most of the North-eastern states like Meghalaya, Sikkim and Tripura have also made a significant place for themselves in this classification. The analysis table above shows that the indicators identified across various pillars are highly significant in explaining the impact they pose on the pillar level indices.

It is observed that equity and sustainability indicators such as the population covered under social protection, average dropout rates, proportion of population living under slums, renewable energy etc. have a statistically significant impact on the Growth pillar. Growth of the state implies an increase in people's per capita income and standard of living, thus increasing their real money income. Therefore, it is assumed that there would be a lesser need for social protection benefits. Interestingly, the results for high performing states indicate that growth increases due to an increase in the proportion of population living in slums. This is in line with the Kuznets theory that prophesised that an increase in growth would result in increased inequality (where the rich become richer and poor become poorer) which in turn would result in increased poverty. This vicious cycle of poverty also leads to the creation of slum habitations in states. Mumbai being the largest growth center of Maharashtra is home

to the largest slum in Asia- 'Dharavi', thus proving this theory. While renewable energy consumption and usage of clean cooking fuel have shown a positive impact on growth a negative relationship is observed between growth and the levels of PM10 in the states. This means that growth is being achieved at the cost of poor air quality.

From the perspective of gender equality, it is observed that crimes against women (total number of rapes per 10 lakh population) has a negative relationship with growth. Further, it can be seen that the female worker population ratio has a negative relationship with growth, indicating the fact that while economic growth is being achieved in these traditionally high performing states it is coming at a cost of widening gender disparities and access to decent employment for women. This is strengthened by India's consistently declining female labour force participation rate and poor performance in the SDG 5 Index.

In terms of sustainability, even though the high performing states are on the path of achieving sustainability they still have not managed to address the agricultural distress. As the analysis points out, increase in sustainability is not resulting in upliftment of the farmers. According to the National Crime Records Bureau, in 2019, 7.4% of the total suicides in the country were committed by indebted farmers. Maharashtra, Karnataka, Andhra Pradesh, Chhattisgarh are amongst the states that have seen the most number of farmer suicides in the past year. The analysis also indicates that rural indebtedness is also increasing with increase in sustainability strengthened by the positive correlation between rural indebtedness and farmers suicides.

On the contrary, only one indicator- the states' own tax revenue growth- among the growth and sustainability indicators impacts states' performance in equity. The analysis indicates that an increase in state's own tax revenue growth is affecting equity negatively. This can be attributed to the fact that, due to high inequality, the proportion of taxes is burdened on the middle- and high-income earners. Along with the burden of the tax incidence, tax evasion is also a main cause for this negative relationship. According to the Ministry of Finance in September 2020, only 1% of the people pay taxes diligently. This raises concerns of the declining revenue generated through taxation, thus impacting the welfare of the states.

Low Performing States	Dependent Variables		
	Growth Index	Equity Index	Sustainability Index
Proportion of population covered by social protection	-0.59**	-	-
Prevalence of malnutrition amongst children below 6 years	1.11**	-	-
Average Annual Drop-out rate at secondary level	-1.17***	-	-
Proportion of urban population living in slums	-1.14***	-	-0.45**
Rural Indebtedness	-1.04***	-	-
Expenditure in social sector	-0.94**	-	-
Incidence of Crimes against SC and ST	-0.17	-	-
Rapes per 10 lakh population	-2.72***	-	-
Worker Population Ratio (Female) (WPR)	-2.01***		
Renewable energy share in the total final energy consumption	-0.36	1.07**	
Percentage of households using clean cooking fuel	-1.62**	0	
Annual mean levels of fine particulate matter (PM10) in cities (population weighted)	-0.95**	0.97*	
Proportion of total Government expenditure on Agriculture and Allied Services		-0.55*	
Immunisation achievement		0.37*	
Net Enrolment Ratio at Elementary (1-8)		0.14	
Proportion of population using safely managed drinking water services		-0.57***	-0.18
Proportion of population using safely managed sanitation services		0.36	
States Own Tax Revenue Growth		1.02*	
Annual growth rate of real GSDP per capita		0.76**	-0.12
Unemployment Rate		-0.68**	
Palma Ratio of Household Expenditure in Urban and Rural India			0.38*

The traditionally poor performing states have always been a concern for the country in terms of basic human development. The 'BI-MARU' states-Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh- are all classified in the low performing states category.

Most of the states in this category are those that are heavily reliant on agriculture. The analysis shows that this reliance on agriculture is not reflected in the budgetary allocation towards agriculture and allied services by the government. This is not only resulting in a high rate of farmer suicides but is also directly affecting the sustainability of the states. The fact that rural indebtedness is negatively correlated with the growth pillar emphasises the fact that despite multiple schemes to support agriculture credit, the state of farmers has not changed much. The increase in rural indebtedness also increases pressure on the banking sector due to the creation of NPAs if the farmer is unable to pay off the debt or commits suicide.

Further, the analysis suggests that a percentage increase in school dropouts at the secondary level causes an increase in growth by 117% and a percentage increase in malnutrition levels in the children below 6 years of age causes an increase in growth by 111%. Such a stark contrast can be explained only by a non-conventional approach. It is also observed that for this category of states, a percentage increase in per capita income of the households results in a 76% increase in equity. However, a negative correlation between Palma ratio and the

Sustainability pillar portrays a different picture indicating that sustainability is increasing at the cost of increasing inequality. The increased inequality raises questions on the effective and equitable allocation of resources furthered by the negative correlation between expenditure in the social sector and the Growth pillar.

It can be inferred that the poor performing states must work towards effectively addressing the human development needs. Limited expenditure in the social sector along with increased malnutrition levels are further indicative of persisting inequalities, furthering the argument that the rich getting richer and the poor are getting poorer.

The gender aspect cannot be ignored in the traditionally non performing states as well. Rising rates of crimes against women is a serious concern in these states. Data from the 2019 NCRB report points to the fact that 14.7% of the total cases of rapes reported in the country occurs in Uttar Pradesh followed by Bihar and Rajasthan. The regression results state that 1% increase in the rape cases in these states result in a 272% fall in the growth Index, indicating that the states need to work on policies to address women's safety. The analysis also points to the fact that growth is seen to be increasing at the cost of decreasing female worker population.

The State of the States

Convergence to Steady State

Curbing regional disparities has been one of the prime goals of the states not only in India, but worldwide. Convergence is a concept that indicates if a state is moving towards a pattern of steady growth over time. In this context, growth is measured in terms of the Gross State Domestic Product (GSDP). The convergence model can be used to understand if increasing growth in traditionally high performing states has a spillover effect on the low performers, thereby bridging regional disparities. A coefficient less than 1 indicates convergence. The model used for analysis, referred to as the conditional convergence model, takes into account the effect of factors such as gross capital formation, labour force participation and female labour force participation rate on GSDP over time.

For the analysis, states have been classified into three categories- high, nominal (medium) and poor performing. Each category comprises 9 states, based on the scores in the PAI 2020 ranking. The regression methodology follows a time-series panel data regression² model with data extracted from 2014-15 to 2019-20.

- **High Performing states:** Goa, Kerala, Tamil Nadu, Meghalaya, Himachal Pradesh, Sikkim, Karnataka, Chhattisgarh and Tripura
- **Nominal Performing States:** Maharashtra, Gujarat, Punjab, Arunachal Pradesh, Nagaland, Uttarakhand, Delhi and Madhya Pradesh
- **Poor Performing states:** Manipur, Rajasthan, West Bengal, Assam, Haryana, Jharkhand, Bihar and Uttar Pradesh

	High Performing States		Nominal Performing States		Poor Performing States	
	Un-conditional	Conditional	Un-conditional	Conditional	Un-conditional	Conditional
Independent Variables	Per capita GSDP	Per capita GSDP	Per capita GSDP	Per capita GSDP	Per capita GSDP	Per capita GSDP
Gross Capital Formation	-	0.02***	-	0.03***	-	0
Female Labour-force Participation rate	-	-0.03***	-	-0.03***	-	0
Labour-force participation rate	-	0.05***	-	0.05***	-	0.05***
Year	0.11***		0.11***		0.11***	
Constant	-220.13***	7.73***	-207.91***	7.66***	-220.74***	6.87***

The analysis mentioned above shows that over time each set of states is following the path of convergence, i.e. all of the states are progressing towards a path of steady growth over time. Hence it may be said that the trickle-down effect of the development in high performing states is impacting nominal performing states and likewise the nominal states are impacting the development of the poor performing states.

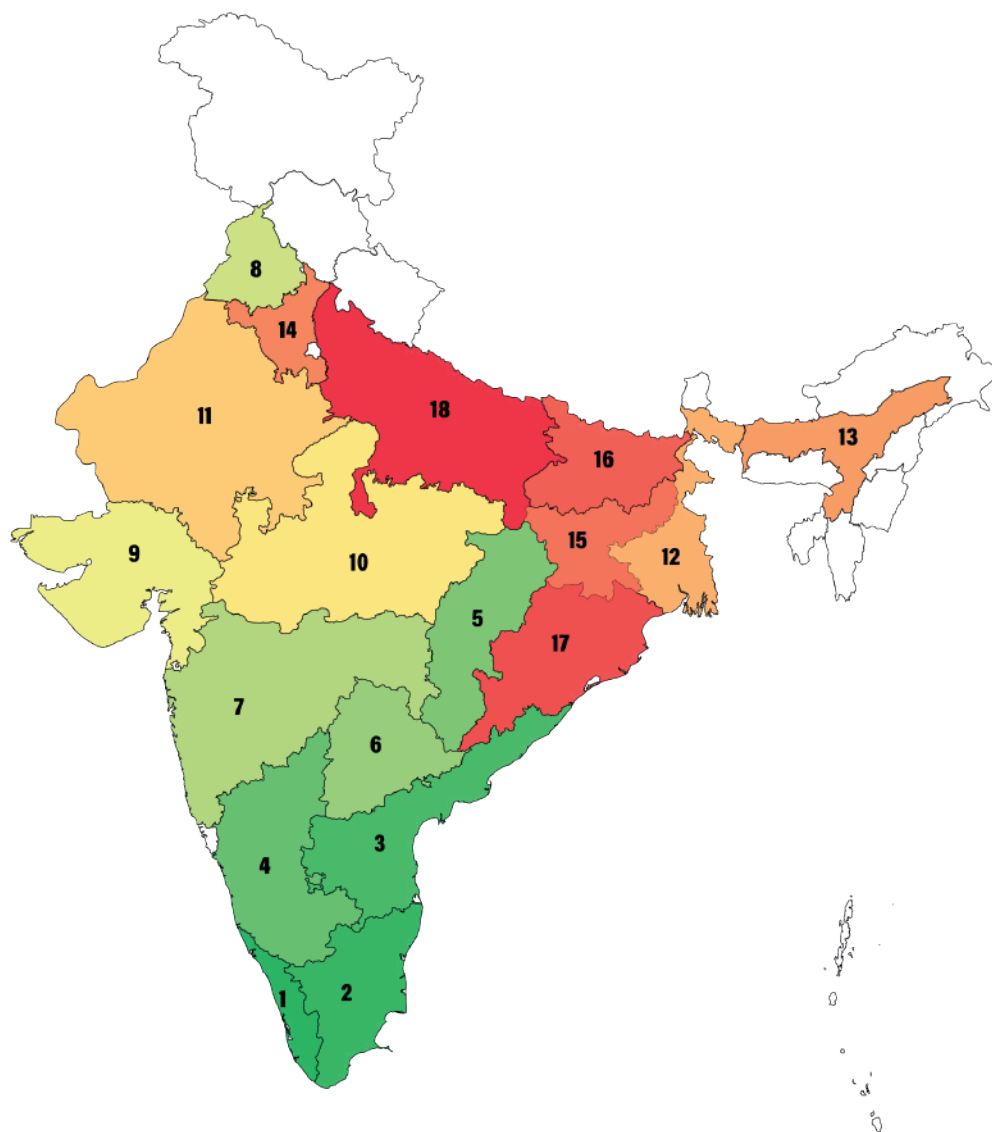
The results of the conditional convergence analysis provide interesting results. In the case of gross capital formation, it is indicative that high performing and nominal performing states are aiming to follow a steady state growth rate over time, but the poor performing states are struggling to attain a present growth for capital formation. This is supported by the fact that the proportion of total government expenditure on infrastructure and manufacturing value added as a proportion of GDP and per capita are non-significant indicators in the case of poor performing states. The working population is a huge contributor to the economy and as seen, the coefficient is less than 1 and highly significant in all three categories of states. It is interesting to note that the

female labour force participation rate has a negative coefficient in the high and nominal performing states. This indicates that the female labour force participation rate has a greater impact on economic growth in the long run. However, the poor performing states do not show significant results in terms of female labour force participation. This may be attributed to the prevailing gender disparities in these states, where social norms are forcing women out of the workforce.

² To lower the variance inflation in the model, a log model for all the said indicators have been used and Mizoram has been dropped due to unavailability of data on labour force participation rate.



The Sense Of An Ending

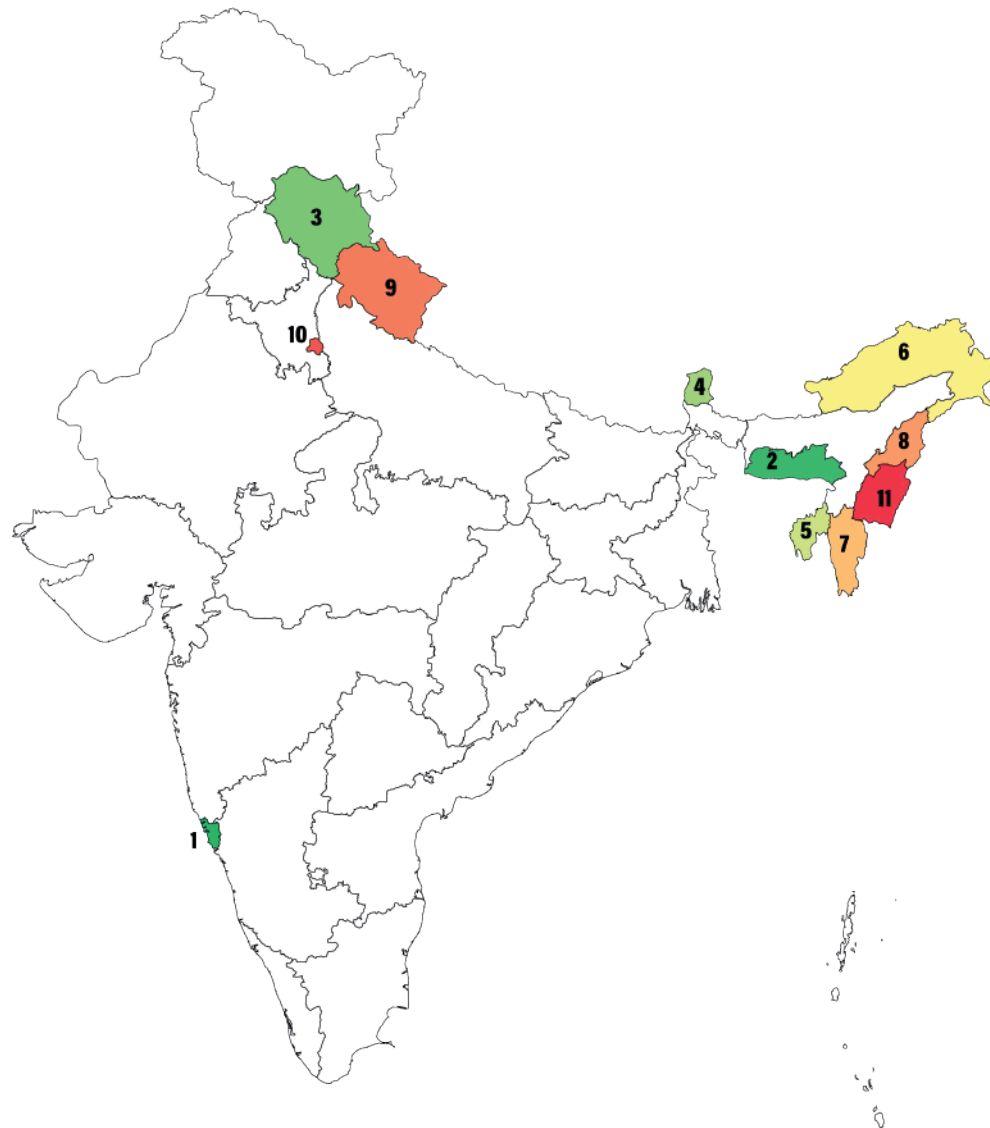


Rank	Large States	Index
1	Kerala	1.389
2	Tamil Nadu	0.912
3	Andhra Pradesh	0.531
4	Karnataka	0.468
5	Chhattisgarh	0.429
6	Telangana	0.388
7	Maharashtra	0.143
8	Punjab	0.092
9	Gujarat	0.054
10	Madhya Pradesh	-0.345
11	Rajasthan	-0.38
12	West Bengal	-0.49
13	Assam	-0.671
14	Haryana	-0.702
15	Jharkhand	-0.958
16	Bihar	-1.159
17	Odisha	-1.202
18	Uttar Pradesh	-1.462

Highest Index Value

Lowest Index Value


OVERALL RANKINGS

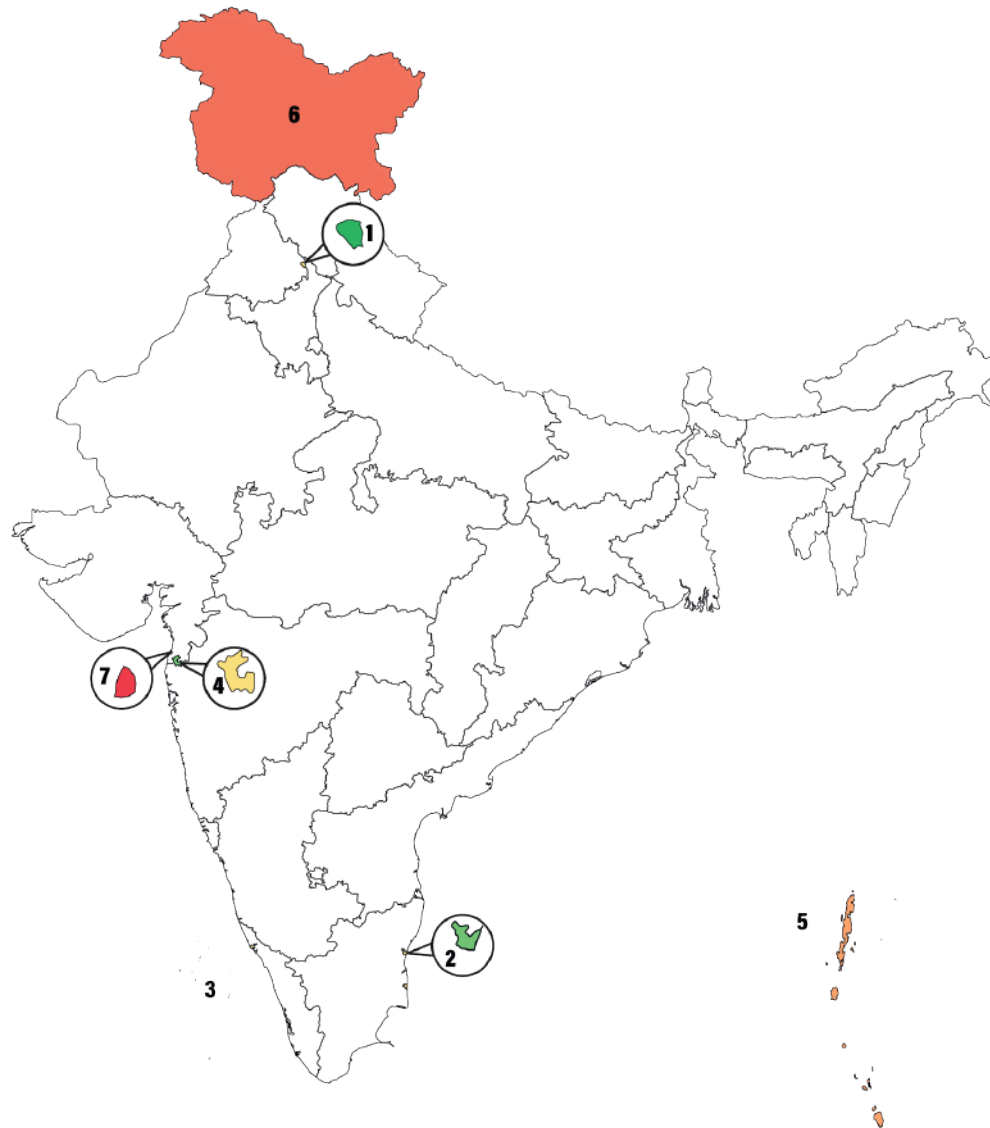


Rank	Small States	Index
1	Goa	1.746
2	Meghalaya	0.797
3	Himachal Pradesh	0.725
4	Sikkim	0.603
5	Tripura	0.146
6	Arunachal Pradesh	0.048
7	Mizoram	-0.056
8	Nagaland	-0.117
9	Uttarakhand	-0.278
10	Delhi	-0.29
11	Manipur	-0.364

Highest Index Value Lowest Index Value

OVERALL RANKINGS

The Sense Of An Ending



Rank	Union Territory	Index
1	Chandigarh	1.058
2	Puducherry	0.521
3	Lakshadweep	0.004
4	Daman & Diu	-0.077
5	A & N Islands	-0.308
6	Jammu & Kashmir	-0.507
7	Dadra & Nagar Haveli	-0.691

Highest Index Value

Lowest Index Value


OVERALL RANKINGS

"Any man who stands for progress has to criticize, disbelieve, and challenge every item of the old faith."

Shaheed Bhagat Singh

"One of the deep secrets of life is that all that is really worth the doing is what we do for others."

Lewis Carrol

The overall rankings for PAI 2020, present some interesting results. While some are expected, there are a few surprises as well. It can be said that, while some categories of states have made progress, others have shown poor performance in PAI 2020. The rankings of PAI 2020 are further supported by a cluster analysis which shows states where certain characteristics tend to form clusters and group together in specific patterns. The cluster analysis in PAI 2019 pointed to the concentration of the large states, particularly the top performing states, into a cluster that was largely growth driven. On the other hand, the small states, led by the Northeastern states, appeared to be driven by sustainability parameters. There were a set of states that were poor performers across all three pillars of equity, growth and sustainability.

The cluster analysis using data from PAI 2020, however, is indicative of the transition in India's development trajectory. PAI 2020 has generated compelling evidence from which two broad trends can be discerned:

First, there is a process of convergence occurring, even if slow, between the high performing states and the traditionally low performing states on several aspects of growth and equity. This is cause for cautious optimism. Indeed, if this trend was to continue, it can be argued that demographics favour the hitherto slow growing states because they have relatively younger populations. It is therefore likely that the future growth drivers will come from some of these populous and resource endowed, but currently less developed states. It is also noteworthy that the progress made by some of these states on specific indicators has outpaced the

high performing states. For instance, as pointed out in The Delta Analysis chapter, in the large states' category Bihar has emerged as the state with the most improvement on some of the equity indicators, despite being at the bottom of the PAI 2020 rankings on the equity pillar. The state has shown improvements in reducing malnutrition, a fact observed in PAI 2019 as well, besides being a top performer in the number of children enrolled in organised learning under the ICDS programme. Contrast this with Kerala dropping to the bottom of the delta rankings on equity, pointing to the fact that the state has shown the least improvement on some equity indicators in the time period studied. This is contrary to Kerala's performance in all editions of the Public Affairs Index, where the state has emerged first. The stagnation in progress on some aspects of development governance is attributable to some specific indicators such as reduction in malnutrition, participation in organised learning, increase in the cases of crimes against SCs and STs and cases of rapes.

In a similar fashion, there is a pattern of a perceptible slowing down in progress on certain indicators in the traditional high growth states, and this should be a cause for concern. The worst performer in terms of a delta in the Growth pillar is Tamil Nadu which occupies the last position in the Delta rankings on the Growth pillar. Similarly, Kerala and Karnataka, states that feature at the top of the PAI 2020 growth rankings, are eighth and tenth respectively in terms of Delta performance. This suggests that the states may be experiencing stagnation in growth which must be corrected. Another state that has shown poor growth is Gujarat which is towards the bottom in terms of delta rank-

ing on growth. From a research perspective, it is an interesting transition that is happening across the country, and will raise many policy research related questions, including on migration, urbanisation and the emergence of future growth centres.

The second trend that emerges from the evidence of PAI 2020, is the persistent and deeply entrenched inequality concentrated in some specific geographies that are rooted in structure and agency related constraints and therefore warrant sustained policy attention and coordinated programmatic action. These are populations and geographies that are at risk of being left behind, despite efforts by the Centre and the State Governments; despite additional resource allocations over a period of time. These pockets of poverty need to be understood better and a more context-specific and resource sensitive intervention plan devised. From the evidence generated by PAI 2020, a structural problem that appears as a common feature across such endemically poor geographies, can be deduced. Seen from a macroeconomic perspective, it is a problem of structural transformation. The inequality that characterises these states and districts arises primarily from the complex pattern of transition out of agriculture. In all of them, while the contribution of agriculture has stagnated at about 15-17 percent of GSDP, the share of the work force in agriculture is more than three times that number. This has triggered significant movement out of agriculture, of large number of workers, in search of non-farm jobs. If anything, the absence of growth drivers in such endemically resource constrained regions has been exacerbated by extreme climate events resulting in agrarian distress and forced migration. From a real-world intervention perspective, the only real-

istic opportunity is to improve land use and water use efficiency in these rain-fed semi-arid regions. There is also perhaps a strong case for significantly increasing the MNREGA allocations in such pockets. Another feature that characterises these pockets is the near complete absence of voice and social accountability. Much of the development praxis extant is supply-side dominated, fragmented and with no community-based institutional architecture that fosters participatory governance. Therefore, the absence of community agency is as important a constraint besides the structure related problem. In the state-wise analysis PAI 2020 does provide some recommendations on what might be done.

The COVID-19 pandemic has exposed the flaws in the country. While there is no doubt that India has achieved much since Independence, there is a long way to go if the SDG 2030 Agenda is to be achieved in letter and spirit. Record high rates of unemployment, a declining Gross Domestic Product, rising migrant crisis, high levels of informalisation of the workforce, consistently declining female labour force participation, rising cases of social inequities and threats to minority communities, rapid urbanisation at the cost of the environment and soaring crimes against women are some of the most pressing issues plaguing the country currently. Unless these structural issues are addressed, the country may not be close to attaining sustainable development. The results from the PAI 2020 are testimony to this.

Overall Rankings

Among the large states, Kerala tops the rankings yet again, followed closely by Tamil Nadu. While Kerala has improved performance in PAI 2020 with a score of 1.388 as compared to 1.011 in PAI 2019, Tamil Nadu's score has slipped from 0.823 in PAI 2019 to 0.912 in PAI 2020. Following Kerala and Tamil Nadu are Andhra Pradesh (0.531) and Karnataka (0.468) which are placed third and fourth respectively. Both Andhra Pradesh and Karnataka have shown an improvement in performance in PAI 2020. However, similar to PAI 2019, there is a considerable gap between Tamil Nadu, ranked second, and Andhra Pradesh, ranked third, indicating that there does exist some regional disparities. It is interesting to note that continuing with the trend established in PAI 2019, the top four states in PAI 2020 are South Indian states. Closely following Karnataka is Chhattisgarh (0.429), which has moved up two places over the past year. Telangana, Maharashtra, Punjab and Gujarat continue to remain in the middle range of the rankings. Rajasthan and Haryana have slipped in the rankings, with Haryana moving into the bottom five states category in PAI 2020. The bottom of the rankings features Haryana, Jharkhand, Bihar, Odisha and Uttar Pradesh, which is similar to PAI 2019, indicating that these states are yet to catch up completely with other well performing states. What is more concerning is that all unlike the top performing states, all the states at the bottom of the rankings have seen a drastic decline in scores as compared to the previous year. The largest decline can be seen in Bihar (from -0.658 to -1.158) and Uttar Pradesh (-0.864 to -1.461).

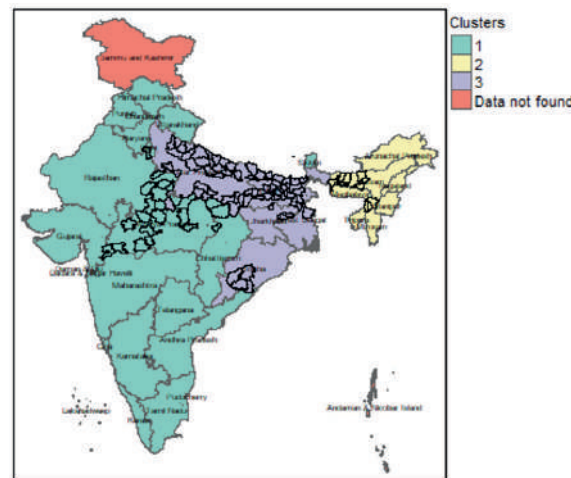
Moving to the small states, Goa continues to top the rankings with a score of 1.745. The state has shown large improvement in the score as compared to PAI 2019 (from 1.1 to 1.745). Following Goa is Meghalaya (0.797) which has moved from third position in the previous year. However, the score of the state has seen a reduction, from 0.891 in PAI 2019 to 0.797 this year. Himachal Pradesh follows Meghalaya, with a score of 0.725. The state has seen a consistent drop in performance from PAI 2016, where it was ranked first to PAI 2019 where it ranked second, to now. Sikkim (0.602) has seen an improvement in performance from seventh in PAI 2019 to fourth position in this year. Tripura too has moved from the bottom three in PAI 2019 to fifth position in PAI 2020, with a score of 0.145. There is however a considerable gap between Sikkim, ranked fourth and Tripura which is a cause of concern. Another state that has shown marginal improvement is Nagaland which has moved up two places, with however only a minor improvement in score. States like Arunachal Pradesh, Uttarakhand and Mizoram have seen declining performances with a drop in scores. However, the largest decline is seen in the case of Manipur which has moved from sixth in PAI 2019 to eleventh in PAI 2020. The state must look into the reasons for such a fall in performance, some of which are highlighted in the individual state fact sheets and design corrective action. Delhi has remained at the bottom of the rankings. The national capital has however shown an improvement in scores from -1.214 in PAI 2019 to -0.289 in PAI 2020 which is a good sign.

Among the Union Territories, Chandigarh emerges as the top performer with a score of 1.057. As seen in the large and the small states, there is a con-

siderable gap in scores between Chandigarh and Puducherry (0.520), which is ranked second. While there is a slight variation in the indicators used for ranking the Union Territories as compared to the states, it is observed that the UTs have shown poorer performance than both the large and the small states in terms of the scores. At the bottom of the rankings in Jammu & Kashmir (-0.506) followed by Dadra & Nagar Haveli (-0.690). Jammu & Kashmir, which was a part of the small states' category till PAI 2019, was among the poor performers as well.

Cluster Analysis

From a development and governance perspective, it is crucial to identify and analyse the patterns in the performance of states in good governance. To do this, PAI 2020 conducted a 'cluster analysis' to assess the performance of the states and get a sense of the general direction in which states are moving. The analysis has categorised states into three clusters as explained below:



Cluster 1 includes the states of Kerala, Goa, Himachal Pradesh, Delhi, Maharashtra, Andhra Pradesh, Telangana, Gujarat, Rajasthan, Karnataka, Tamil Nadu, Punjab, Haryana, Uttarakhand, Madhya Pradesh, Sikkim, Chhattisgarh. This cluster has mix of large states and small states where most of the large states are on the list of better performers in PAI 2020. Cluster 1 performs above average in 17 indicators under the growth pillar as compared to the 11 indicators under equity, which shows that this cluster is highly growth driven. These states have also seen a moderately better performance in the 4 out of 5 indicators under sustainability. As compared to the results in PAI 2019, additions in this cluster include states like Madhya Pradesh which have moved from the third cluster.

Cluster 2 mostly includes small states, namely, Arunachal Pradesh, Manipur, Meghalaya, Nagaland, Tripura, Mizoram and Assam; all from the North East. This cluster is highly equity driven with the states performing above average in 16 of the 23 indicators as compared to only 5 indicators in the growth pillar. However, in sustainability this cluster proves to be lagging with above average performance in only 2 out of 7 sustainability pillar indicators. This is a stark shift from the results in PAI 2019 where this cluster was sustainability driven.

Cluster 3 consists of Uttar Pradesh, Bihar, Jharkhand, Odisha and West Bengal. These states are the same states which have ranked towards the end in PAI 2020. In this cluster, only 8 out of 23 indicators in the equity pillar, 6 out of 20 indicators in the growth pillar and 1 out of 7 indicators in the sustainability pillar are indicators where the states perform above average. Interestingly, most of the

Aspirational Districts that have been identified by the NITI Aayog fall within this particular cluster, similar to last year. This raises a concern on the performance of these states over time.

With all the findings, the results of the cluster analysis coincide with the correlation and regression analysis. As seen in the regression analysis the poor performing states are all clustered together in Cluster 3, and these states also feature at the bottom of the PAI 2020 rankings. This indicates to the fact that, while states like Uttar Pradesh, Bihar, Jharkhand, West Bengal, Odisha are converging towards a growth path, their rate of progress towards sustainable development is a lot slower than the other Indian states. However, what is most striking is the fact that apart from the North East states, equity remains a major concern for a major part of the country.

PAI 2020 through the Delta Analysis also showcases the stagnancy in the growth rates of traditionally better performing states like Kerala, Tamil Nadu, Karnataka, Maharashtra and Gujrat, while the poor performing states like Bihar and Assam have picked up the pace of growth in the identified human development indicators. The indicators to attain Sustainable Development such as Gender Inequality (SDG5), Zero Poverty (SDG1), Zero Hunger (SDG2), Good health and wellbeing (SDG3), Quality Education (SDG4), Decent work and Economic Growth (SDG8) are seen as of utmost importance and need to be emphasised in the state's development praxis. In terms of converging towards a sustained growth over year, two classifications (high performing states and nominal performing states) have shown a significant impact of female labour

force participation to achieve steady state. The economic impact of increased female labour force participation is very evident as seen in the convergence results and if the poor performing states too are following the path of convergence like the high and nominal performing states, it is essential to cater to the well-being of the female population; economically, socially or culturally. In conclusion, it would be safe to say that PAI 2020 agrees with the UNDP narrative that "Equity and Sustainability are important for human development and the growth of a nation".

India's economic transition is a complex phenomenon and the patterns of growth and inequality diverse. A standard theoretical framework will perhaps miss what is happening at the ground level. But one economic fundamental for a vast agrarian economy like India would perhaps apply and should be taken seriously - the states must focus attention on the structure, agency and regulatory aspects that circumscribe both the land-use and water-use efficiency challenges if agriculture has to transition from subsistence farming to a modern and sustainable food production system, resilient to climate change. The community needs to be engaged and participatory mechanisms evolved. If there is one imperative today, it is for the states to bridge the critical knowledge gaps in understanding current risk management strategies of small and marginal farmers.

The heart of India is still rural and the most common citizen the farmer. In essence, if we must articulate a sense of an ending it is simply: nothing about them, without them.

PAI 2020 is the fifth edition of the annual ranking of the States of India on the quality and adequacy of public governance. We therefore decided to include a review, by an independent researcher, of the five-year journey of PAC to develop a composite index to measure the quality of subnational governance in India.

***Dr. Haritha Pusarla** is an independent researcher and writer with avid interest in public governance. She is a molecular biologist by training and holds a PhD in Life Sciences.*

The Evolution of the Public Affairs Index

"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 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 Carroll

Alice in Wonderland

Driven by its mandate to help enhance the quality of public governance in the states, Public Affairs Centre (PAC), widely known for its Citizen Report Card (CRC), embarked on an ambitious exercise in 2016, to measure the quality and effectiveness of subnational governance in India. Thus, the now widely recognised and holistically designed Public Affairs Index (PAI) was born. PAI 2020 is the fifth edition of this composite index.

UNESCO defines governance as "...structures and processes that are designed to ensure accountability, transparency, responsiveness, rule of law, stability, equity and inclusiveness, empowerment, and broad-based participation". Often confused with Management, Governance is really about distribution and sharing of power, setting priorities and holding stakeholders accountable. Good governance, often recognised as a necessary precondition for eradicating poverty and ensuring sustainable development, was one of the targets of the Millennium Development Goals (MDGs) and with this promoting good governance for human welfare emerged a priority. More important, it was the famous third wave of democratisation in the 1990s that triggered the quest for measuring governance to monitor the progress of a country.

Policy makers and economists agreed that good governance is essential for economic development. In late 1990s, The World Bank Institute and the Research Department of World Bank, initiated a programme to evolve worldwide governance Indicators. Effectively debunking the difficulty in measuring an abstract governance, several institutions developed data-based frameworks

to measure the quality of governance relying, both on empirical data and analyses. Findings of such analyses began to gain traction amongst the government personnel, civil society and even the private sector. Inter-governmental and multilateral institutions began to employ data-driven frameworks tied with effective outcomes for policy and decision making.

Subnational Governance

Empirical case studies increasingly reinforced the significant role that the sub-national States can play in regulating rapid economic activities and governance. Sub-national governments go a long way in addressing human development issues like resource imbalance, regional disparities, problems of exclusion, denial, marginalisation, discrimination, absence of rule of law, hence denial of security, safety and opportunities. With an exclusive jurisdiction over agriculture, school education, public health, sanitation, land and police, States in India, besides being mere implementers of Centre's initiatives, can customise and restructure them to suit their needs and address the regional challenges.

Despite distinct constitutional delineation of power between the centre and states, there always existed a tussle between exertion of overarching power by the centre and the propensity of the states to assert their autonomy. The restructured Planning Commission, now referred to as NITI (National Institution for Transforming India) Aayog, in 2015 recommended greater devolution of funds to

states and cautioned against any arbitrary cuts in Centrally Sponsored Schemes (CSS) paving the way for a harmonious and constructive development strategy for the country. Devolution of funds and decentralisation are an essential beginning towards empowering the states. In this regard, the PAI 2019 recommended more effective implementation of the 73rd and 74th amendments for strengthening the third tier of governance to generate a multiplier effect and significantly enhance the impact of the Centre's initiatives together with the states' aggregate performance. PAI has also alluded to the bottom up approach and the need for the democratisation of development.

For long, from the perspective of the development trajectory of a country and performance of the states, GDP as an indicator received overwhelming attention of policy makers to the near & complete exclusion of equity, ecological sustainability and the outcomes of such economic development. GDP or economic power has been a denominator for appraising the comparative strength of a country among the comity of nations. The higher the GDP the more powerful is the country because of its economic strength, military, infrastructure and currency. Since the turn of the millennium and especially after the recession in 2008, the concept of GDP ceased to be a comprehensive indicator of the multi-sectoral development. The concept of inclusive development as opposed to economic development began to gain prominence. Along with regular macroeconomic indicators, the ranking of human development indicators and physical quality of life indicators began to gain prominence. Various international agencies began to evaluate countries based on a wide variety of indicators to examine

and ensure the delivery of the fruits of development to citizens, which in the ultimate analysis is the crux of good governance.

Conceptualisation of PAI

Periodic monitoring or assessment of progress is essential to revive and revitalise governance mechanisms. Besides bringing transparency to the implementation of public policies, sustained efforts on the evaluation of relevant indicators of governance would compel implementing agencies to constantly review policies and revisit them to address the needs of the people. Applying this principle, since launching the Public Affairs Index in 2016, the PAC has been refining the PAI methodology to mirror individual approaches of the States. Making a marked departure from the subjective approach, PAI embraced a scientific approach of measuring governance based on the data collected from reliable secondary sources and developed a framework that offered solutions to the core issues that confronted the States. In line with the changing global paradigms where development is expressed in terms of numbers or score cards, PAI developed a data driven framework which makes more sense to those involved in governance and their subjects. This triggered a genuine inter-state competition, corporate style of evaluation, instilled a perish or perform outlook, and fostered periodic monitoring to ensure timely implementation and execution of projects.

On the premise that a single definition of governance cannot be applied to all states as they have nuanced differences arising out of cultural dissimilarities and social variations, including governance measuring

doctrines and approaches, PAI conceptualised an India-specific study to rank the 30 (now 29) states of India categorised into two lists based on population with two crore population as the dividing line. Accordingly, 68 indicators grouped within 25 focus subjects falling under 10 themes were selected for the purpose of study in 2016. Data was standardised with population and standardised variables were represented in percentage form for interstate comparisons. Ranks were allotted at indicator level, focus subject level and theme level. Themes included- Essential Infrastructure, Human Development, Social Protection, Women & Children, Law and Order, Justice, Environment, Transparency & Accountability, Fiscal Management, and Economic Freedom.

After analysing the data covering 10 broad themes Kerala stood at the top table amongst both large and small states closely followed by Tamil Nadu and Karnataka at 2nd and 3rd position respectively. With high economic strength and financial prowess Maharashtra and Gujarat wrested 4th and 5th positions. With an overall better performance in all the indicators, the Kerala model of development stood out as the epitome of quality of governance in sharp contrast to the Gujarat Model of development that fared poorly in social and human indicators. Among the small states - Mizoram, Himachal Pradesh, Delhi and Sikkim shared the top honours. PAI 2016 presented a comprehensive analysis of 29 states (since data on the then recently carved Telangana state wasn't available).

PAC has notably employed the modern tool of Sentiment Analysis to extract the opinions from social media. This analysis deploys twin tools

of the Natural Language Programming (NLP) and Machine Learning (ML) algorithms wherein articles containing the predetermined set of words are classified and analysed. Based on the perceptions of social media Karnataka was first among the equals closely followed by Tamil Nadu and Odisha in 2nd and 3rd positions. Sikkim topped the list of small states followed by Tripura and Himachal Pradesh. Kerala was ranked the best governed states followed by Tamil Nadu and Andhra Pradesh.

PAI 2017

After the receiving acclaim for a relatively reliable index, and after considerable deliberations, PAI 2017 expanded its vision to include an exclusive study on Inequality which included economic disparity, gender bias and social discrimination. With this, the focus subjects increased to 26; 16 new indicators were added, 2 tweaked and 2 dropped to arrive at 82 total indicators for analysis under the broad frame work of 10 defined broad themes. Prioritising equity and inclusion as key governance aspects, the concept of inequality was revisited to emphasise the divergence between regions, states, and within communities. Based on the availability of data, the Compound Annual Growth Rate (CAGR) and Arithmetic Mean (AM) was calculated with data from three consecutive years and used as data points for a scale of 0 to 1. The five top places in the overall PAI index (score) were occupied by Kerala, Tamil Nadu, Gujarat, Karnataka, and Maharashtra respectively. Himachal Pradesh was the first among small states followed by Goa, Mizoram, Sikkim and Uttarakhand.

The last four ranks among the large states-Assam, Odisha, Jharkhand and Bihar in both 2016 and 2017 remained the same. The highest rankings of both large and small states dipped in 2017 with differences between the larger states being much less in 2017. Interestingly, 13 among the 18 large states were performing at levels above the mid-point, while 7 out of 12 states were placed above the midpoint driving home the point of larger states contributing much towards good governance. The highest score on the scale of 0 to 1 was 0.568 suggesting that even the best state was a mediocre performer in the larger framework of good governance.

Five themes – Inequality, Human Rights, Crime, Law & Order, Essential Infrastructure, and Fiscal Management were chosen for the Sentiment Analysis in 2017. Among the large states, Assam topped the overall sentiment score in all the five themes followed by Kerala, Rajasthan, Haryana and Maharashtra. Uttarakhand, Sikkim, Tripura and Meghalaya obtained the highest scores in that order in the category of small states. In the special study on social, economic and gender equality, Kerala state stood at the top of the chart, reasserting the pre-eminence of the Kerala Model of Development. Tamil Nadu, Punjab, Telangana, Haryana followed among the large states. The wide gap in the index value between the rank 1 and rank 2 States, vouches for overall better performance of Kerala in all the social indicators. Among the small states, Sikkim ranked first followed by Himachal Pradesh, Goa, Mizoram and Delhi. In the light of the PAI findings, the States that had invested significantly in health and education topped the PAI index. States that fared poorly in health and education lagged behind

in the development trajectory and ended up at the bottom of the PAI index rankings.

After 2017, Sentiment Analysis was discontinued. While sentiment analysis does provide subjective perceptions, it was recognised that it runs counter to the empirical approach adopted for the PAI index. Though often touted as a useful analysis for business strategy, this quick tool to gauge popular perception based on the reports from the social media, is rooted in bias. Ideally gauging perceptions of an independent, apolitical, unbiased, uncensored media would help in assessing the mood of people regarding particular theme. But the social media is none of these. Rooted in bias, sentiment score may have been an unproductive exercise.

Comprehensive Study of Governance

Important pointers from the study in 2016 and 2017 became a motivating factor for various states. Broadening the scope and improvising the study, with inputs from academicians and statisticians, fine-tuning methodology, PAI 2018 commenced an earnest analysis of 100 indicators with 30 focus subjects and 10 themes. PAI 2018 adopted the Four Capital Theory (FCT) as the cornerstone of governance and gave a special focus on the Children of India.

The findings of the three consecutive years established a clear lead of Southern states in the overall PAI Index. Kerala and Tamil Nadu consistently occupied the first two positions with Telangana catapulting to third position in 2018. Uttar Pradesh, Bihar, Madhya Pradesh, Jharkhand which ended up at the bottom of the table trig-

gered the old debate of BIMARU states weighing down the progress of the country. North India states displayed poor performance in a variety of indicators without any real signs of progress. Significant divergences were observed between Southern States and BIMARU states in aspects of literacy, life expectancy and education. Small states with a steady improvement in performance offered valuable lessons to the large states. Himachal Pradesh, Goa, Mizoram and Sikkim consistently topped the list in the small state category.

Exhaustive analysis of various indicators in PAI 2018 offered crucial insights on the performances of various states. The outstanding performance of Himachal Pradesh a result of largely bipartisan long-term strategies; and a rare political unanimity that education, health, women's empowerment social justice be given highest priority contributed to its vibrant transformation. Also, the determination and aspirations displayed by small states to improve their performance and the great impact of social harmony in ensuring better reach of government policies made a case in point for the bifurcation of larger states like Uttar Pradesh and Bihar.

Throughout the study, the importance of political stability and bipartisan support of the political parties have been left largely unexplored. Future studies can take this analysis forward. Since independence, Kerala has been by and large ruled by leftist or centre of left parties. PAI has indicated that this leftist slant might have been a driving factor for better performance in various social indicators.

PAI 2018 conducted special analysis of data spanning 2005-06 to 2015-16 on focus subjects of education,

health and women of the top five states which bettered themselves and the bottom five states with lowest growth rates to understand how they are catching up with others. Bihar and Jharkhand reportedly registered remarkable progress in full immunisation among children of 12-23 months age group compared to Tamil Nadu, Himachal Pradesh, Haryana, Maharashtra and Uttarakhand. Similarly, Infant Mortality Rates have dropped in almost all states except Mizoram. Interestingly, states with low growth rates like Bihar and Arunachal Pradesh showed increased investment in education while states like Karnataka and Delhi showed decreased public spending on education. In the case of institutional delivery, Chhattisgarh and Jharkhand registered the highest improvement despite poor performance in other social indicators. A clear pattern of laggard states demonstrating the will to achieve higher human development goals is a significant welcome change. The better performance of Chhattisgarh and Jharkhand strengthens the case for the division of larger states to provide for more equitable distribution of resources. Kerala, Tamil Nadu, Telangana, Karnataka and Gujarat occupied the first five positions in the 2018 aggregated PAI index. Among small states, Himachal Pradesh maintained its lead followed by Mizoram, Sikkim, Tripura and Chhattisgarh.

Constructing a Composite Index (CI) through the prism of Sustainable Development

In a paradigm shift from the plethora of indicators, PAI 2019 carried out a statistically rigorous scientific analysis of select indicators related to sustainable development. With the objective of

meeting global standards, PAI 2019 subscribed to a prescriptive orientation for measurement of sub-national governance.

The veracity of any analysis is contingent on the exactitude of data. Factoring in the constraints related to availability of quality data indicators which have statistically significant impact on governance were carefully chosen to construct a Composite Index (CI). Instead of assigning weights, data was subjected to Factor Analysis (FA) and Principal Component Analysis (PCA). Delta analysis was also used to analyse performance of a state over a period of time.

To measure governance, PAI 2019 identified three pillars - Growth, Equity and Sustainability with five themes propounded in the World-Wide Governance Indicators (WGI). Voice and Accountability, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption. (WGI has six dimensions, the theme of Political Stability and Absence of violence/Terrorism was excluded from the purview of the 2019 study). Aligning the analysis to the global approach, PAI 2019 was integrated with the Sustainable Development Goals (SDG) agenda and focussed on 13 of the 17 SDG in which the state governments play a major role, and identified 49 indicators under them to measure governance. With the SDG framework, PAI 2019 took a leap forward to revamp the analysis for generating an India-specific data-driven framework to help in making informed policy decisions in the pursuit of the UN development agenda, 2030.

The Evolution of the Public Affairs Index

Unlike the previous three editions, espousing the objectives of enabling the states to identify problem areas of governance, providing support for optimisation solutions, and highlighting the need to strengthen institutions, PAI 2019 came a long way in streamlining its governance assessment exercise. Equity, Growth and Sustainability are the cornerstones for development. Using 23 indicators, PAI 2019 measured equity across the three dimensions of social, economic and gender spanning the five themes. Tamil Nadu topped the rankings with an index value of 0.782 followed by Chhattisgarh and West Bengal. While Madhya Pradesh (-1.084), Haryana, Odisha, Karnataka and Telangana (-1.732) occupied the bottom rankings. In case of small states, Himachal Pradesh (1.889) ranked first, followed by Meghalaya, Nagaland, Manipur and Mizoram. While Jammu & Kashmir (0.460), Uttarakhand, Sikkim, Arunachal Pradesh and Delhi (-2.285) found place at the bottom of the rankings. The large differences in the scores of states showcased the differences in equity.

Another interesting aspect of PAI 2019 was the use of correlation analysis, regression analysis and delta analysis. Correlation analysis signals the relationship between the variable under study to the overall PAI index. A weak correlation exists between equity and overall PAI in case of large states. However, a strong positive correlation is found between equity and PAI index in case of small states. By consequence, new policy initiatives with a potential impact on equity indices can be implemented on a pilot basis in small states. If the desired change is achieved, these policies can be scaled to larger states.

Regression Analysis helped in identifying the magnitude to which particular indicators affected the overall PAI index. With regard to equity, aspects related to women, children, education, injustice faced by SC/ST and undertrial prisoners had a marked effect on the overall PAI. This analysis greatly enhanced the ability to identify the problem areas in particular states. Similarly, Delta Analysis performed for a period of time, besides nullifying the legacy issues helped in fathoming the performance of state in a particular aspect.

The aforementioned three analyses provide a detailed account of the structural inadequacies which in turn can serve as a feed-back apparatus for policy makers to catalyse collaboration with regional stakeholders and accelerate development.

Twenty-one indicators were used to measure growth which included the themes of government effectiveness and regulatory quality. Growth is often discussed in terms of economic progress alone, but in fact, includes health, education and infrastructure. Indicators like number of buses, population with access to electricity and banking facilities, measures to promote business ventures and state spending on agriculture were found to enhance the growth prospects of the states. In the case of large states, the performance in growth significantly influenced overall performance. However, the correlation is not significant in small states. Growth analysis underscored a striking feature of jobless growth phenomenon in Gujarat, Madhya Pradesh and Himachal Pradesh which experienced simultaneous increase in both unemployment rate and Net State Domestic Product (NSDP). Delta analysis between 2011-12 and 2017-

18 of unemployment indicated an overall increase in unemployment in all states except Tripura.

Sustainability is often sacrificed for economic progress. Consequently, nature's fury manifests in the form of extreme climate events that have an impact on the environment, economy and the future of humankind, are a common occurrence now. The burden of striking a right balance to the Malthusian-Darwinian dynamic through implementation of right policies is on state governments. The top performing states in sustainability pillar were the five southern states. Karnataka with an index score of 1.45 led the table followed by Kerala, Tamil Nadu, Telangana and Andhra Pradesh. Sustainability and overall performance were strongly correlated both in large and small states. Interestingly, all the five indicators of sustainability-renewable energy, proportion of forest area, proportion of degraded area, solid waste generation and processing, PM10 particulate matter was found to have significant impact on the sustainability index. While the use of renewable energy has increased in all states, seven states witnessed decline of which five are North-Eastern states of Nagaland, Manipur, Meghalaya, Tripura and Sikkim. West Bengal showed the highest increase in forest cover from 2007 to 2017.

Four South Indian states were among the top five in the CI rankings - Kerala with a score of 1.011 was ahead of Tamil Nadu (0.823), Andhra Pradesh, Karnataka and Punjab. Among small states, Goa with a score of 1.1 led the CI rankings followed by Himachal Pradesh, Meghalaya, Arunachal Pradesh and Mizoram. PAI 2019 made a significant contribution in providing a Pan-India perspective

through cluster-analysis. The analysis identified a cluster with moderate equity performance but below average in growth and sustainability pillars and included the bottom five large states - Uttar Pradesh, Bihar, Jharkhand, Odisha, Assam. 96 of the 100 aspirational districts are concentrated in these regions which remained underdeveloped despite vast amounts of public investments.

Delta Analysis tracks a state's performance for a particular variable across a time period and can be an effective tool in assessing the impact of government policies like affirmative action, social security schemes etc. Unlike the static analysis, delta analysis is dynamic, factoring in changes over of time to reflect a trend, but any climate or health emergency of pandemic proportions can an anomalous change in a pattern.

PAI 2016, 2017, 2018 can be reckoned as formative years where attempts were made to present a comprehensive or 360 view of sub-national governance. Use of indicators with auto-co-relationships changed the outcomes. By culling the indicators and integrating the measures with global themes, PAI 2019 has fine-tuned its study and raised the bar. Unfortunately, comparative analysis of PAI 2019 with previous studies is not possible due to the differences in the methodologies used. By displaying an intent to provide a reliable, credible and comparable data-driven framework, PAC has certainly elevated itself as a premier think-tank in policy making.



Each state is economically, socially, politically and culturally different from one another. Thus, policies and reforms need to be context and region specific so that it benefits the marginalised section of the population, thus **'leaving no one behind'**. The state fact sheets provide an insightful analysis on the progress made by the states towards the three dimensions of sustainable development - Equity, Growth and Sustainability.

The fact sheets provide the rankings and scores for each state while giving a brief description on the performance of the state at the Pillar level. In addition, the fact sheets highlight those specific indicators where the state's ranking is among the Top 3 and Bottom 3. Each fact sheet also calls attention to the indicators where the state is an outlier in the hope that policy reform is directed towards that specific sector.

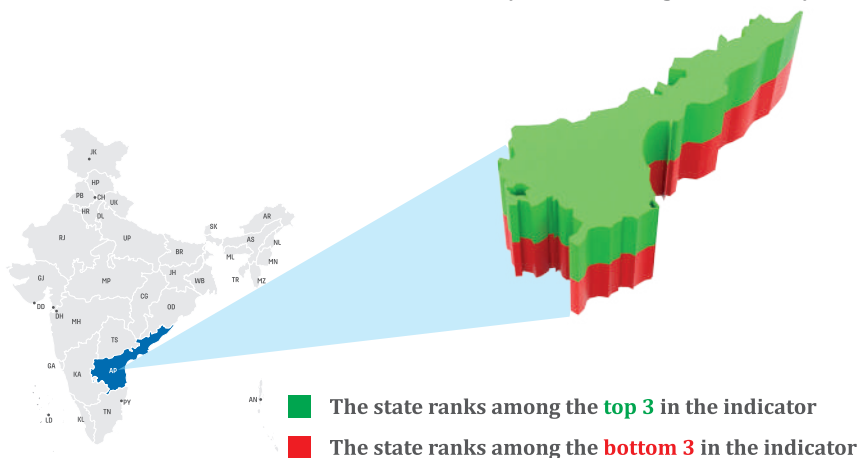
Given the pace of growth and the development paradigm of the country, it is believed that focus must be given primarily to the pillars of Human Development – Education, Health & Livelihoods. Hence, the state fact sheets include actionable policy recommendations in the ambit of Human Development.

AP ANDHRA PRADESH



Andhra Pradesh ranks 3rd in the PAI 2020 Index, similar to the rank in PAI 2019. The state has shown an improved performance in the Equity pillar and is ranked 1st. The indicators where the state's performance is among the top 3 include the utilisation of the Nirbhaya Fund, percentage of undertrials, crimes against children and worker population ratio. The state is also a top performer in several growth indicators including health worker density, budget allocation in agriculture and infrastructure, population with access to electricity and least unemployment rate.

PAI 2020 recommends that the state focus on reducing inequalities in terms of slum population and rural indebtedness and focus on improving educational outcomes. The state may focus on schemes such as the Pradhan Mantri Awas Yojana, the Agriculture and Rural Debt Relief Scheme, Amma Vodi, Mid-Day Meal and Samagra Siksha Abhiyan.



Pillar I (Equity)

Utilisation of Nirbhaya Fund
 Unsentenced detainees as a proportion of overall prison
 Crimes against children
 Worker Population Ratio (Female) (WPR)
 Proportion of urban population living in slums
 Gender Parity Index (Elementary)
 Rural Indebtedness
 Child Sex ratio



Pillar II (Growth)

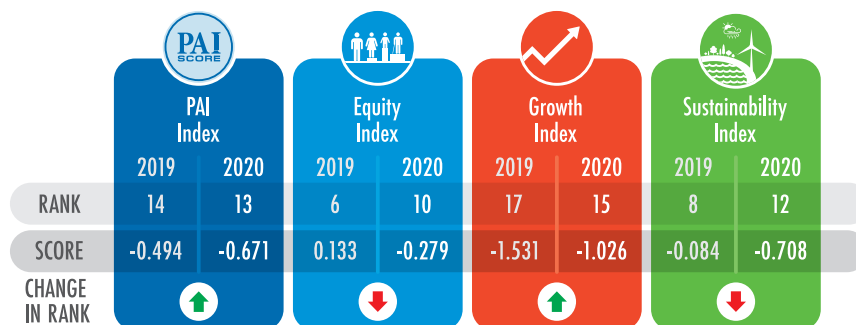
Proportion of total Government expenditure on Agriculture and Allied
 Health worker density
 Percentage of school teachers professionally qualified
 Proportion of population with access to electricity
 Annual growth rate of real GSDP per capita
 Unemployment Rate
 Proportion of households with an account at a bank
 Proportion of total government expenditure on infrastructure
 Net Enrolment Ratio at Elementary (1-8)
 Proportion of population using safely managed drinking water services
 Fiscal Surplus/ Deficit
 Manufacturing value added as a proportion of GDP and per capita



Pillar III (Sustainability)

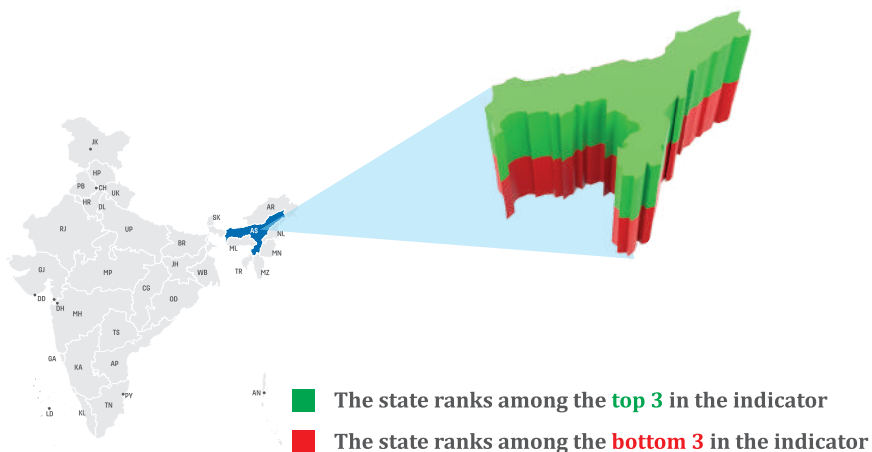
Large States

AS ASSAM



Assam ranks 13th in the PAI 2020 Index, a rank higher than in PAI 2019. The state has seen considerable dip in performance in both the Equity and Sustainability pillars. The indicators where the state is among the top 3 performers include the participation of children in early education, slum dwelling population, rural indebtedness and crimes against minorities. The state is also a top performer in net enrolment ratio at the elementary level, budget allocation for infrastructure and forest area

PAI 2020 recommends that the state focus on improving female worker population ratio, quality and infrastructural facilities in schools, increasing employment opportunities, basic immunisation and tree cover. The state may focus on schemes such as the Swadhar scheme for women welfare, Samagra Siksha Abhiyan, Integrated Child Development Scheme, Swachh Bharat Abhiyan and the CAMPA scheme for forest cover



Pillar I (Equity)

- Participation rate in organized learning (one year before the official primary entry age)
- Proportion of urban population living in slums
- Rural Indebtedness
- Incidence of Crimes against SC and ST
- Cases Pending in District Courts
- No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
- Number of victims of intentional homicide per 100,000 population
- Worker Population Ratio (Female) (WPR)



Pillar II (Growth)

- Net Enrolment Ratio at Elementary (1-8)
- Proportion of total government expenditure on infrastructure
- Immunisation achievement
- ASER Index
- Proportion of schools with access to (a) electricity; (b) computers for pedagogical purposes; (c) access to CWSN
- Percentage of school teachers professionally qualified
- States Own Tax Revenue Growth
- Unemployment Rate
- Proportion of households with an account at a bank



Pillar III (Sustainability)

- Forest area as a proportion of total land area
- Proportion of land that is degraded over total land area
- Tree cover

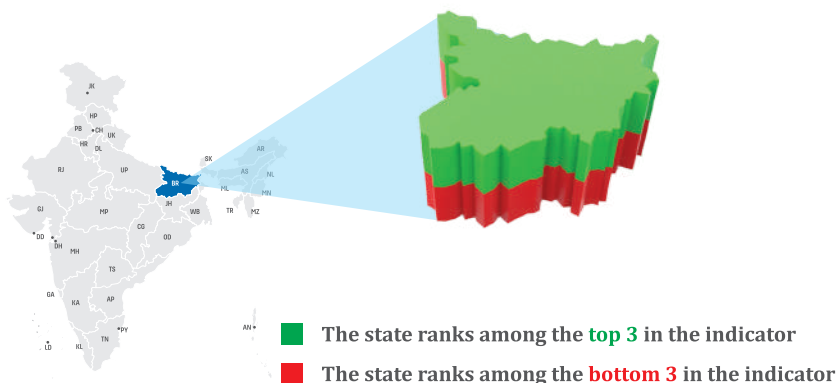
State Fact Sheets

BR BIHAR



Bihar ranks 16th in the PAI 2020 Index, a rank lower than PAI 2019. The state has seen the most decline in the Sustainability pillar. The indicators where the state is among the top 3 performers include coverage under social protection schemes, urban and rural palma ratio, social sector expenditure, cases of rape, crimes against children, improved educational outcomes and land degradation.

PAI 2020 recommends that the state focus on improving educational outcomes, participation of women in the workforce, access to clean cooking fuel, sanitation and electricity and manufacturing in the share of GDP. The state may consider prioritising schemes such as the Sarva Siksha Abhiyan, Bihar Student Credit scheme, Pradhan Mantri Jan Aarogya Yojana and the Pradhan Mantri Deen Dayal Upadhyay Ujjwala Yojana



Pillar I (Equity)

Proportion of population covered by social protection
 Palma Ratio of Household Expenditure in Urban and Rural India
 Gender Parity Index (Elementary)
 Farmer's/ Cultivators suicide per HHs
 Expenditure in social sector
 Crimes against children
 Rapes per 10 lakh population
 Participation rate in organized learning (one year before the official primary entry age)
 Average Annual Drop-out rate at secondary level
 Unsentenced detainees as a proportion of overall prison population
 Dowry deaths per 10 lakh population
 Cases Pending in District Courts
 Worker Population Ratio (Female) (WPR)
 No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered



Pillar II (Growth)

Net Enrolment Ratio at Elementary (1-8)
 Proportion of population using safely managed drinking water services
 Proportion of households with an account at a bank
 Health worker density
 Institutional delivery
 Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30
 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;
 Percentage of school teachers professionally qualified
 Proportion of population using safely managed sanitation services
 Proportion of population with access to electricity
 Manufacturing value added as a proportion of GDP and per capita
 Number of Buses per 10 lakh population



Pillar III (Sustainability)

Proportion of land that is degraded over total land area (4th)
 Percentage of households using clean cooking fuel
 Tree cover

Large States

CA CHHATTISGARH

	PAI SCORE		Equity Index		Growth Index		Sustainability Index	
	2019	2020	2019	2020	2019	2020	2019	2020
RANK	8	5	2	3	12	10	10	4
SCORE	-0.059	0.429	0.514	0.260	-0.149	0.187	-0.543	0.840
CHANGE IN RANK	↑		↓		↑		↑	

Chhattisgarh ranks 5th in the PAI 2020 Index, an improvement from the 8th position in PAI 2019. The state has shown the most improvement in the Sustainability pillar. The indicators where the state is among the top performers include the political participation of women, utilisation of the Nirbhaya fund, reducing rural indebtedness, improving child sex ratio and female participation in the workforce. The state is also a top performer in terms of unemployment rate, air quality and forest area.

PAI 2020 recommends that the state focus on improving infant mortality rate, safety of children and women, usage of renewable energy and indicators of fiscal performance. The state may consider prioritising implementation of schemes such as the POSHAN Abhiyan, efficiency of the Samvedna centres and the Swavlamban Yojana.



Pillar I (Equity)

Proportion of seats held by women in (a) state legislatures and (b) local governments

Utilisation of Nirbhaya Fund

Rural Indebtedness

Unsented detainees as a proportion of overall prison population

Child Sex ratio

Worker Population Ratio (Female) (WPR)

Infant Mortality Rate (IMR)

Crimes against children

Rapes per 10 lakh population



Pillar II (Growth)

Unemployment Rate

Fiscal Surplus/ Deficit

States Own Tax Revenue Growth

Annual growth rate of real GSDP per capita



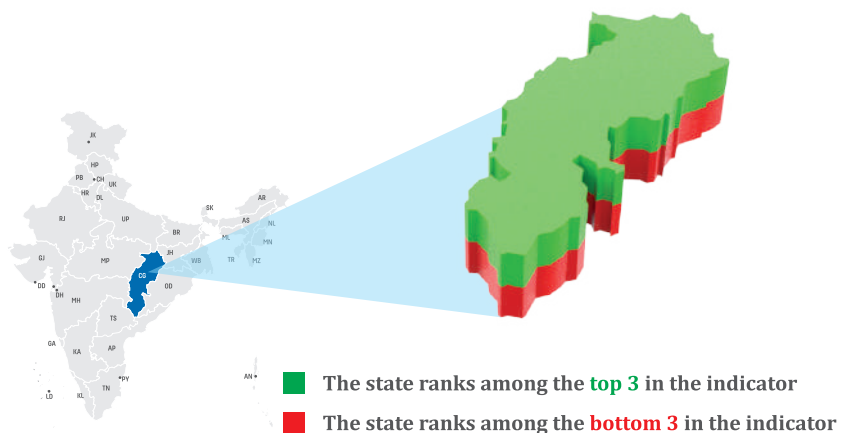
Pillar III (Sustainability)

Forest area as a proportion of total land area

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



GJ GUJARAT



Gujarat ranks 9th in the PAI 2020 Index, a drop from the 6th position in PAI 2019. The state has shown consistent performance across all three pillars between the two years. The indicators where the state is among the top 3 performers includes reduced crimes against women, inequalities and indicators of fiscal and economic growth.

PAI 2020 recommends that the state focus on improving coverage under social protection schemes, budget allocation in agriculture, women's participation in politics, access to immunisation and control of pollution levels. The state may consider prioritising schemes such as the Pradhan Mantri Jan Aarogya Yojana and the Gujarat Emission Trading scheme.



Pillar I (Equity)

Palma Ratio of Household Expenditure in Urban and Rural India

Dowry deaths per 10 lakh population

Rapes per 10 lakh population

Cases Pending in District Courts

Proportion of population covered by social protection

Proportion of seats held by women in (a) state legislatures and (b) local

Utilisation of Nirbhaya Fund

Proportion of total Government expenditure on Agriculture and Allied Services



Pillar II (Growth)

Percentage of school teachers professionally qualified

Fiscal Surplus/ Deficit

Annual growth rate of real GSDP per capita

Proportion of households with an account at a bank

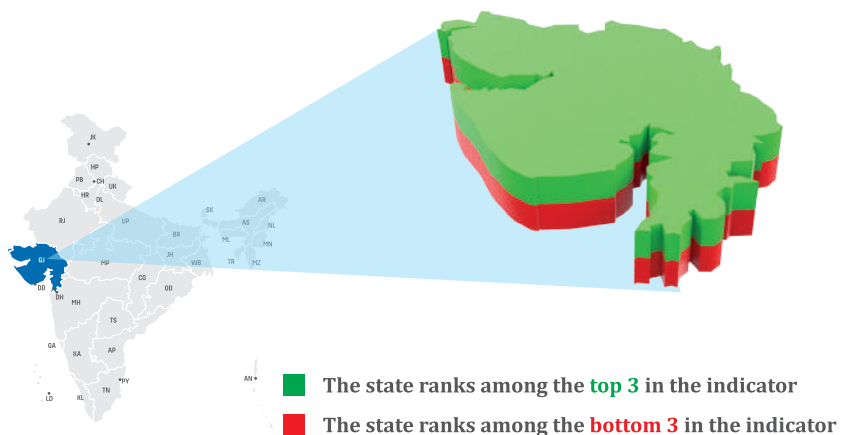
Manufacturing value added as a proportion of GDP and per capita

Immunisation achievement



Pillar III (Sustainability)

Annual mean levels of fine particulate matter (PM10) in cities
(population weighted)



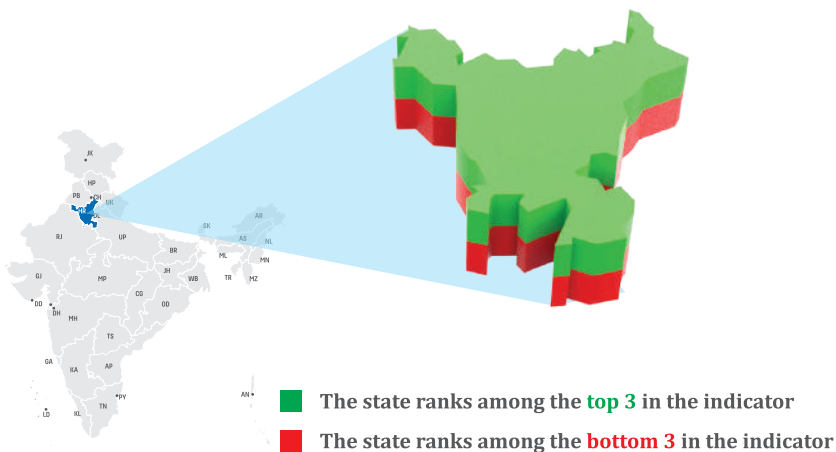
Large States

HR HARYANA

	PAI SCORE		Equity Index		Growth Index		Sustainability Index	
	2019	2020	2019	2020	2019	2020	2019	2020
RANK	12	14	15	17	2	7	15	15
SCORE	-29	-702	-1.134	-1.273	1.11	0.562	-0.844	-1.393
CHANGE IN RANK	↓		↓		↓		=	

Haryana ranks 14th in the PAI 2020 Index, a drop from 12th position in PAI 2019. The state has shown a drop in performance in both the Equity and Growth pillar. The indicators where the state is among the top 3 performers include utilisation of the Nirbhaya fund, reducing farmer suicides, quality and infrastructure in school education and population with access to clean sanitation.

PAI 2020 recommends the state to focus on reducing inequalities, increase participation of children in early education, improve safety of women and children, reduce unemployment and increase usage of renewable energy sources. The state may consider prioritising schemes such as the Haryana Child Protection scheme, the Haryana Skill Development Mission, the usage of CAMPA fund and the Integrated Solid Waste Management Scheme.



Pillar I (Equity)

Utilisation of Nirbhaya Fund

Farmer's/ Cultivators suicide per HHs

Participation rate in organized learning (one year before the official primary entry age)

Palma Ratio of Household Expenditure in Urban and Rural India

Number of victims of intentional homicide per 100,000 population

Child Sex ratio

Crimes against children

Dowry deaths per 10 lakh population



Pillar II (Growth)

ASER Index

Proportion of schools with access to (a) electricity; (b) computers for

Proportion of population using safely managed sanitation services

Unemployment Rate



Pillar III (Sustainability)

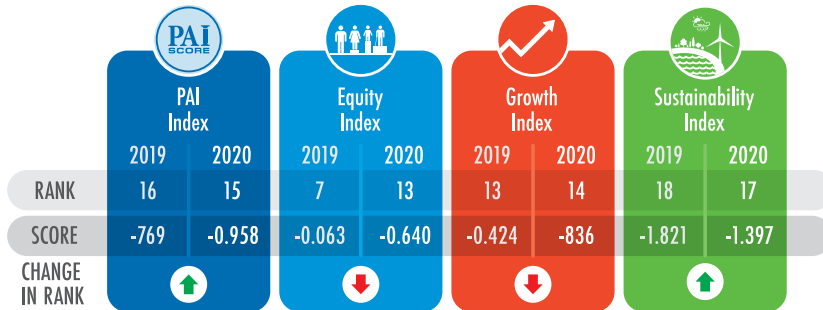
Tree cover

Renewable energy share in the total final energy consumption

Forest area as a proportion of total land area

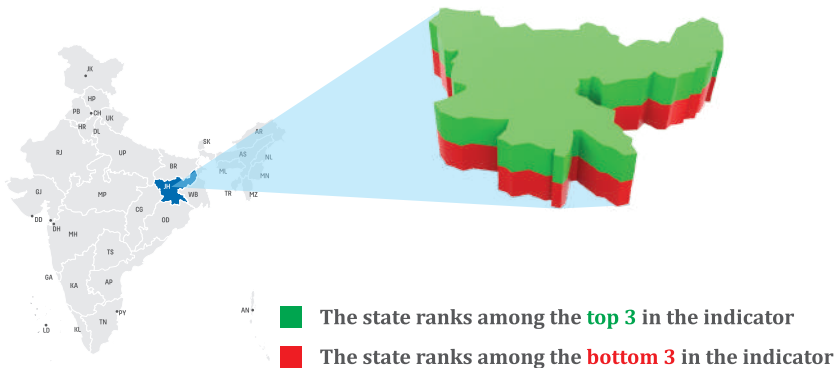
Solid waste generation and waste processing in the urban areas

JH JHARKHAND



Jharkhand ranks 15th in the PAI 2020 Index, a minor improvement from 16th position in PAI 2019. The state has seen a considerable drop in the Equity rankings between the two years from 7th in 2019 to 13th in 2020. The indicators where the state is among the top 3 performers include political participation of women, reduced inequalities, social sector expenditure, crimes against children and economic growth.

PAI 2020 recommends the state focus on improving coverage of social protection schemes, quality and infrastructure of school education, healthcare facilities, access to sanitation, electricity and renewable energy and share of manufacturing in economic growth. The state may consider prioritising schemes such as Samagra Siksha Yojana, Pradhan Mantri Jan Aarogya Yojana, Swachh Bharat Mission and Pradhan Mantri Deen Deyal Upadhyay Ujjwala yojana.



Pillar I (Equity)

- Proportion of seats held by women in (a) state legislatures and (b) local governments
- Palma Ratio of Household Expenditure in Urban and Rural India
- Proportion of urban population living in slums
- Rural Indebtedness
- Farmer's/ Cultivators suicide per HHs
- Expenditure in social sector
- Crimes against children
- Proportion of population covered by social protection
- Average Annual Drop-out rate at secondary level
- Number of victims of intentional homicide per 100,000 population



Pillar II (Growth)

- Annual growth rate of real GSDP per capita
- Health worker density
- Institutional delivery
- ASER Index
- Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30
- 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
- Proportion of population using safely managed drinking water services
- Proportion of population using safely managed sanitation services
- Proportion of population with access to electricity
- Manufacturing value added as a proportion of GDP and per capita
- Number of Buses per 10 lakh population



Pillar III (Sustainability)

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

Large States

KA KARNATAKA



Karnataka ranks 4th in the PAI 2020 Index, similar to the rank in PAI 2019. The state has shown considerable improvement in the Equity pillar but a drop in Sustainability rankings. The indicators where the state is among the top 3 performers includes crimes against women, institutional deliveries, usage of renewable energy and pollution levels.

PAI 2020 recommends the state focus on improving political participation of women and reducing inequality in society. The state may consider prioritising schemes such as the Pradhan Mantri Fasal Bima Yojana, Pradhan Mantri Kisan Samman Nidhi, Micro Load Subsidy scheme and the functioning of the Karnataka Raitha Suraksha.



Pillar I (Equity)

Rapes per 10 lakh population

Proportion of seats held by women in (a) state legislatures and (b) local governments

Palma Ratio of Household Expenditure in Urban and Rural India

Farmer's/ Cultivators suicide per HHs



Pillar II (Growth)

Institutional delivery

Number of Buses per 10 lakh population

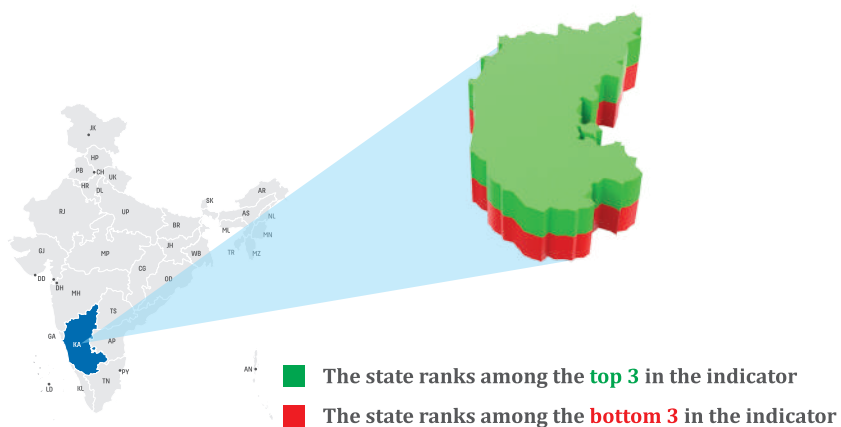
Proportion of households with an account at a bank



Pillar III (Sustainability)

Renewable energy share in the total final energy consumption

Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

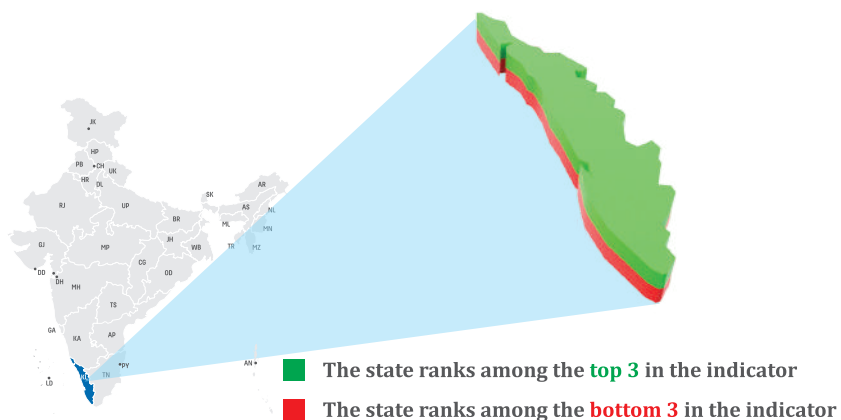


KL KERALA

	PAI Index		Equity Index		Growth Index		Sustainability Index	
	2019	2020	2019	2020	2019	2020	2019	2020
RANK	1	1	4	2	1	1	2	1
SCORE	1.011	1.389	0.358	0.628	1.308	1.419	1.367	2.118
CHANGE IN RANK	=		↑		=		↑	

Kerala ranks 1st in the PAI 2020 rankings, similar to PAI 2019. The state is among the top 3 in all three pillars and has improved rankings in the Equity pillar. The indicators where the state is among the top 3 indicators include coverage of social protection schemes, urban inequalities, access and healthcare facilities and quality and infrastructure of schools. The state has also performed well in providing access to electricity and sanitation, reduced pollution levels and forest and tree cover.

PAI 2020 recommends the state focus on addressing income inequalities, reducing unemployment rates and protection of women and social minorities. The state may consider prioritising schemes such as the One Day Home scheme, Kaithangu and Nirbhaya Cell scheme, Unemployment allowance and Kerala Zero Unemployment Scheme



Pillar I (Equity)

- Proportion of population covered by social protection
- Proportion of urban population living in slums
- Infant Mortality Rate (IMR)
- Number of victims of intentional homicide per 100,000 population
- Child Sex ratio
- Dowry deaths per 10 lakh population
- Palma Ratio of Household Expenditure in Urban and Rural India
- Expenditure in social sector
- Incidence of Crimes against SC and ST
- Rapes per 10 lakh population



Pillar II (Growth)

- Health worker density
- Immunisation achievement
- Institutional delivery
- ASER Index
- Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30
- 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
- Number of Buses per 10 lakh population
- Proportion of total Government expenditure on Agriculture and Allied Services
- Unemployment Rate
- Proportion of total government expenditure on infrastructure



Pillar III (Sustainability)

- Forest area as a proportion of total land area
- Tree cover
- Annual mean levels of fine particulate matter (PM10) in cities

Large States

MP MADHYA PRADESH

	PAI Index		Equity Index		Growth Index		Sustainability Index	
	2019	2020	2019	2020	2019	2020	2019	2020
RANK	10	10	14	16	10	12	6	6
SCORE	-0.143	-0.345	-1.084	-1.232	0.338	-0.319	0.319	0.230
CHANGE IN RANK	=		↓		↓		=	

Madhya Pradesh ranks 10th in the PAI 2020 Index, similar to PAI 2019. The state has maintained performance across all three pillars. The indicators where the state is among the top 3 performers includes budget allocation towards agriculture, reduced unemployment rate and solid waste generation and processing.

PAI 2020 recommends the state to focus on improving coverage under social protection, infant mortality, protection of women, children and social minorities, educational outcomes and indicators of economic growth. The state may consider prioritising schemes such as the Safe City programme, Kaya Kalp scheme, Sarva Siksha Abhiyan and the Swachh Sarvekshan scheme.



Pillar I (Equity)

Proportion of population covered by social protection

Infant Mortality Rate (IMR)

Incidence of Crimes against SC and ST

Crimes against children

Rapes per 10 lakh population



Pillar II (Growth)

Proportion of total Government expenditure on Agriculture and Allied Services

Unemployment Rate

ASER Index

Net Enrolment Ratio at Elementary (1-8)

Fiscal Surplus/ Deficit

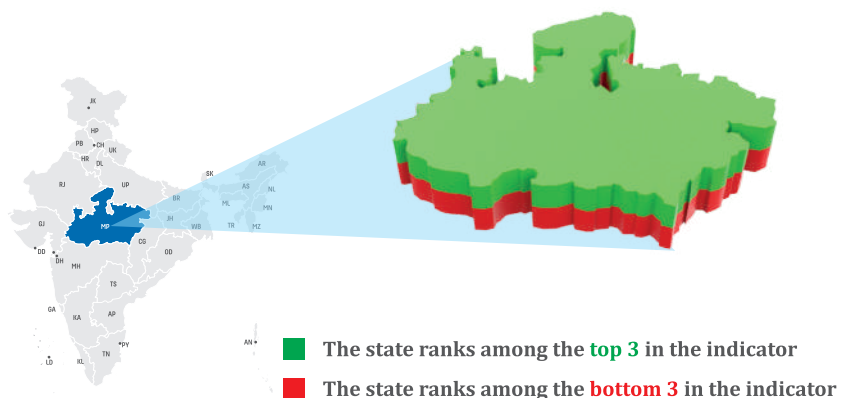
Annual growth rate of real GSDP per capita

Proportion of total government expenditure on infrastructure



Pillar III (Sustainability)

Solid waste generation and waste processing in the urban areas



MH MAHARASHTRA

	PAI Index		Equity Index		Growth Index		Sustainability Index	
	2019	2020	2019	2020	2019	2020	2019	2020
RANK	9	7	10	6	6	9	11	8
SCORE	-0.06	0.143	-0.379	0.004	0.753	0.265	-0.552	0.159
CHANGE IN RANK	↑		↑		↓		↑	

Maharashtra ranks 7th in the PAI 2020 Index, an improvement from 9th position in PAI 2019. The state has improved performance in the Equity and the Sustainability pillars. The indicators where the state is among the top 3 performers include improved school education outcomes, reduced infant mortality, social sector spending and fiscal indicators.

PAI 2020 recommends the state focus on improving performance in equity indicators such as coverage under social protection schemes, urban and rural inequalities and reducing crimes against women. The state may consider prioritising schemes such as the Pradhan Mantri Awas Yojana and Pradhan Mantri Krishi Samman Nidhi.



Pillar I (Equity)

Average Annual Drop-out rate at secondary level

Infant Mortality Rate (IMR)

Expenditure in social sector

Proportion of population covered by social protection

Utilisation of Nirbhaya Fund

Proportion of urban population living in slums

Farmer's/ Cultivators suicide per HHs

Unsentenced detainees as a proportion of overall prison population



Pillar II (Growth)

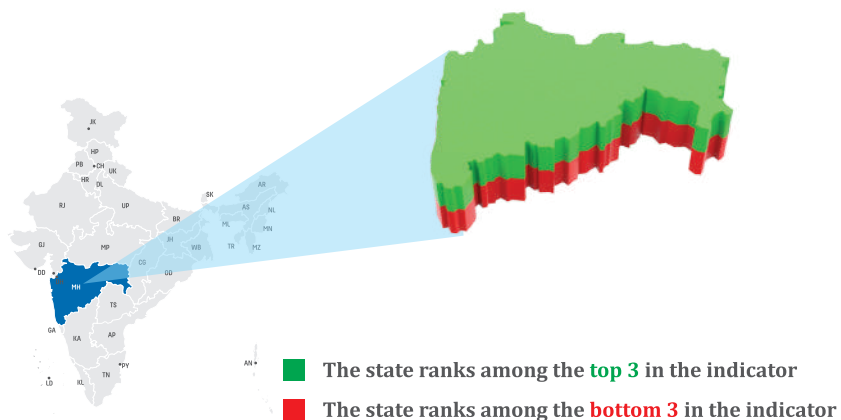
Percentage of school teachers professionally qualified

Fiscal Surplus/ Deficit

States Own Tax Revenue Growth



Pillar III (Sustainability)



Large States

OD ODISHA

	PAI Index		Equity Index		Growth Index		Sustainability Index	
	2019	2020	2019	2020	2019	2020	2019	2020
RANK	18	17	16	15	15	16	14	16
SCORE	-0.972	-1.201	-1.227	-1.154	-0.852	-1.054	-0.837	-1.395
CHANGE IN RANK	↑		↑		↓		↓	

Odisha ranks 17th in the PAI 2020 Index, an improvement by one position from PAI 2019. The state has shown constant performance in all three pillars. The indicators where the state is among the top 3 performers include social protection coverage, early childhood education and immunisation rates.

PAI 2020 recommends the state focus on reducing drop out rates, increasing utilisation of the Nirbhaya fund, improving own tax revenue and improving access to sanitation and clean cooking fuel. The state may consider prioritising schemes such as the Sarva Siksha Abhiyan, Odisha Small Savings Incentive, Swachh Bharat Abhiyan, Solid Waste Management Scheme and the Pradhan Mantri Deen Dayal Upadhyay Ujjwala scheme.



Pillar I (Equity)

Proportion of population covered by social protection

Participation rate in organized learning (one year before the official primary entry age)

Average Annual Drop-out rate at secondary level

Utilisation of Nirbhaya Fund

Gender Parity Index (Elementary)

Cases Pending in District Courts



Pillar II (Growth)

Immunisation achievement (4th)

Proportion of population using safely managed sanitation services

States Own Tax Revenue Growth

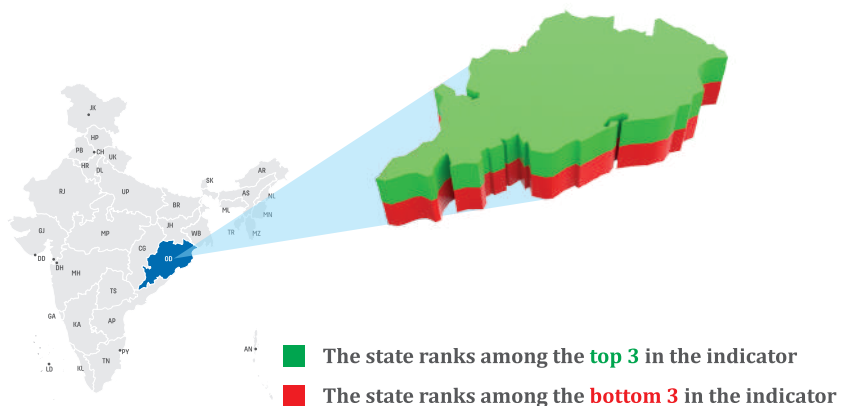
Proportion of households with an account at a bank



Pillar III (Sustainability)

Percentage of households using clean cooking fuel

Solid waste generation and waste processing in the urban areas

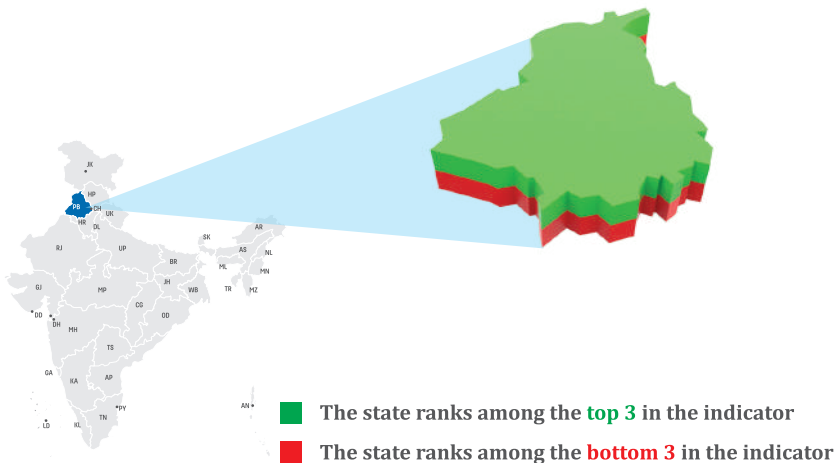


PB PUNJAB

	PAI SCORE		Equity Index		Growth Index		Sustainability Index	
	2019	2020	2019	2020	2019	2020	2019	2020
RANK	5	8	5	7	7	6	12	10
SCORE	0.089	0.091	0.216	-0.051	0.678	0.725	-0.629	-0.400
CHANGE IN RANK	↓		↓		↑		↑	

Punjab ranks 8th in the PAI 2020 Index, a drop from 5th position in PAI 2019. The state has shown an improved performance in terms of both Growth and Sustainability but a decline in terms of Equity. The indicators where the state is among the top 3 performers includes reduced malnutrition, improved school outcomes, reduced crimes against minorities, healthcare access and access to clean fuel, drinking water, electricity and sanitation.

PAI 2020 recommends the state focus on improving coverage under social protection schemes, expenditure in the social sector, improving forest coverage and growth rate of GSDP. The state may consider prioritising utilisation of the CAMPA fund.



Pillar I (Equity)

Prevalence of malnutrition amongst children below 6 years

Average Annual Drop-out rate at secondary level

Gender Parity Index (Elementary)

Incidence of Crimes against SC and ST

Cases Pending in District Courts

No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered

Proportion of population covered by social protection

Expenditure in social sector



Pillar II (Growth)

Health worker density

Immunisation achievement

ASER Index

Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30

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 drinking water services

Proportion of population using safely managed sanitation services

Proportion of population with access to electricity

Annual growth rate of real GSDP per capita



Pillar III (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

Large States

RJ RAJASTHAN

	PAI Index		Equity Index		Growth Index		Sustainability Index	
	2019	2020	2019	2020	2019	2020	2019	2020
RANK	13	11	12	9	11	8	16	9
SCORE	-0.444	-0.380	-0.445	-0.226	-0.01	0.512	-0.878	-0.293
CHANGE IN RANK	↑		↑		↑		↑	

Rajasthan ranks 11th in the PAI 2020 Index, an improvement from 13th position in PAI 2019. The state has shown an improvement in all three pillars. The indicators where the state is among the top 3 performers include political participation of women and usage of renewable energy.

PAI 2020 recommends the state focus on improving the participation of children in early education, reduced crimes against minorities, improved child sex ratio and control of pollution. The state may consider prioritising schemes such as the Bhamashah and Rajshree scheme, the CAMPA fund and Pollution Check Certificate Scheme.



Pillar I (Equity)

- Proportion of seats held by women in (a) state legislatures and (b) local governments
- Participation rate in organized learning (one year before the official primary entry age)
- Gender Parity Index (Elementary)
- Incidence of Crimes against SC and ST
- Child Sex ratio

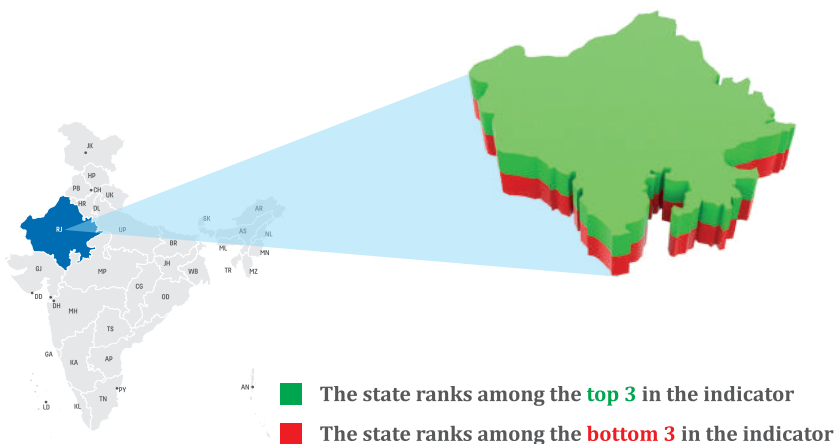


Pillar II (Growth)



Pillar III (Sustainability)

- 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
- Annual mean levels of fine particulate matter (PM10) in cities (population weighted)



TN TAMIL NADU

	PAI Index		Equity Index		Growth Index		Sustainability Index	
	2019	2020	2019	2020	2019	2020	2019	2020
RANK	2	2	1	5	8	3	3	2
SCORE	0.823	0.912	0.782	0.118	0.65	1.159	1.036	1.458
CHANGE IN RANK	=		↓		↑		↑	

Tamil Nadu ranks 2nd in the PAI 2020 Index, similar to PAI 2019. The state has improved performance in terms of both Growth and Sustainability but has seen a decline in Equity. The indicators where the state is among the top 3 performers include school outcomes, reduced infant mortality, improved child sex ratio and institutional delivery, indicators of fiscal performance and usage of renewable energy.

PAI 2020 recommends the state focus on equity indicators including political participation of women, reducing inequalities in terms of rural indebtedness and control of corruption. The state may consider prioritising the Vaazndhu Kaattuvom project.



Pillar I (Equity)

Average Annual Drop-out rate at secondary level

Infant Mortality Rate (IMR)

Child Sex ratio

Dowry deaths per 10 lakh population

Worker Population Ratio (Female) (WPR)

Proportion of seats held by women in (a) state legislatures and (b) local governments

Rural Indebtedness

Unsentenced detainees as a proportion of overall prison population

No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered



Pillar II (Growth)

Institutional delivery

Net Enrolment Ratio at Elementary (1-8)

Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30

States Own Tax Revenue Growth

Manufacturing value added as a proportion of GDP and per capita

Proportion of total government expenditure on infrastructure

Number of Buses per 10 lakh population

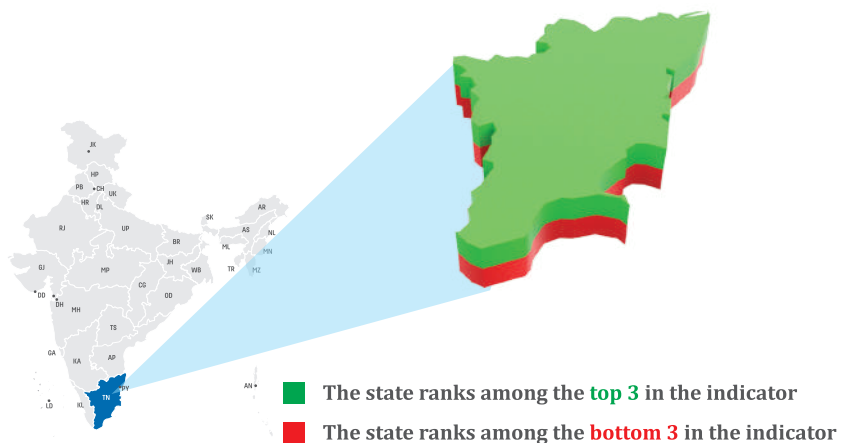


Pillar III (Sustainability)

Renewable energy share in the total final energy consumption

Percentage of households using clean cooking fuel

Tree cover



Large States

TS TELANGANA



Telangana ranks 6th in the PAI 2020 Index, a improvement by one position from PAI 2019. The state has shown improved performance in all three pillars. The indicators where the state is among the top 3 performers include reduced malnutrition, government spending on agriculture, access to clean cooking fuel and solid waste management.

PAI 2020 recommends the state focus on improving coverage of social protection schemes, urban and rural inequalities in terms of rural indebtedness and farmer suicides, access to health human resources and sanitation and government spending on infrastructure. The state may consider prioritising schemes such as the Pradhan Mantri Awas Yojana, Pradhan Mantri Jan Aarogya Yojana, Mission Bhagiratha and the Rythu Bandhu scheme.



Pillar I (Equity)

Prevalence of malnutrition amongst children below 6 years

Number of victims of intentional homicide per 100,000 population

Unsented detainees as a proportion of overall prison population

Proportion of population covered by social protection

Proportion of urban population living in slums

Rural Indebtedness

Farmer's/ Cultivators suicide per HHs



Pillar II (Growth)

Proportion of total Government expenditure on Agriculture and Allied Services

Health worker density

Proportion of population using safely managed drinking water services

Proportion of total government expenditure on infrastructure



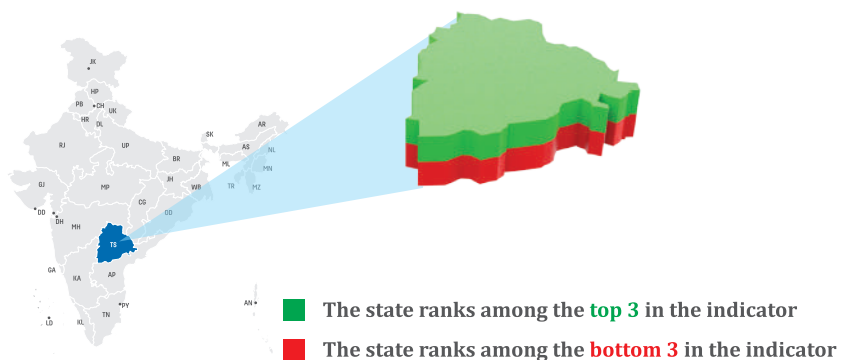
Pillar III (Sustainability)

Percentage of households using clean cooking fuel

Solid waste generation and waste processing in the urban areas

Proportion of land that is degraded over total land area

Tree cover

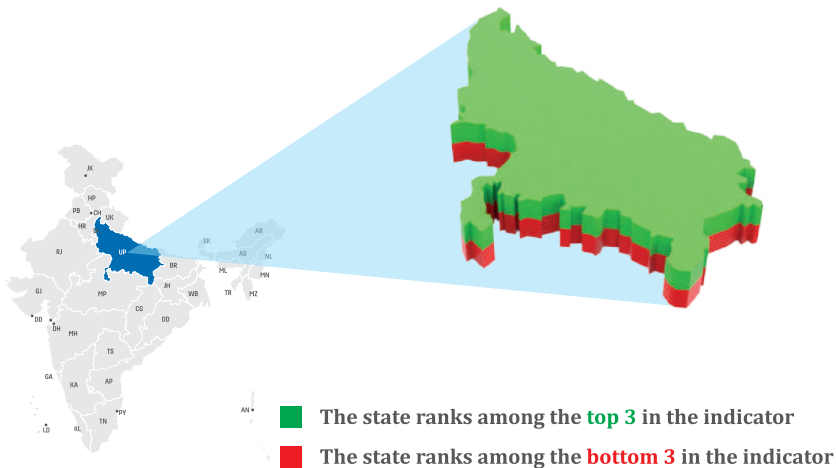


UP UTTAR PRADESH

	PAI Index		Equity Index		Growth Index		Sustainability Index	
	2019	2020	2019	2020	2019	2020	2019	2020
RANK	17	18	11	18	16	18	17	13
SCORE	-0.864	-1.201	-0.388	-1.843	-1.165	-1.386	-1.04	-1.154
CHANGE IN RANK	↓		↓		↓		↑	

Uttar Pradesh ranks 18th in the PAI 2020 Index, a drop by one rank from PAI 2019. The state has shown a decline in performance in both Equity and Growth but an improvement in terms of Sustainability. The indicators where the state is among the top 3 performers includes reduced undertrial prisoners and improvement in own tax revenue.

PAI 2020 recommends the state focus on improving quality and infrastructure in schools, reducing crimes against women, improving female workforce participation, health outcomes for children and improve air quality. The state may consider prioritising schemes such as the Samagra Siksha Abhiyan, Pradhan Mantri Jan Aarogya Yojana, Swavlamban Yojana and the Navjaat Sishu Suraksha Karyakram for reducing infant mortality.



Pillar I (Equity)

Gender Parity Index (Elementary)

Number of victims of intentional homicide per 100,000 population

Unsented detainees as a proportion of overall prison population

Infant Mortality Rate (IMR)

Dowry deaths per 10 lakh population

Cases Pending in District Courts

Worker Population Ratio (Female) (WPR)

No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered

Proportion of total Government expenditure on Agriculture and Allied Services



Pillar II (Growth)

Proportion of population using safely managed drinking water services

States Own Tax Revenue Growth

Immunisation achievement

Institutional delivery

Net Enrolment Ratio at Elementary (1-8)

Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30

Proportion of population with access to electricity



Pillar III (Sustainability)

Proportion of land that is degraded over total land area

Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

Large States

WB WEST BENGAL



West Bengal ranks 12th in the PAI 2020 Index, a slip by one position in PAI 2019. The state has shown an improved performance in the Growth pillar but a decline in terms of Sustainability. The indicators where the state is among the top 3 performers includes participation of children in early education, reduced crimes against minorities and fiscal and economic growth.

PAI 2020 recommends the state to focus on improving public transport and percentage of qualified teachers. The state may consider prioritising schemes such as the Samagra Siksha Abhiyan.



Pillar I (Equity)

Participation rate in organized learning (one year before the official primary entry age)

Incidence of Crimes against SC and ST

No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered



Pillar II (Growth)

Immunisation achievement

Fiscal Surplus/ Deficit

Manufacturing value added as a proportion of GDP and per capita

Percentage of school teachers professionally qualified

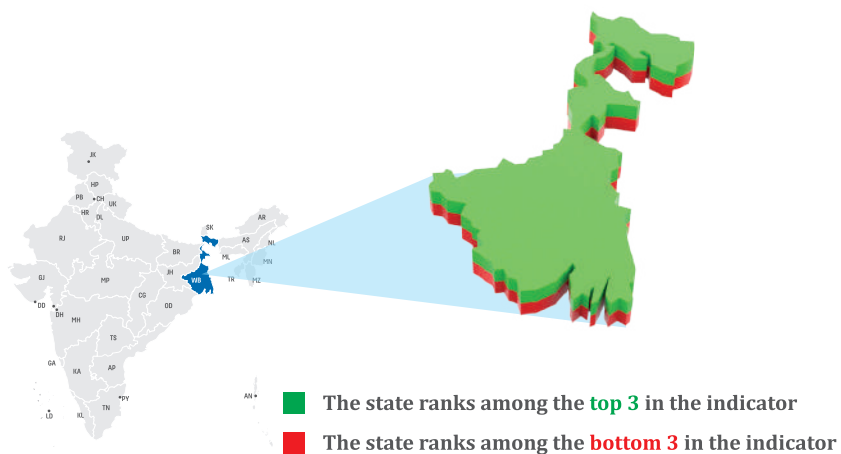
Number of Buses per 10 lakh population



Pillar III (Sustainability)

Proportion of land that is degraded over total land area

Solid waste generation and waste processing in the urban areas

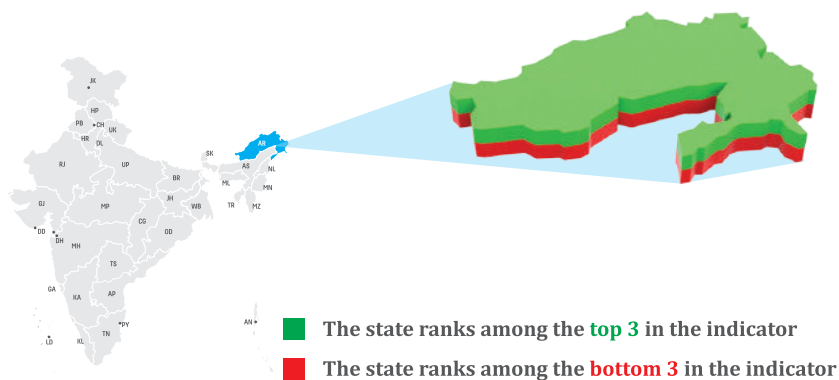


AP ARUNACHAL PRADESH

	PAI Index		Equity Index		Growth Index		Sustainability Index	
	2019	2020	2019	2020	2019	2020	2019	2020
RANK	4	6	11	9	5	5	1	9
SCORE	0.619	0.048	-0.255	-0.174	0.207	0.299	1.904	0.019
CHANGE IN RANK	↓		↑		=		↓	

Arunachal Pradesh ranks 6th in the PAI 2020 Index, while it was at the 4th place in PAI 2019. The state has shown an improved performance in the Equity pillar but, it has drastically slipped to rank 9th in the sustainability pillar. The indicators where the state's performance is among the top 3 include the proportion of population covered by social protection, participation rate in organized learning and proportion of Urban population living in slums. The state is also a top performer in several growth indicators including fiscal deficit, reducing unemployment rate and proportion of households with a bank account. The state also shows good performance in the indicator pertaining to renewable energy.

PAI 2020 recommends that the state focus on reducing inequalities in terms of improving the gender parity, enhancing the educational outcomes and also look at its depleting forest reserves. The state is advised to focus on schemes such as Samagra shiksha Yojana, Rashtriy Mahila Kosh, CAMPA scheme and also introspect its Urban solid waste management policy.



Pillar I (Equity)

Proportion of population covered by social protection
 Participation rate in organized learning (one year before the official primary entry age)
 Proportion of urban population living in slums
 Infant Mortality Rate (IMR)
 Farmer's/ Cultivators suicide per HHs
 Unsensitized detainees as a proportion of overall prison population
 Incidence of Crimes against SC and ST
 Average Annual Drop-out rate at secondary level
 Palma Ratio of Household Expenditure in Urban and Rural India
 Gender Parity Index (Elementary)



Pillar II (Growth)

Expenditure in social sector
 Worker Population Ratio (Female) (WPR)
 Number of victims of intentional homicide per 100,000 population
 No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
 Fiscal Surplus/ Deficit
 Unemployment Rate
 Proportion of households with an account at a bank
 Proportion of total government expenditure on infrastructure
 Number of Buses per 10 lakh population
 Immunisation achievement
 Institutional delivery
 ASER 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 with access to electricity
 States Own Tax Revenue Growth
 Annual growth rate of real GSDP per capita
 Manufacturing value added as a proportion of GDP and per capita



Pillar III (Sustainability)

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

Small States

DL DELHI

	PAI Index		Equity Index		Growth Index		Sustainability Index	
	2019	2020	2019	2020	2019	2020	2019	2020
RANK	12	10	12	11	3	4	12	5
SCORE	-1.214	-0.289	-2.285	-1.601	0.341	0.299	-1.696	0.434
CHANGE IN RANK	↑		↑		↓		↑	

Delhi ranks 10th in the PAI 2020 Index, showing improvement by 2 places from PAI 2019. The state has shown an improved performance in the Equity pillar and the sustainability pillar. The equity indicators where the state's performance is among the top 3 include the proportion of population covered by social protection, Average annual drop-out rate at secondary level and proportion of population living in slums. The state is also a top performer in the growth indicators including health worker density, institutional deliveries and net enrollment ratio at elementary level. The state is also a good performer in percentage of households using clean fuel and proportion of land that is degraded over total area.

PAI 2020 recommends that the state focus on Women's and children's safety. The state is advised to focus on effectively implementing schemes such as Behavioural Change for Safety of the Women Scheme (women's safety), POCSO act etc.



Pillar I (Equity)

Proportion of population covered by social protection
Average Annual Drop-out rate at secondary level
Proportion of seats held by women in (a) state legislatures and (b) local governments
Gender Parity Index (Elementary)
Farmer's/ Cultivators suicide per HHs
Expenditure in social sector
No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
Participation rate in organized learning (one year before the official primary entry age)
Proportion of urban population living in slums
Rural Indebtedness
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
Cases Pending in District Courts



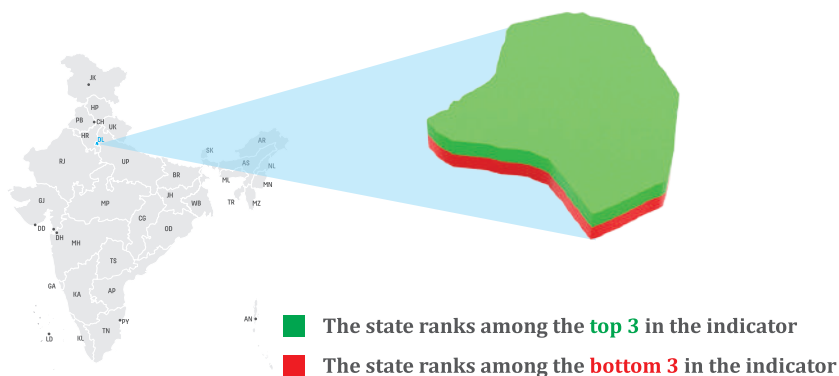
Pillar II (Growth)

Health worker density
Institutional delivery
Net Enrolment Ratio at Elementary (1-8)
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)
Percentage of school teachers professionally qualified
Proportion of population with access to electricity
States Own Tax Revenue Growth
Proportion of households with an account at a bank
Proportion of total Government expenditure on Agriculture and Allied Services
Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30
Proportion of population using safely managed drinking water services



Pillar III (Sustainability)

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

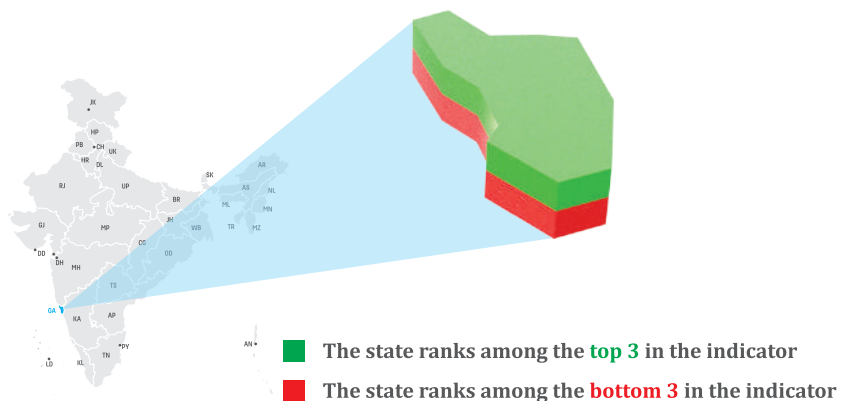


GA GOA

	PAI Index		Equity Index		Growth Index		Sustainability Index	
	2019	2020	2019	2020	2019	2020	2019	2020
RANK	1	1	6	5	1	1	5	1
SCORE	1.1	1.745	0.771	1.123	2.154	1.933	0.376	2.180
CHANGE IN RANK	=		↑		=		↑	

Goa tops the PAI 2020 Index with rank 1. The state has shown consistent performance in the growth pillar and has effectively improved 4 places in the sustainability pillar. The equity indicators where the state's performance is among the top 3 include the proportion of population covered by social protection, Average annual drop-out rate at secondary level and proportion of urban population living in slums. The state is also a top performer in the growth indicators including total expenditure in agriculture and allied activities, immunization and institutional deliveries. The state is also a good performer in percentage of households using clean cooking fuel and solid waste management.

PAI 2020 recommends that the state focus on livelihood schemes for the agriculture sector to lower rural indebtedness also cater to crime related issues. Some of the schemes that require immediate attention of the state are MAMTA scheme, Pradhan Mantri Kaushal Vikas Yojana, Ayushman Bharat scheme etc.



Pillar I (Equity)

Proportion of population covered by social protection
 Average Annual Drop-out rate at secondary level
 Proportion of urban population living in slums
 Infant Mortality Rate (IMR)
 Farmer's/ Cultivators suicide per HHs
 Child Sex ratio
 Prevalence of malnutrition amongst children below 6 years
 Participation rate in organized learning (one year before the official primary entry age)
 Proportion of seats held by women in (a) state legislatures and (b) local governments
 Rural Indebtedness
 Number of victims of intentional homicide per 100,000 population



Pillar II (Growth)

Proportion of total Government expenditure on Agriculture and Allied Services
 Immunisation achievement
 Institutional delivery
 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)
 Percentage of school teachers professionally qualified
 Proportion of population using safely managed drinking water services
 Proportion of population using safely managed sanitation services
 States Own Tax Revenue Growth
 Proportion of population with access to electricity
 Annual growth rate of real GSDP per capita
 Proportion of households with an account at a bank
 Manufacturing value added as a proportion of GDP and per capita
 Proportion of total government expenditure on infrastructure
 Number of Buses per 10 lakh population
 Health worker density
 Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30
 Fiscal Surplus/ Deficit
 Unemployment Rate



Pillar III (Sustainability)

Percentage of households using clean cooking fuel
 Tree cover
 Solid waste generation and waste processing in the urban areas
 Renewable energy share in the total final energy consumption

Small States

HP HIMACHAL PRADESH

	PAI Index		Equity Index		Growth Index		Sustainability Index	
	2019	2020	2019	2020	2019	2020	2019	2020
RANK	2	3	1	2	2	2	7	10
SCORE	0.985	0.725	1.889	2.020	0.867	0.491	0.199	-0.338
CHANGE IN RANK	↓		↓		=		↓	

Himachal Pradesh ranks 3rd in the PAI 2020 Index. The state has shown consistent performance in the growth pillar, but has slipped in the sustainability pillar. The equity indicators where the state's performance is among the top 3 include reduction in Average annual drop-out rate at secondary, proportion of urban population living in slums and lesser number of intentional homicides. The state is also a consistent performer in the growth indicators including immunization achievement, health worker density and ASER index.

PAI 2020 recommends that the state focus on reducing inequality and infant mortality. Some of the schemes that require immediate attention of the state are POSHAN Abhiyan, Navjaat Shishu Surakhsha Karyakram, and CAMPA.



Pillar I (Equity)

- Average Annual Drop-out rate at secondary level
- Proportion of urban population living in slums
- Number of victims of intentional homicide per 100,000 population
- Child Sex ratio
- Worker Population Ratio (Female) (WPR)
- Palma Ratio of Household Expenditure in Urban and Rural India
- Infant Mortality Rate (IMR)



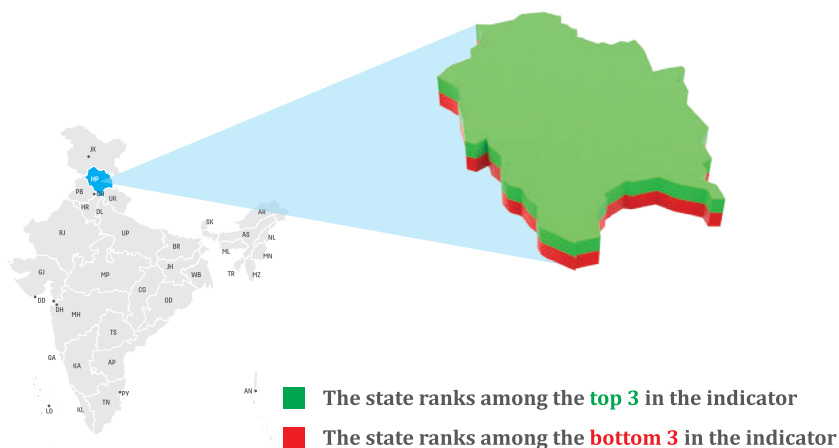
Pillar II (Growth)

- Health worker density
- Immunisation achievement
- ASER 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)
- Percentage of school teachers professionally qualified
- Proportion of population using safely managed drinking water services
- Proportion of total government expenditure on infrastructure



Pillar III (Sustainability)

- 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

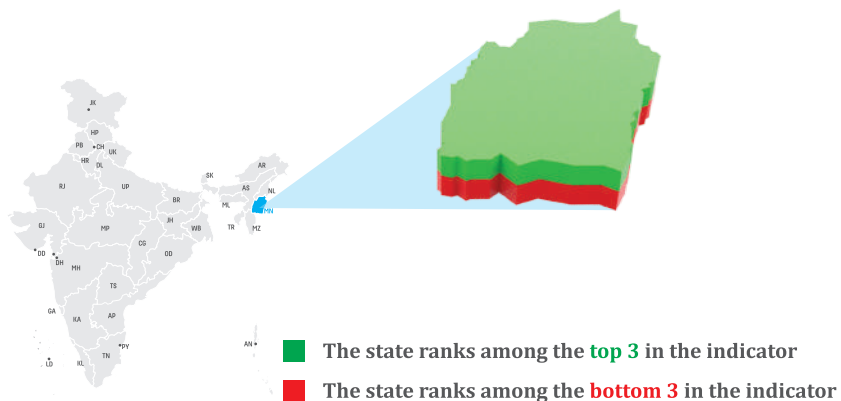


MN MANIPUR



Manipur ranks 11th in the PAI 2020 Index while it ranked 6th in the PAI 2019 Index. The state has fell in the performance in all the three pillars. The equity indicators where the state's performance is among the top 3 include reduction in malnutrition, improvement in participation rate in organized learning and reduction of Palma ratio. The state is also has performed better in ASER index and Net enrolment ratio for the growth Pillar.

PAI 2020 recommends that the state focus on schemes related to agriculture such as Pradhan Mantri Kisan Samman nidhi Yojana, Pradhan Mantri Kaushal Vikas Yojana, National Rural Drinking Water Programme and CAMPA.



Pillar I (Equity)

- Prevalence of malnutrition amongst children below 6 years
- Participation rate in organized learning (one year before the official primary entry age)
- Palma Ratio of Household Expenditure in Urban and Rural India
- Infant Mortality Rate (IMR)
- Number of victims of intentional homicide per 100,000 population
- Crimes against children
- Dowry deaths per 10 lakh population
- Rapes per 10 lakh population
- Farmer's/ Cultivators suicide per HHs
- Unsentenced detainees as a proportion of overall prison population
- No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered



Pillar II (Growth)

- ASER Index
- Net Enrolment Ratio at Elementary (1-8)
- Proportion of population using safely managed drinking water services
- Proportion of population using safely managed sanitation services
- Fiscal Surplus/ Deficit
- Annual growth rate of real GSDP per capita
- Unemployment Rate
- Proportion of households with an account at a bank
- Proportion of total government expenditure on infrastructure
- Number of Buses per 10 lakh population



Pillar III (Sustainability)

- Tree cover

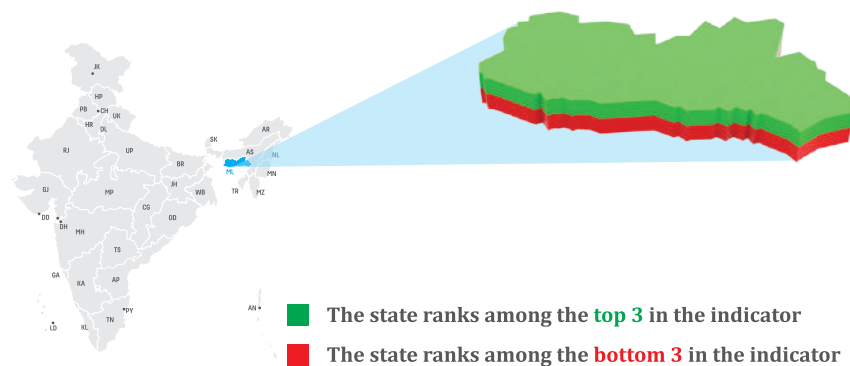
Small States

ML MEGHALAYA



Meghalaya ranks 2nd in the PAI 2020 Index. The state has shown an improved performance in the Equity pillar and the sustainability pillar. The equity indicators where the state's performance is among the top 3 include Palma ratio, Gender Parity index and reducing rural indebtedness. The state is also a top performer in the growth indicators including Proportion of government expenditure on agriculture and allied services, Net enrolment ratio at elementary level and Annual growth rate of GSDP per capita. The state has also performed well maintaining the tree cover, improved solid waste management in urban areas and reduced PM10 levels.

PAI 2020 recommends that the state can further focus on health attributes. The state is advised to stress on schemes such as POSHAN Abhiyan, Rashtruya Mahila Kosh scheme, Swadhar Scheme and Ujjwala Yojana.



Pillar I (Equity)

Palma Ratio of Household Expenditure in Urban and Rural India
 Gender Parity Index (Elementary)
 Rural Indebtedness
 Expenditure in social sector
 Incidence of Crimes against SC and ST
 Child Sex ratio
 Worker Population Ratio (Female) (WPR)
 Proportion of population covered by social protection
 Prevalence of malnutrition amongst children below 6 years
 Utilisation of Nirbhaya Fund
 Unsented detainees as a proportion of overall prison population
 Cases Pending in District Courts



Pillar II (Growth)

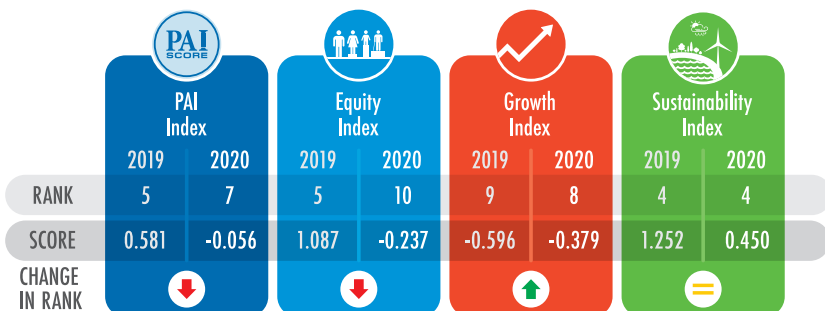
Proportion of total Government expenditure on Agriculture and Allied Services
 Net Enrolment Ratio at Elementary (1-8)
 Annual growth rate of real GSDP per capita
 Unemployment Rate
 Institutional delivery
 ASER Index
 Proportion of schools with access to (a) electricity; (b) computers for pedagogical 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)
 Percentage of school teachers professionally qualified
 Proportion of population using safely managed drinking water services
 Proportion of population using safely managed sanitation services
 Fiscal Surplus/ Deficit
 States Own Tax Revenue Growth
 Proportion of population with access to electricity
 Manufacturing value added as a proportion of GDP and per capita



Pillar III (Sustainability)

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

MZ MIZORAM



Mizoram ranks 7th in the PAI 2020 Index slipping two places from its 5th rank in PAI 2019. The state has shown an improved performance in the growth and the sustainability pillar. The equity indicators where the state's performance is among the top 3 include reduction of malnutrition, improved participation in organized learning and utilization of Nirbhaya fund. The state has also performed well in the growth pillar in health worker density, ASER Index and improved Pupil teacher ratio. The state has performed well maintaining the tree cover, reduced PM10 levels and increased number of households using clean cooking fuel.

PAI 2020 recommends that the state can further focus on health attributes and gender parity. The state is advised to stress on schemes such as POSHAN Abhiyan, Crimes prevention against women and children, POCSO act and PM-JAY scheme.



Pillar I (Equity)

Prevalence of malnutrition amongst children below 6 years
 Participation rate in organized learning (one year before the official primary entry age)
 Utilisation of Nirbhaya Fund
 Rural Indebtedness
 Incidence of Crimes against SC and ST
 Dowry deaths per 10 lakh population
 Cases Pending in District Courts
 Proportion of population covered by social protection
 Average Annual Drop-out rate at secondary level
 Proportion of seats held by women in (a) state legislatures and (b) local governments
 Proportion of urban population living in slums
 Infant Mortality Rate (IMR)
 Gender Parity Index (Elementary)
 Farmer's/ Cultivators suicide per HHs
 Expenditure in social sector
 Crimes against children
 Rapes per 10 lakh population



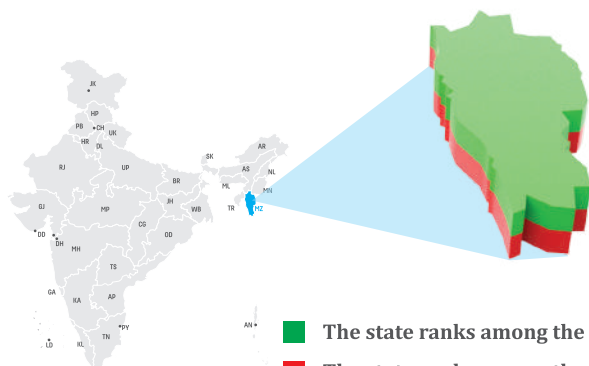
Pillar II (Growth)

Health worker density
 ASER Index
 Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30
 Proportion of population using safely managed sanitation services
 Immunisation achievement
 States Own Tax Revenue Growth
 Proportion of households with an account at a bank



Pillar III (Sustainability)

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
 Annual mean levels of fine particulate matter (PM10) in cities (population weighted)
 Solid waste generation and waste processing in the urban areas



- The state ranks among the **top 3** in the indicator
- The state ranks among the **bottom 3** in the indicator

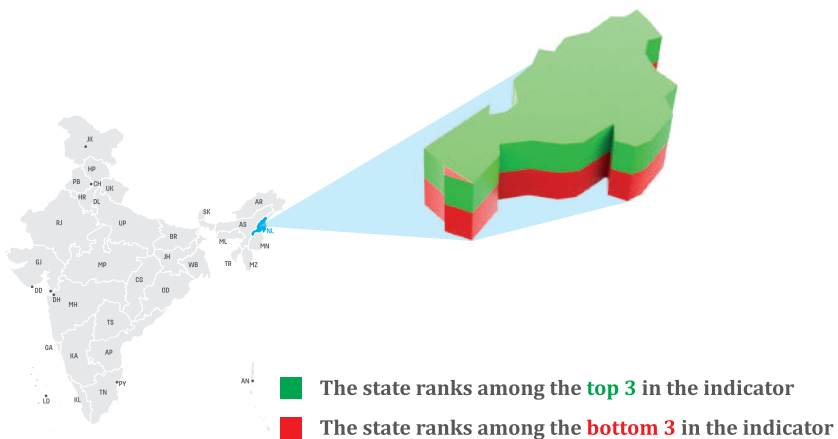
Small States

NL NAGALAND



Nagaland ranks 8th in the PAI 2020 Index while it ranked 10th in PAI 2019. The state has shown an improved performance in all the three pillars. The indicators where the state's performance is among the top 3 include reduction of malnutrition, utilization of Nirbhaya fund and Gender Parity Index. The state has also seen an increased performance in the number of buses per 10 lakh population.

PAI 2020 recommends that the state can further focus on education and health attributes. The state is advised to look at schemes such as Samagra Siksha Abhiyan, Swadhar Scheme, Pradhan Mantri Kaushal Vikas Yojana, Ujjwala Yojana, Pradhan Mantri Soil Health Card Scheme and Pradhan Mantri Krishi Sinchai Yojana.



Pillar I (Equity)

- Prevalence of malnutrition amongst children below 6 years
- Utilisation of Nirbhaya Fund
- Gender Parity Index (Elementary)
- Rural Indebtedness
- Unsented detainees as a proportion of overall prison population
- Crimes against children
- Dowry deaths per 10 lakh population
- Rapes per 10 lakh population
- No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
- Proportion of population covered by social protection
- Average Annual Drop-out rate at secondary level
- Proportion of seats held by women in (a) state legislatures and (b) local governments
- Expenditure in social sector
- Cases Pending in District Courts
- Worker Population Ratio (Female) (WPR)



Pillar II (Growth)

- Number of Buses per 10 lakh population
- Proportion of total Government expenditure on Agriculture and Allied Services
- Immunisation achievement
- Institutional delivery
- Net Enrolment Ratio at Elementary (1-8)
- Percentage of school teachers professionally qualified
- Annual growth rate of real GDP per capita
- Unemployment Rate
- Proportion of households with an account at a bank
- Proportion of total government expenditure on infrastructure



Pillar III (Sustainability)

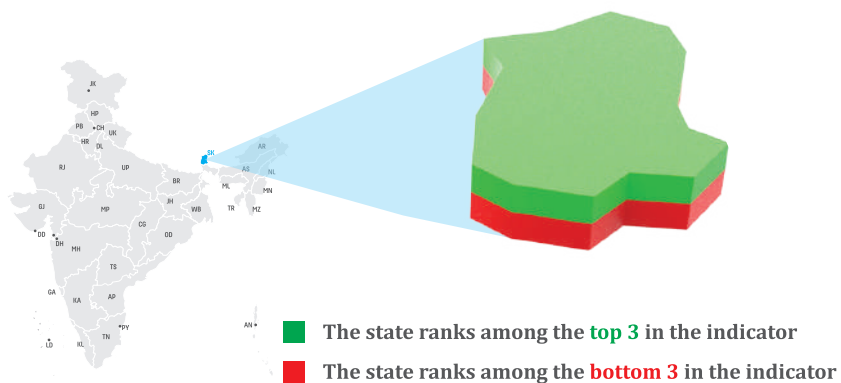
- Proportion of land that is degraded over total land area
- Percentage of households using clean cooking fuel
- Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

SK SIKKIM



Sikkim ranks 4th in the PAI 2020 Index while it ranked 7th in PAI 2019. The state has shown an improved performance in all the three pillars. The equity indicators where the state's performance is among the top 3 include proportion of seats held by women in state and local governments, improved palma ratio and reduced number of victims of intentional homicide per 1 lakh population. The state also has improved performance in expenditure in agriculture and allied sectors, immunisation achievement and institutional delivery. The state has also managed to improve solid waste generation and processing for urban areas along with reduced PM10 levels.

PAI 2020 recommends that the state focus on education and prevalence of crime related indicators. The state is advised to look at schemes such as Samagra Siksha Abhiyan, Pradhan Mantri Kisan Samman Nidhi Yojana, Ayushman Bharat Yojana and Pradhan Mantri Krishi Sinchai Yojana.



Pillar I (Equity)

Proportion of seats held by women in (a) state legislatures and (b) local governments
 Palma Ratio of Household Expenditure in Urban and Rural India
 Number of victims of intentional homicide per 100,000 population
 Unsented detainees as a proportion of overall prison population
 Cases Pending in District Courts
 Worker Population Ratio (Female) (WPR)
 No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
 Utilisation of Nirbhaya Fund
 Proportion of urban population living in slums
 Gender Parity Index (Elementary)
 Farmer's/ Cultivators suicide per HHs
 Incidence of Crimes against SC and ST
 Child Sex ratio
 Crimes against children



Pillar II (Growth)

Proportion of total Government expenditure on Agriculture and Allied Services
 Immunisation achievement
 Institutional delivery
 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
 Unemployment Rate
 Manufacturing value added as a proportion of GDP and per capita
 Health worker density
 Net Enrolment Ratio at Elementary (1-8)
 Number of Buses per 10 lakh population



Pillar III (Sustainability)

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

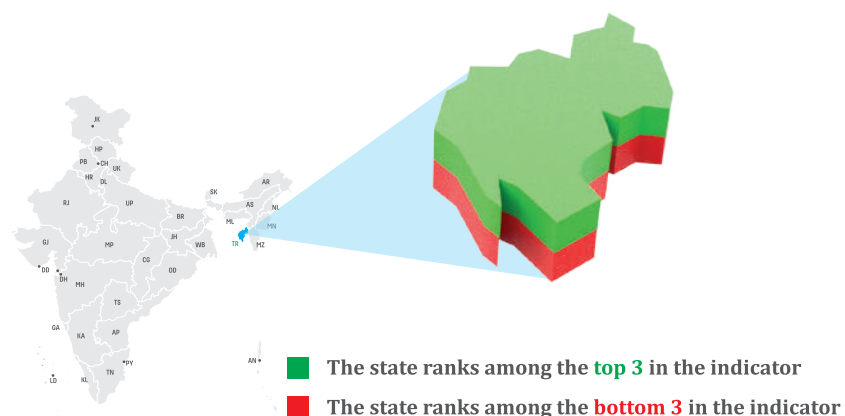
Small States

TR TRIPURA

	PAI Index		Equity Index		Growth Index		Sustainability Index	
	2019	2020	2019	2020	2019	2020	2019	2020
RANK	9	5	7	7	10	6	8	7
SCORE	-0.068	0.145	0.762	0.182	-0.684	0.186	-0.28	0.068
CHANGE IN RANK	↑		=		↑		↑	

Tripura ranks 5th in the PAI 2020 Index while it ranked 9th in PAI 2019. The state has shown an improved performance in growth and sustainability pillars. The equity indicators where the state's performance is among the top 3 include increased expenditure in social sector, reduction in crimes against children and rapes per 10 lakh population. The state also has also performed better in pupil teacher ratio, fiscal surplus/ deficit and annual growth rate of real GSDP per capita.

PAI 2020 recommends that the state focus on gender and education related indicators. The state is advised to look at schemes such as Samagra Siksha Abhiyan, Swadhar Greh scheme and Ujjwala Scheme.



Pillar I (Equity)

- Expenditure in social sector
- Crimes against children
- Rapes per 10 lakh population
- Cases Pending in District Courts
- Utilisation of Nirbhaya Fund
- Number of victims of intentional homicide per 100,000 population
- Dowry deaths per 10 lakh population
- Worker Population Ratio (Female) (WPR)
- No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered



Pillar II (Growth)

- Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30
- Fiscal Surplus/ Deficit
- Annual growth rate of real GSDP per capita
- ASER 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)
- Percentage of school teachers professionally qualified
- Proportion of population using safely managed sanitation services
- Proportion of population with access to electricity
- Manufacturing value added as a proportion of GDP and per capita
- Number of Buses per 10 lakh population



Pillar III (Sustainability)

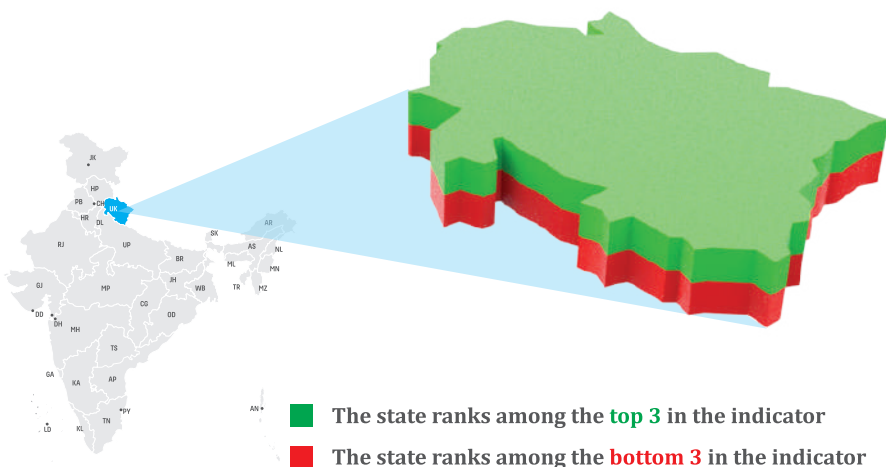
- Proportion of land that is degraded over total land area
- Renewable energy share in the total final energy consumption
- Percentage of households using clean cooking fuel

UK UTTARAKHAND

	PAI Index		Equity Index		Growth Index		Sustainability Index	
	2019	2020	2019	2020	2019	2020	2019	2020
RANK	8	9	9	8	4	7	10	11
SCORE	-0.042	-0.277	-0.045	-0.032	0.289	-0.181	-0.369	-0.62
CHANGE IN RANK	↓		↑		↓		↓	

Uttarakhand ranks 9th in the PAI 2020 Index while it ranked 8th in PAI 2019. The state has shown an improved performance in equity and growth pillars. The equity indicators where the state's performance is among the top 3 include proportion of seats held by women in state and local governments and utilisation of Nirbhaya fund. The state also has improved performance in Fiscal surplus/ Deficit, states own tax revenue growth and Manufacturing value added as a proportion of GDP and per capita. The state has also managed to improve renewable energy share in total final energy consumption.

PAI 2020 recommends that the state focus on gender and education related indicators. The state is advised to look at schemes such as Samagra Siksha Abhiyan, One Stop Centres, Clean Ganga Mission and CAMPA scheme.



Pillar I (Equity)

Proportion of seats held by women in (a) state legislatures and (b) local governments

Utilisation of Nirbhaya Fund

Prevalence of malnutrition amongst children below 6 years

Participation rate in organized learning (one year before the official primary entry age)

Palma Ratio of Household Expenditure in Urban and Rural India

Infant Mortality Rate (IMR)

Rural Indebtedness

Incidence of Crimes against SC and ST

Child Sex ratio

Dowry deaths per 10 lakh population

Rapes per 10 lakh population



Pillar II (Growth)

Fiscal Surplus/ Deficit

States Own Tax Revenue Growth

Manufacturing value added as a proportion of GDP and per capita

Proportion of total Government expenditure on Agriculture and Allied Services

Health worker density

Net Enrolment Ratio at Elementary (1-8)

Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30

Proportion of total government expenditure on infrastructure



Pillar III (Sustainability)

Renewable energy share in the total final energy consumption

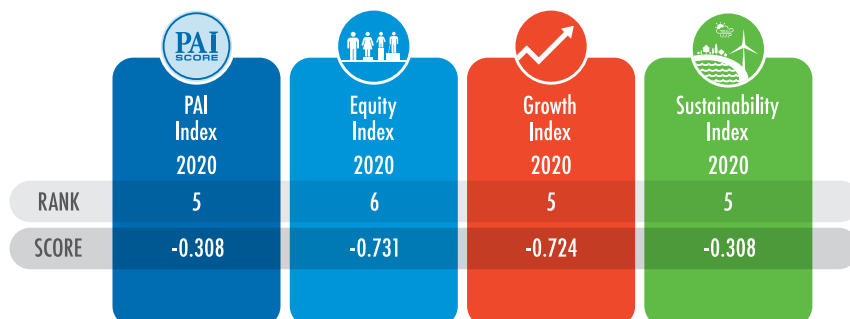
Forest area as a proportion of total land area

Solid waste generation and waste processing in the urban areas

Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

Union Territories

AN ANDAMAN AND NICOBAR ISLANDS



Andaman and Nicobar islands rank 5th in the PAI 2020 Index in terms of Union Territories. The equity indicators where the UT's performance is among the top 3 include Average annual drop out rate at secondary level, proportion of urban population living in slums and Infant mortality rate. The UT also has improved performance in pupil teacher ratio and proportion of households with an account at a bank. The UT has also managed to improve renewable energy share in total final energy consumption.

PAI 2020 recommends that the UT focus on inequality and crimes related indicators. The UT is advised to look at schemes such as Dulari Scheme, POCSO act and CAMPA scheme.



Pillar I (Equity)

- Average Annual Drop-out rate at secondary level
- Proportion of urban population living in slums
- Infant Mortality Rate (IMR)
- Proportion of population covered by social protection
- Participation rate in organized learning (one year before the official primary entry age)
- Palma Ratio of Household Expenditure in Urban and Rural India
- Number of victims of intentional homicide per 100,000 population
- Incidence of Crimes against SC and ST
- Child Sex ratio
- Crimes against children
- Rapes per 10 lakh population
- Cases Pending in District Courts
- No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered



Pillar II (Growth)

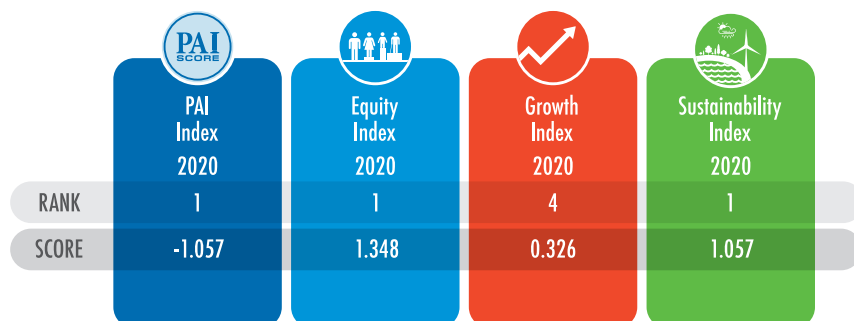
- Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30
- Proportion of households with an account at a bank
- Average population served per govt allopathic doctor
- Proportion of schools with access to (a) electricity; (b) computers for pedagogical purposes; (c) 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 with access to electricity
- Unemployment Rate



Pillar III (Sustainability)

- Renewable energy share in the total final energy consumption
- Forest area as a proportion of total land area
- Tree cover

CH CHANDIGARH



Chandigarh ranks 1st in the PAI 2020 Index. The equity indicators where the UT's performance is among the top 3 include Participation rate in organised learning, Utilisation of Nirbhaya fund and reduced Infant Mortality rate. The UT also has improved performance in basic infrastructure indices like drinking water, sanitation and proportion of households with an account at a bank. The UT has also managed to improve percentage of households using clean cooking fuel and sustain tree cover.

PAI 2020 recommends that the UT focus on inequality and crimes related indicators. The UT is advised to look at schemes such as Swadhar Greh Scheme, POCSO act and CAMPA scheme.



Pillar I (Equity)

Participation rate in organized learning (one year before the official primary entry age)
 Utilisation of Nirbhaya Fund
 Infant Mortality Rate (IMR)
 Gender Parity Index (Elementary)
 Unsentenced detainees as a proportion of overall prison population
 Child Sex ratio
 Cases Pending in District Courts
 Proportion of population covered by social protection
 Palma Ratio of Household Expenditure in Urban and Rural India
 Proportion of urban population living in slums
 Number of victims of intentional homicide per 100,000 population
 Crimes against children
 Dowry deaths per 10 lakh population
 Rapes per 10 lakh population
 No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered



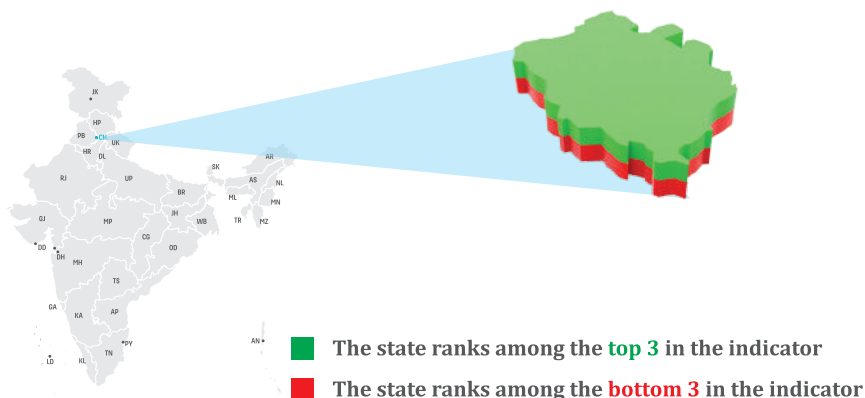
Pillar II (Growth)

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)
 Percentage of school teachers professionally qualified
 Proportion of population using safely managed drinking water services
 Proportion of population using safely managed sanitation services
 Proportion of households with an account at a bank
 Average population served per govt allopathic doctor



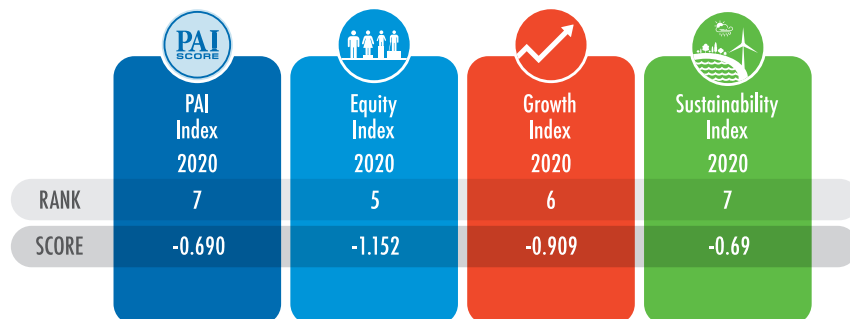
Pillar III (Sustainability)

Percentage of households using clean cooking fuel
 Tree cover
 Solid waste generation and waste processing in the urban areas
 Proportion of land that is degraded over total land area
 Annual mean levels of fine particulate matter (PM10) in cities (population weighted)



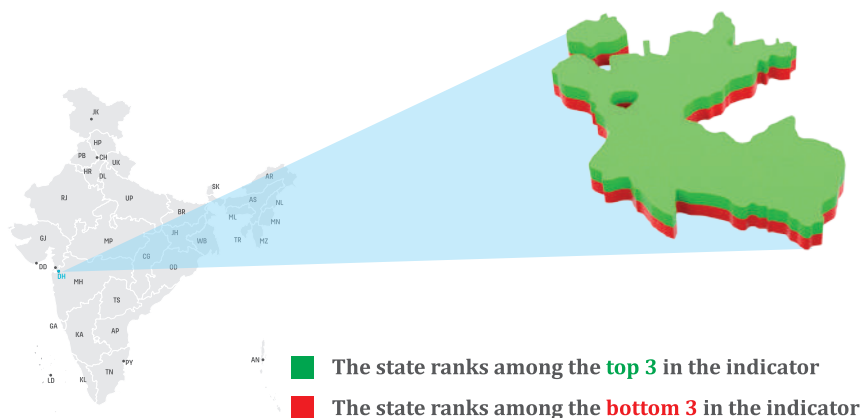
Union Territories

DH DADRA AND NAGAR HAVELI



Dadra and Nagar Haveli ranks 7th in the PAI 2020 Index. The equity indicators where the UT's performance is among the top 3 include Utilisation of Nirbhaya fund, population covered by social protection scheme and Child sex ratio. The UT also has improved performance in Net enrolment ratio and pupil teacher ratio. The UT has also managed to sustain tree cover.

PAI 2020 recommends that the UT focus on inequality, education and gender parity indicators. The UT is advised to look at schemes such as Samagra Siksha Abhiyan, Swadhar Greh Scheme and Ujjwala Yojana.



Pillar I (Equity)

- Proportion of population covered by social protection
- Utilisation of Nirbhaya Fund
- Palma Ratio of Household Expenditure in Urban and Rural India
- Child Sex ratio
- Dowry deaths per 10 lakh population
- Rapes per 10 lakh population
- Cases Pending in District Courts
- Worker Population Ratio (Female) (WPR)
- Prevalence of malnutrition amongst children below 6 years
- Average Annual Drop-out rate at secondary level
- Infant Mortality Rate (IMR)
- Gender Parity Index (Elementary)
- Incidence of Crimes against SC and ST



Pillar II (Growth)

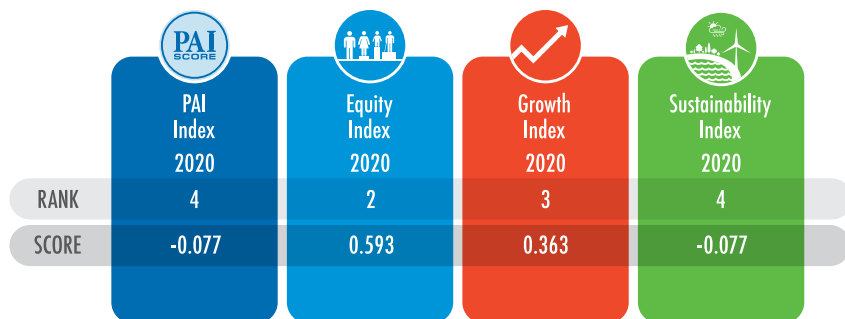
- Net Enrolment Ratio at Elementary (1-8)
- Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30
- Unemployment Rate
- Immunisation achievement
- Institutional delivery
- Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 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



Pillar III (Sustainability)

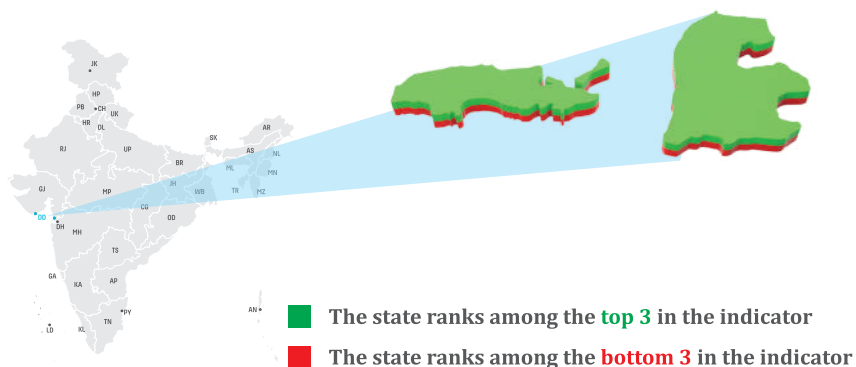
- Tree cover
- Renewable energy share in the total final energy consumption
- Percentage of households using clean cooking fuel
- Solid waste generation and waste processing in the urban areas

DD DAMAN AND DIU



Daman and Diu ranks 4th in the PAI 2020 Index. The equity indicators where the UT's performance is among the top 3 include population covered by social protection, reducing homicides and incidence of crimes against ST and SCs. The UT also has improved performance in proportion of population with access to electricity and improved unemployment rate. The UT has also managed to improve solid waste management.

PAI 2020 recommends that the UT focus on health indicators. The UT is advised to look at schemes such as POSHAN Abhiyan and Ayushman Bharat Scheme.



Pillar I (Equity)

- Proportion of population covered by social protection
- Number of victims of intentional homicide per 100,000 population
- Incidence of Crimes against SC and ST
- Dowry deaths per 10 lakh population
- Prevalence of malnutrition amongst children below 6 years
- Utilisation of Nirbhaya Fund
- Infant Mortality Rate (IMR)



Pillar II (Growth)

- Proportion of population with access to electricity
- Unemployment Rate
- Immunisation achievement
- Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30
- Percentage of school teachers professionally qualified
- Number of Buses per 10 lakh population

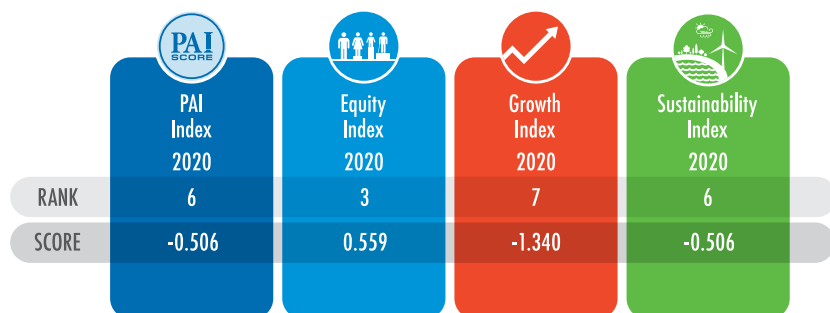


Pillar III (Sustainability)

- Proportion of land that is degraded over total land area
- Solid waste generation and waste processing in the urban areas

Union Territories

JK JAMMU & KASHMIR



Jammu and Kashmir ranks 6th in the PAI 2020 Index. The equity indicators where the UT's performance is among the top 3 include reduction in malnutrition, proportion of population living in slums and Crimes against children. The UT also has improved performance in number of buses per 10 lakh population.

PAI 2020 recommends that the UT focus on health and education related indicators. The UT is advised to look at schemes such as Samagra Siksha Abhiyan etc.



Pillar I (Equity)

- Prevalence of malnutrition amongst children below 6 years
- Proportion of urban population living in slums
- Crimes against children
- Worker Population Ratio (Female) (WPR)
- Average Annual Drop-out rate at secondary level
- Unsentenced detainees as a proportion of overall prison population
- Dowry deaths per 10 lakh population
- Cases Pending in District Courts



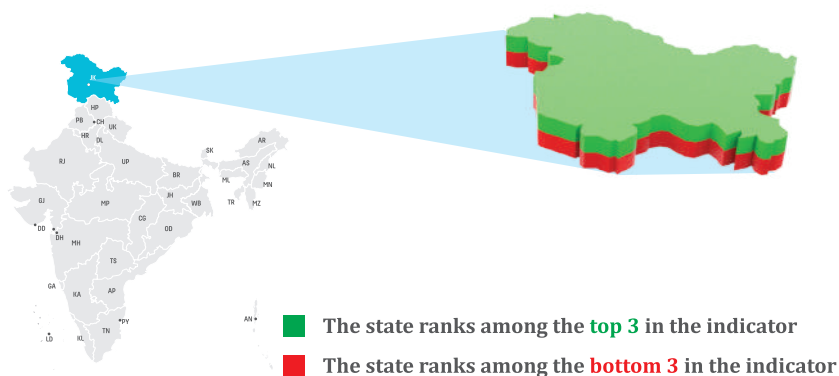
Pillar II (Growth)

- Number of Buses per 10 lakh population
- Institutional delivery
- Net Enrolment Ratio at Elementary (1-8)
- 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)
- Percentage of school teachers professionally qualified
- Proportion of population using safely managed drinking water services
- Proportion of population using safely managed sanitation services
- Proportion of households with an account at a bank

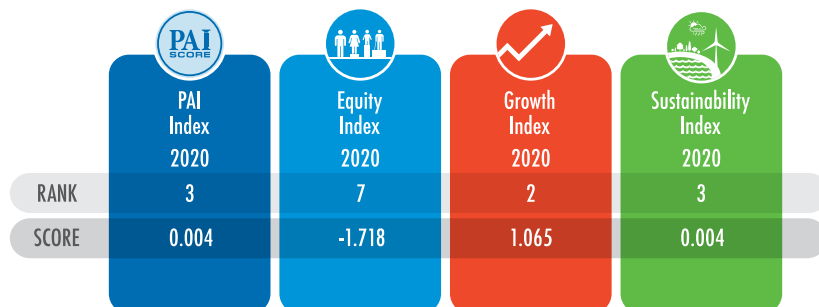


Pillar III (Sustainability)

- 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
- Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

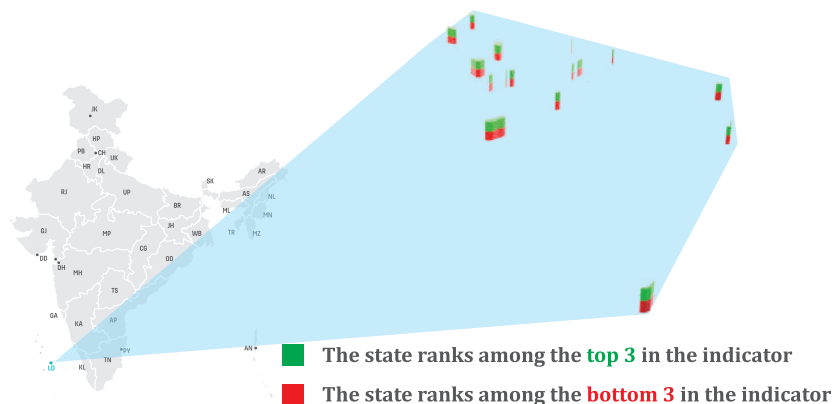


LD LAKSHADWEEP



Lakshadweep ranks 3rd in the PAI 2020 Index. The equity indicators where the UT's performance is among the top 3 include reduced malnutrition, improved participation rate in organized learning and reduction in the average drop out rates. The UT also has improved performance in immunization achievement, institutional deliveries and proportion of population with access to safely managed sanitation services. The UT has also managed to improve renewable share in the total final energy consumption, retained the forest cover and low PM10 levels.

PAI 2020 recommends that the UT focus on gender parity indicators. The UT is advised to look at schemes such as Unnat Bharat Abhiyan, Samagra Siksha Abhiyan etc.



Pillar I (Equity)

- Prevalence of malnutrition amongst children below 6 years
- Participation rate in organized learning (one year before the official primary entry age)
- Average Annual Drop-out rate at secondary level
- Number of victims of intentional homicide per 100,000 population
- Incidence of Crimes against SC and ST
- No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
- Utilisation of Nirbhaya Fund
- Gender Parity Index (Elementary)
- Unsented detainees as a proportion of overall prison population
- Worker Population Ratio (Female) (WPR)

Pillar II (Growth)

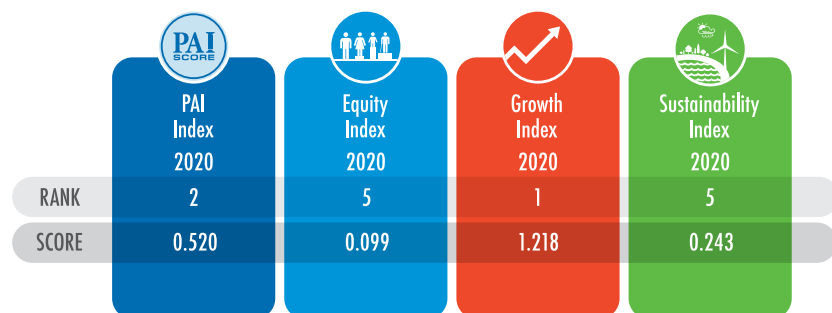
- Immunisation achievement
- Institutional delivery
- Average population served per govt allopathic doctor
- Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30
- Proportion of population using safely managed sanitation services
- Proportion of population with access to electricity
- Net Enrolment Ratio at Elementary (1-8)
- Unemployment Rate
- Number of Buses per 10 lakh population

Pillar III (Sustainability)

- Renewable energy share in the total final energy consumption
- 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
- Tree cover

Union Territories

PY PUDUCHERRY



Puducherry ranks 2nd in the PAI 2020 Index. The equity indicators where the UT's performance is among the top 3 include reduced palma ratio, improved gender parity index and reduction in the unsentenced detainees as a proportion of overall prison population. The UT also has improved performance in immunization achievement and institutional deliveries. The UT has also managed to improve percentage of households using clean cooking fuel, retained the forest cover and low PM10 levels.

PAI 2020 recommends that the UT focus on education indicators. The UT is advised to look at schemes such as Samagra Siksha Abhiyan, Pradhan Mantri Jan Dhan Yojana etc.



Pillar I (Equity)

Palma Ratio of Household Expenditure in Urban and Rural India
 Gender Parity Index (Elementary)
 Unsented detainees as a proportion of overall prison population
 Crimes against children
 Rapes per 10 lakh population
 No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered
 Participation rate in organized learning (one year before the official primary entry age)
 Proportion of urban population living in slums
 Child Sex ratio
 Worker Population Ratio (Female) (WPR)



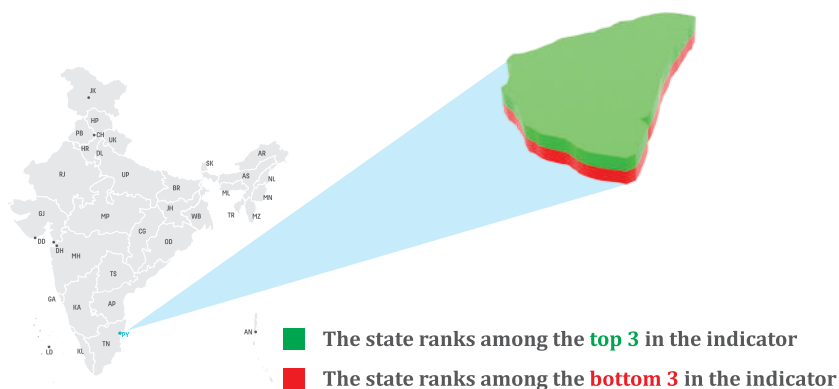
Pillar II (Growth)

Immunisation achievement
 Institutional delivery
 Average population served per govt allopathic doctor
 Net Enrolment Ratio at Elementary (1-8)
 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)
 Percentage of school teachers professionally qualified
 Proportion of population using safely managed drinking water services
 Number of Buses per 10 lakh population
 Proportion of households with an account at a bank



Pillar III (Sustainability)

Proportion of land that is degraded over total land area
 Percentage of households using clean cooking fuel
 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





- **PAI 2020 Technical Note On Methodology**
- **PAI 2020 Pillar Wise State & UT Rankings**
- **PAI 2020 Theme Wise State Rankings**
- **PAI 2020 Theme Wise Union Territory Rankings**
- **PAI 2020 List Of Pillars, Themes, Sdgs & Indicators**
- **PAI 2020 Notes/Adjustments**
- **PAI 2019 Media Coverage**
- **PAC Key Publications**

Abstract

This technical note provides a detailed explanation and the justification of the model used for computing the Public Affairs Index (PAI) 2020. While most composite indices use the weighted average method for measuring overall governance from a variety of individual indicators, PAI 2020 model uses a variation of the Principal Components Analysis (PCA) technique to arrive at the composite index. This technique effectively pronounces small variations amongst states and eliminates bias owing to outliers. The 50 indicators used in PAI 2020 are grouped at various levels namely Sustainable Development Goals (SDG), Themes and Pillars. PAI 2020 uses the principal components effectively to systematically compute the index scores at each level without the use of subjective or uniform weights.

Keywords

Principal Component Analysis, Variance, Index, Factors

Introduction

Composite indicators provide a common ground to compare multiple entities measured on a wide range of individual indicators, each representing a unique dimension of the entity. PAI 2020 uses a total of 50 indicators covering diverse domains of Growth, Sustainability and Equity spread across the themes of Voice and Accountability, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption. Further the 50 indicators covers 13 Sustainable Development Goals (SDGs). The entities here are the 30 states of India grouped into large and small states.

A common technique for calculating the composite index for each of the 30 states is to compute the weighted average of the indicators rolling up at each level using uniform or subjective weights. Subjective weights are allocated using domain knowledge and careful analysis using appropriate justifications. These justifications, however sound are subject to debate. [1], [2] discuss various methods of computing composite indices and a critical assessment of each technique. In the PAI 2020 model, the 50 indicators at the bottom most layer are mapped to the respective SDG in a manner such that each indicator maps to exactly one SDG. Each of the SDG maps to one of the Themes and likewise each of the Themes map to the respective Pillars in the top most layer. Each indicator can be tied to a Pillar, Theme and the SDG that it maps to. A pictorial representation of the PAI 2020 model constituting the three levels namely - Pillars, Themes and SDGs is presented below:

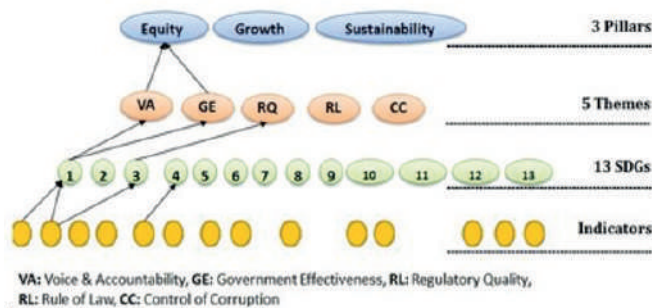


Figure 1: PAI 2020 Model illustrating the three levels - Pillars, Themes and SDGs

An index score is computed at every node in each of the levels namely Pillars, Themes and SDG using a variation of the Principal Components Analysis technique. Finally the index scores at the top most level constituting the pillars namely Equity, Growth and Sustainability are averaged to arrive at the composite score for each state. The rest of the sections in this note explains the detailed process of generating the index scores at the various levels and the composite index for each state. The note is concluded with a summary section and references to related literature.

COMPUTING PAI 2020

Let $x_{q,s}$ denote the raw value of the individual indicator q for state s where $q = 1 \dots 50$ and $s = 1 \dots 30$. The raw scores were converted into normalised Z scores to ensure appropriate scaling of data. The direction of the scores were reversed appropriately during the process of scaling to ensure a standard alignment of values for each indicator wherein a high value indicates better performance and vice versa. Let $i_{q,s}$ denote the normalised values of the individual indicator q for state s .

$$i_{q,s} = \frac{x_{q,s} - \mu_q}{\sigma_q} \quad \text{Equation 1}$$

The above was preferred over scaling using the Min-Max method namely:

$$m_{q,s} = \frac{x_{q,s} - \min_q(x_s)}{\max_q(x_s) - \min_q(x_s)} \quad \text{Equation 2}$$

PAI 2020 Technical Note On Methodology

Scaling using Z score (Equation 1) maintains the dispersion in the data when compared to scaling using the Min-Max method (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 individual indicators aggregating into a node at each level. In Figure 1, the blue, pink and green circles depict nodes at each level namely the Pillars, Themes and SDGs. PAI 2020 uses the Principal Components Analysis (PCA) technique to compute the index scores at each node. PCA explains the variance in the observed data using a few linear combinations of the original data. These few linear combinations reduce the original data to a smaller set of variables called the principal components (PCs) in a manner that the PCs hold a high amount of the cumulative variance in the original data. These PCs are orthogonal to each other or "uncorrelated". The PCs are calculated using the respective factor loadings $\alpha_{i,q}$ such that:

$$PC_{i,q} = X_{ai,q} \cdot \alpha_{i,q} \quad \text{where } X_{ai,q} \quad \text{Equation 3}$$

The cutoff for the PCs is taken at 0.8. In other words, the the model selects as many PCs that explain a cumulative variance of 80% principal component as the

2, 3) Manhattan aggregated score, 2) Euclidean Distance of the PCs - $\sum PC_j$

Distance of the PCs - $\sum PC_j$, 4) Weighted average of the PCs, using the variance explained by the PCs as the respective weights - $\sum w_j \cdot PC_j$.

PAI 2020 uses the following technique to aggregate the PCs into an index score at the respective 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 . This aggregation technique ensures that states performing exceedingly well on one off indicators and hence accounting for large dispersion in the PC scores do not bias the index scores at a node when compared to states that perform well on most of the indicators and hence account for smaller dispersion in the PC scores. Further, the use of a variation of Manhattan Distance over Euclidean Distance ensures that small differences in PC scores across states are pronounced during aggregation.

The above process of calculating the index scores is repeated at each level until the index scores at the top most level are calculated namely the scores for the pillars (Equity, Growth and Sustainability). The three index scores for the pillars are then averaged to calculate the composite index for each state.

Summary

PAI 2020 uses the variance in the data to derive the index scores at each level using a variation of the PCA technique. This eliminates the use of subjective weights to calculate the composite index. Further, the model ensures any bias introduced

owing to outliers is eliminated while computing the composite index for each state. Finally the composite index can be decomposed to individual index scores at the Pillar, Themes and SDG level for granular analysis of each state from various perspectives.

References

1. Freudenberg, M. (2003), "Composite Indicators of Country Performance: A Critical Assessment", 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 hand book on constructing composite indicators. Putting theory into practice.

PAI 2020 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

PAI 2020 Pillar Wise State & UT Rankings

Rank	States	Equity	States	Growth	States	Sustainability
1	ML	2.17	GA	1.934	GA	2.181
2	HP	2.021	KL	1.42	KL	2.118
3	MN	1.505	KA	1.22	TN	1.458
4	NL	1.171	TN	1.159	TL	0.948
5	GA	1.123	TL	0.784	CG	0.841
6	SK	0.904	AP	0.729	KA	0.793
7	AP	0.652	PB	0.726	ML	0.64
8	KL	0.629	HR	0.563	SK	0.591
9	CG	0.26	GJ	0.512	MZ	0.451
10	TR	0.183	HP	0.492	DL	0.435
11	WB	0.134	SK	0.313	MP	0.23
12	TN	0.118	DL	0.299	AP	0.213
13	MH	0.004	AR	0.299	MH	0.16
14	UK	-0.032	MH	0.265	NL	0.069
15	PB	-0.052	CG	0.188	TR	0.068
16	GJ	-0.059	TR	0.186	MN	0.054
17	AR	-0.175	WB	0.04	AR	0.019
18	RJ	-0.226	MP	-0.032	GJ	-0.294
19	MZ	-0.238	UK	-0.181	HP	-0.338
20	AS	-0.279	RJ	-0.235	PB	-0.4
21	TL	-0.569	MZ	-0.38	UK	-0.62
22	KA	-0.609	ML	-0.42	RJ	-0.679
23	JH	-0.64	JH	-0.836	AS	-0.708
24	BR	-0.891	AS	-1.026	UP	-1.155
25	OR	-1.155	OR	-1.054	BR	-1.245
26	MP	-1.232	BR	-1.34	HR	-1.393
27	HR	-1.273	UP	-1.386	OR	-1.396
28	DL	-1.601	NL	-1.588	JH	-1.398
29	UP	-1.844	MN	-2.648	WB	-1.641

Rank	UTs	Equity	UTs	Growth	UTs	Sustainability
1	CH	1.349	PY	1.219	CH	1.498
2	DD	0.594	LD	1.065	LD	0.665
3	JK	0.56	DD	0.364	AN	0.532
4	PY	0.099	CH	0.327	PY	0.244
5	DH	-0.152	AN	-0.725	JK	-0.74
6	AN	-0.731	DH	-0.909	DH	-1.011
7	LD	-1.718	JK	-1.34	DD	-1.187

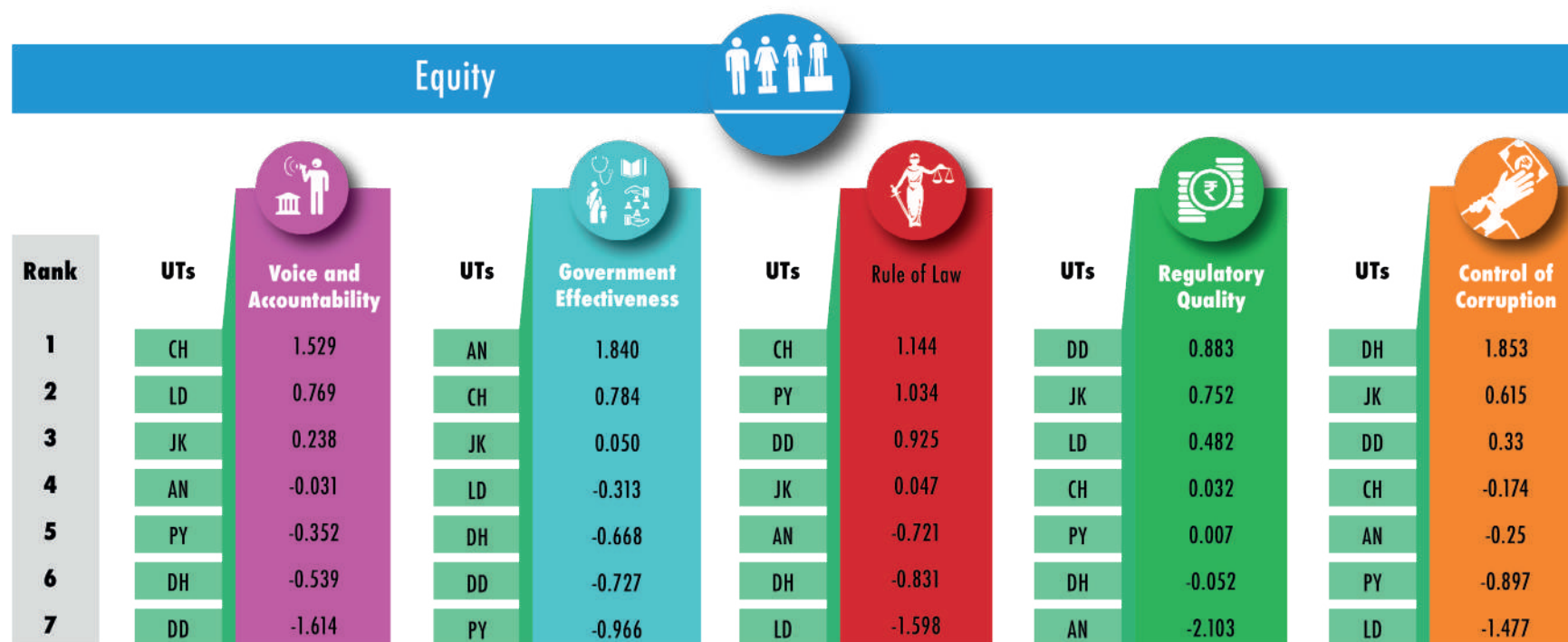
Annexures

Equity										
										
Rank	States		States		States		States		States	
		Voice and Accountability		Government Effectiveness		Rule of Law		Regulatory Quality		Control of Corruption
1	UK	1.834	GA	1.776	NL	1.693	ML	1.992	SK	1.844
2	MN	1.620	KL	1.601	AR	1.261	HP	1.977	NL	1.141
3	HP	1.324	DL	1.262	MN	1.056	CG	1.977	DL	0.779
4	RJ	1.213	MN	1.054	HP	0.921	AP	1.547	GA	0.709
5	MZ	1.079	TR	0.985	GJ	0.903	SK	1.486	AS	0.63
6	NL	1.024	ML	0.963	ML	0.849	TN	0.649	PB	0.396
7	AS	0.900	MH	0.825	PB	0.711	TL	0.596	WB	0.353
8	ML	0.805	WB	0.640	WB	0.595	MP	0.588	HR	0.226
9	JH	0.686	NL	0.594	TR	0.567	MH	0.511	ML	0.18
10	BR	0.566	TN	0.534	GA	0.515	RJ	0.189	CG	-0.049
11	SK	0.559	AR	0.492	AP	0.513	KA	0.181	MP	-0.081
12	CG	0.317	HR	0.301	TN	0.493	GA	0.151	GJ	-0.087
13	AP	0.125	HP	0.145	TL	0.435	MZ	0.12	JH	-0.178
14	TR	0.003	BR	0.092	KA	0.345	KL	-0.11	KA	-0.23
15	KL	-0.027	GJ	0.086	MZ	0.307	WB	-0.302	AP	-0.245
16	GA	-0.124	PB	0.082	MH	0.146	MN	-0.34	UK	-0.266
17	PB	-0.209	SK	0.023	KL	0.040	GJ	-0.34	MZ	-0.269
18	OR	-0.305	KA	-0.012	CG	-0.005	OR	-0.402	RJ	-0.277
19	UP	-0.544	AS	-0.329	AS	-0.255	UK	-0.601	KL	-0.283
20	DL	-0.569	JH	-0.369	SK	-0.566	JH	-0.77	MH	-0.31
21	MP	-0.645	UK	-0.606	UK	-0.606	PB	-0.793	HP	-0.316
22	WB	-0.719	TL	-0.617	BR	-0.746	HR	-0.854	TL	-0.342
23	GJ	-0.783	OR	-0.748	JH	-0.844	UP	-0.893	AP	-0.38
24	HR	-0.863	AP	-0.821	UP	-0.862	DL	-0.916	OR	-0.391
25	AR	-1.117	RJ	-0.931	RJ	-0.897	AR	-0.931	MN	-0.451
26	TN	-1.311	MP	-1.521	OR	-0.937	TR	-1	TR	-0.451
27	MH	-1.391	UP	-1.575	MP	-1.114	AS	-1.038	BR	-0.545
28	TL	-1.638	CG	-1.859	HR	-1.304	NL	-1.054	UP	-0.553
29	KA	-1.809	MZ	-2.063	DL	-3.209	BR	-1.621	TN	-0.556

PAI 2020 Theme Wise State Rankings

Growth 				
Rank	Government Effectiveness 		Regulatory Quality 	
	States		States	
1	KL	2.051	GA	2.524
2	PB	1.595	KA	1.428
3	TN	1.160	AR	1.143
4	GA	0.817	TL	0.980
5	HR	0.764	TN	0.843
6	HP	0.752	AP	0.512
7	AP	0.747	CG	0.480
8	SK	0.712	ML	0.471
9	KA	0.681	GJ	0.455
10	DL	0.616	MP	0.403
11	MH	0.475	KL	0.403
12	GJ	0.430	TR	0.356
13	TL	0.375	HR	0.209
14	MZ	0.291	HP	0.097
15	WB	0.259	MH	-0.018
16	TR	-0.035	DL	-0.099
17	UK	-0.124	SK	-0.173
18	CG	-0.157	UK	-0.189
19	RJ	-0.167	WB	-0.191
20	OR	-0.236	JH	-0.233
21	MP	-0.458	RJ	-0.238
22	AP	-0.627	PB	-0.342
23	AS	-0.980	BR	-0.526
24	ML	-1.196	UP	-0.644
25	NL	-1.207	AS	-0.793
26	JH	-1.212	MZ	-0.946
27	UP	-1.751	NL	-1.538
28	MN	-1.786	OR	-1.585
29	BR	-1.789	MN	-2.789

Sustainability 				
Rank	Government Effectiveness 		Regulatory Quality 	
	States		States	
1	DL	2.099	CG	2.028
2	GA	2.084	SK	1.697
3	KL	1.800	KL	1.422
4	TN	1.417	TL	1.295
5	KA	1.132	GA	1.232
6	MZ	1.072	ML	1.072
7	AR	0.692	MP	0.845
8	AP	0.396	TN	0.801
9	MH	0.309	MN	0.67
10	GJ	0.253	TR	0.4
11	TL	0.147	HP	0.227
12	NL	0.094	AS	0.16
13	PB	0.057	KA	0.075
14	ML	-0.099	NL	0.012
15	UK	-0.177	MH	-0.067
16	TR	-0.297	AP	-0.073
17	RJ	-0.347	BR	-0.32
18	MP	-0.496	MZ	-0.388
19	HR	-0.547	AR	-0.664
20	MN	-0.589	PB	-0.665
21	HP	-0.741	RJ	-0.687
22	CG	-0.750	GJ	-0.699
23	UP	-0.776	UK	-0.766
24	SK	-0.799	UP	-0.98
25	OR	-0.968	JH	-1.069
26	JH	-1.056	OR	-1.155
27	WB	-1.102	WB	-1.394
28	AS	-1.237	DL	-1.438
29	BR	-1.573	HR	-1.572



PAI 2020 Theme Wise UT Rankings

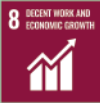


Annexures

SI1#	Pillar	SI2#	Theme	SI3#	SDG	SI4#	Indicators
I	 Equity	A	 Voice and Accountability	a		1	Proportion of population covered by social protection
				b		2	Prevalence of malnutrition amongst children below 5 years
				c		3	Participation rate in organized learning (one year before the official primary entry age)
				d		4	Average Annual Drop-out rate at secondary level
				e		5	Proportion of seats held by women in (a) state legislatures and (b) local governments
				f		6	Utilisation of Nirbhaya Fund
		B	 Government Effectiveness	g		7	Palma Ratio of Household Expenditure in Urban and Rural India
				h		8	Proportion of urban population living in slums
				i		9	Infant Mortality Rate (IMR)
						10	Gender Parity Index (Elementary)
						11	Rural Indebtedness
		C	 Rule of Law	j		12	Farmer's/ Cultivators suicide per HHs
						13	Expenditure in social sector
						14	Number of victims of intentional homicide per 100,000 population
						15	Unsented detainees as a proportion of overall prison population
						16	Incidence of Crimes against SC and ST
						17	Child Sex ratio
						18	Crimes against children
		D	 Regulatory Quality	k		19	Dowry deaths per 10 lakh population
						20	Rapes per 10 lakh population
		E	 Control of Corruption	l		21	Cases Pending in District Courts
						22	Worker Population Ratio (Female) (WPR)
						23	No. of ACB (Anti-Corruption Bureau) cases disposed as a % of total cases registered

PAI 2020 List Of Pillars, Themes, SDGs & Indicators

Methodology used	Data Source	Years
Latest Data Point	National Social Assistance Programme (NSAP), NFHS-4	2020, 2015-16
Latest Data Point	NFHS-4, National Family Health Survey, India	2015-16
Latest Data Point	ICDS, Ministry of Women and Child Development- GoI	2015
Latest Data Point	U-DISE, Flash Statistics 2016-17	2015-16
Latest Data Point	Ministry of Statistics and Programme Implementation (MoSPI)	2016
Latest Data Point	Ministry of Women and Child Development- GoI	2019
Latest Data Point	Ministry of Statistics and Programme Implementation (MoSPI) & Ministry of Urban Affairs	2011
Latest Data Point	Ministry of Home Affairs (Census 2011)	2011
Latest Data Point	NFHS-4, National Family Health Survey, India	2015-16
Latest Data Point	U-DISE, Flash Statistics 2016-17	2016-17
Latest Data Point	Agricultural Pocket Book 2019, Ministry of Agriculture and Farmers Welfare	2013
Latest Data Point	National Crime Records Bureau (NCRB)(Accidental Deaths and Suicides in India, 2018)	2018
Latest Data Point, Growth Rate	Reserve Bank of India	2017-18, 2018-19, 2019-20
Average, CAGR	National Crime Records Bureau (NCRB)	2016, 2017, 2018
Latest Data Point, CAGR	National Crime Records Bureau (NCRB)	2016, 2017, 2018
Latest Data Point	National Crime Records Bureau (NCRB)	2018
Latest Data Point, Growth Rate	Census 2001, NFHS 4- National Family Health Survey India	2001, 2015-16
Latest Data Point	National Crime Records Bureau (NCRB)	2018
Average, Latest Data Point	National Crime Records Bureau (NCRB)	2016, 2017, 2018
Average, CAGR	National Crime Records Bureau (NCRB)	2016, 2017, 2018
CAGR, Latest Data Point	Court News, Supreme Court of India	2016, 2017, 2018
Latest Data Point	National Sample Survey Office (NSSO)	2017-18
CAGR, Latest Data Point	National Crime Records Bureau (NCRB)	2016, 2017, 2018

SI1#	Pillar	SI2#	Theme	SI3#	SDG	SI4#	Indicators
II	Growth	A	 Government Effectiveness	a	 2 ZERO HUNGER	24	Proportion of total Government expenditure on Agriculture and Allied Services
				b	 3 GOOD HEALTH AND WELL-BEING	26	Health worker density
						25	Immunisation achievement
						27	Institutional delivery
						28	ASER Index
				c	 4 QUALITY EDUCATION	29	Net Enrolment Ratio at Elementary (1-8)
						30	Percentage of elementary and secondary schools with Pupil Teacher Ratio less than/equal to 30
						31	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)
						32	Percentage of school teachers professionally qualified
				d	 6 CLEAN WATER AND SANITATION	33	Proportion of population using safely managed drinking water services
						34	Proportion of population using safely managed sanitation services
				e	 7 AFFORDABLE AND CLEAN ENERGY	35	Proportion of population with access to electricity
				f	 8 DECENT WORK AND ECONOMIC GROWTH	36	Fiscal Surplus/ Deficit
						37	States Own Tax Revenue Growth
		B	 Regulatory Quality	g	 8 DECENT WORK AND ECONOMIC GROWTH	38	Annual growth rate of real GSDP per capita
						39	Unemployment Rate
						40	Proportion of households with an account at a bank
						41	Manufacturing value added as a proportion of GDP and per capita
				h	 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	42	Proportion of total government expenditure on infrastructure
						43	Number of Buses per 10 lakh population
				i	 11 SUSTAINABLE CITIES AND COMMUNITIES		

PAI 2020 List Of Pillars, Themes, SDGs & Indicators

Methodology used	Data Source	Years
Latest Data Point, Growth Rate	Respective State Government Budget	2017-18, 2018-19, 2019-20
Latest Data Point	Ministry of Health and Family Welfare	2017
Latest Data Point	NFHS-4, National Family Health Survey, India	2015-16
Latest Data Point	NFHS-4, National Family Health Survey, India	2015-16
Average	ASER Report	2018
Latest Data Point	U-DISE, Flash Statistics 2016-17	2014-15, 2015-16, 2016-17
Latest Data Point	U-DISE	2016-17
Latest Data Point	U-DISE, Flash Statistics 2016-17	2016-17
Latest Data Point	U-DISE, Flash Statistics 2016-17	2016-17
Latest Data Point	NFHS-4, National Family Health Survey, India	2015-16
Latest Data Point	NFHS-4, National Family Health Survey, India	2015-16
Latest Data Point	NFHS-4, National Family Health Survey, India	2015-16
Average, Growth Rate	A Study of Budgets- Reserve Bank of India	2017-18, 2018-19, 2019-20
Latest Data Point, Growth Rate	A Study of Budgets- Reserve Bank of India	2017-18, 2018-19, 2019-20
Latest Data Point	Ministry of Statistics and Programme Implementation (MoSPI)	2019-20
Latest Data Point	National Sample Survey Office (NSSO)	2017-18
Latest Data Point	Ministry of Finance (Progress Report on Pradhan Mantri Jan Dhan Yojana)	2018
Latest Data Point, CAGR	Reserve Bank of India	2014-15, 2015-16, 2016-17
Latest Data Point, Growth Rate	Respective State Government Budget	2017-18, 2018-19, 2019-20
Latest Data Point	Ministry of Road Transport	2017

SI1 #	Pillar	SI2 #	Theme	SI3 #	SDG	SI4 #	Indicators
III	 Sustainability	A	 Government Effectiveness	a	 7 AFFORDABLE AND CLEAN ENERGY	44	Renewable energy share in the total final energy consumption
						45	Percentage of households using clean cooking fuel
				b	 15 LIFE ON LAND	46	Forest area as a proportion of total land area
						47	Proportion of land that is degraded over total land area
		B	 Regulatory Quality	c	 11 SUSTAINABLE CITIES AND COMMUNITIES	48	Tree cover
						49	Solid waste generation and waste processing in the urban areas
						50	Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

PAI 2020 List Of Pillars, Themes, SDGs & Indicators

Methodology used	Data Source	Years
Latest Data Point	Central Electricity Authority	2020
Latest Data Point	NFHS-4, National Family Health Survey, India	2015-16
Latest Data Point	India State of Forest Report- Forest Survey of India	2019
Latest Data Point	Desertification and Land Degradation Atlas of India, ISRO, GoI	2011-13
Latest Data Point	India State of Forest Report- Forest Survey of India	2019
Latest Data Point	Lok Sabha Unstarred Question No. 2918	2018
Latest Data Point	Central Pollution Control Board (CPCB)	2018

Indicators

Proportion of population covered by social protection

Prevalence of malnutrition amongst children below 6 years

Participation rate in organised learning (one year before the official primary entry age)

Proportion of seats held by women in (a) state legislatures and (b) local governments

Rural Indebtedness

Incidence of Crimes against SC and ST

Child Sex ratio

Worker Population Ratio (Female) (WPR)

Health worker density

PAI 2020 Notes/Adjustments

Adjustments Done

To calculate proportion of population covered by social protection, we have considered Indira Gandhi National Old Age Pension Scheme, Indira Gandhi National Widow Pension Scheme, Indira Gandhi National Disability Pension Scheme and the proportion of women receiving benefits under the maternity benefit scheme and have given equal weightage to compute the overall proportion of population covered by social protection

To calculate prevalence of malnutrition amongst children below 6 years, we have considered % of children who are stunted, wasted, severely wasted and underweight and have given equal weightage to compute the overall level of malnourishment

1. To calculate participation in organised learning, we have considered children in the age group of 3-6 years
2. As per the official data available on ICDS, the number of beneficiaries in Mizoram were more than the actual number of children in the state. Hence, a percent age of 100 was allotted to Mizoram
3. For Andhra Pradesh and Telengana, the age group of 0-6 years was considered

1. To calculate the proportion of women in (a) state legislature and (b) local governments, we have given equal weightage to the seats won by women in elections to state assembly and Panchayati Raj institutions
2. The time period for seats won by women in state assembly is different across states
3. For the states of Delhi, Meghalaya, Mizoram and Nagaland, data is not available for the proportion of seats held by women in Panchayati Raj institutions. Hence no value was assigned to them for that segment

Data for Goa and Delhi was not available. Hence, an average of all the states has been allotted to it

To calculate Worker Population Ratio (Female), we have considered Usual Status (ps+ss) for the 15-59 age group

Data for Telangana has been taken from District Booklet of Adilabad, 2016

To calculate Worker Population Ratio (Female), we have considered Usual Status (ps+ss) for the 15-59 age group

Health Worker Density includes doctors, Auxiliary Nurse Midwife, Registered Nurses and Registered Midwives, Lady Health Visitors and Phramacists
Data is not available for Jammu and Kashmir, Sikkim and Telangana

Annexures

Indicators

ASER 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

Fiscal Surplus/ Deficit

Annual growth rate of real GSDP per capita

Unemployment Rate

Manufacturing value added as a proportion of GDP and per capita

Annual mean levels of fine particulate matter (PM10) in cities (population weighted)

*Note: 7th June 2020 was the last date of data collection

PAI 2020 Notes/Adjustments

Adjustments Done

Data for Delhi and Goa was not available. Thus, the country's average was assigned to them

To calculate 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), each component was given equal weightage

Data was not available for Manipur. Hence the average of all the North-Eastern states was allotted to Manipur

The RBI data is a mix of surpluses (-) and deficits (+). Therefore, in order to convert the data in a common platform, we have used the following formula for the purpose of scoring the states: $(\text{Value} - \text{Maximum}) / (\text{Minimum} - \text{Maximum})$

1. We have considered GSDP at Constant Price with base year as 2011-12
2. In the case of West Bengal, the GSDP data has been sourced from the state portal

To calculate unemployment rate, we have considered Usual Status (ps+ss) for the 15-59 age group

Data for Tripura has been sourced from the Directorate of Economics and Statistics, Government of Tripura

To calculate Annual mean levels of fine particulate matter (PM10) in cities (population weighted), data at the city level was averaged to arrive at state estimates

ಸುಸ್ಥಿರತೆ: ರಾಜ್ಯಕ್ಕೆ ಅಗ್ರಸ್ಥಾನ

ಸಾರ್ವಜನಿಕ ಆಡಳಿತ: ನಾಲ್ಕನೇ ಸ್ಥಾನದಲ್ಲೇ ಮುಂದುವರಿದ ಕರ್ನಾಟಕ

ಪ್ರಜಾವಾಣಿ ವಾರ್ತೆ

ಬೆಂಗಳೂರು: ಸುಸ್ಥಿರತೆಯಲ್ಲಿ ಕರ್ನಾಟಕವು ಅಗ್ರಸ್ಥಾನ ಪಡೆದಿದೆ. ಆದರೆ, ಸಾರ್ವಜನಿಕ ಆಡಳಿತ ಸೂಚಂಕದಲ್ಲಿ (ಪಿಎಸಿ) ರಾಜ್ಯವು ನಾಲ್ಕನೇ ಸ್ಥಾನ ಪಡೆದಿದೆ.

ಕಳೆದ ಎರಡು ವರ್ಷಗಳಲ್ಲಿಯೂ ರಾಜ್ಯವು ನಾಲ್ಕನೇ ಸ್ಥಾನದಲ್ಲಿದ್ದು, ಪಿಎಸಿಯಲ್ಲಿ ಕೇರಳವು ಮೊದಲ ಸ್ಥಾನ ಪಡೆಯುವ ಮೂಲಕ ಸತತ ನಾಲ್ಕನೇ ಬಾರಿ ಈ ಸಾಧನೆಗೆ ಪಾತ್ರವಾಗಿದೆ.

ಸಾರ್ವಜನಿಕ ಆಡಳಿತ ಕೇಂದ್ರದ (ಪಿಎಸಿ) ಮುಖ್ಯಸ್ಥ ಡಾ. ಕಸ್ತೂರಿ ರಂಗನ್ ಗುರುವಾರ ಈ ಸೂಚಂಕವನ್ನು ಬಿಡುಗಡೆಗೊಳಿಸಿದರು. ಅಧಿವೃದ್ಧಿ ಸೂಚಂಕದಲ್ಲಿ ಕರ್ನಾಟಕವು ಮೂರನೇ ಸ್ಥಾನದಲ್ಲಿದೆ.

ದೇಶದಲ್ಲಿ ಸಾರ್ವಜನಿಕ ಆಡಳಿತ ವಿಧಾರಣೆಗೆ ಸಲಹೆ ನೀಡುವ ಉದ್ದೇಶದಿಂದ 1994ರಲ್ಲಿ ಪಿಎಸಿಯನ್ನು ಸ್ಥಾಪಿಸಲಾಗಿದೆ. ರಾಜ್ಯಗಳ ಆಡಳಿತಕ್ಕೆ ಸಂಬಂಧಿಸಿದ 10 ವಿಚಾರಗಳನ್ನು ಹಾಗೂ 30 ಸಿದ್ಧತೆ ವಿಷಯಗಳನ್ನು ಆಧರಿಸಿ ಅಧ್ಯಯನ ನಡೆಸುವ ಪಿಎಸಿ ಪ್ರತಿ ವರ್ಷವೂ ಸೂಚಂಕವನ್ನು ಸಿದ್ಧಪಡಿಸುತ್ತದೆ.

ಅಧ್ಯಯನಕ್ಕೆ ಪ್ರಮುಖವಾಗಿ ಆಯಾ ರಾಜ್ಯ ಸರ್ಕಾರದ ನೀತಿ-ನಿರೂಪಣೆ, ಭಿವೃದ್ಧಿ ಮತ್ತು ಸುಸ್ಥಿರತೆ ಅಂಶಗಳನ್ನು ಒಳಗೊಂಡಿರುತ್ತದೆ.



2019ರ ಸಾರ್ವಜನಿಕ ಆಡಳಿತ ಸೂಚಂಕವನ್ನು ಡಾ. ಕೆ. ಕಸ್ತೂರಿ ರಂಗನ್ (ಮಧ್ಯದಲ್ಲಿರುವವರು) ಗುರುವಾರ ಬಿಡುಗಡೆಗೊಳಿಸಿದರು. ಹಾರ್ವರ್ಡ್‌ನ ಕಂಪ್ಯೂಟೇಷನ್ ಆಂಡ್ ಮೊನಿಟರಿಂಗ್ ಸೆಂಟರ್‌ನ ನಿರ್ದೇಶಕ ಡಾ. ಮಿಲಿಂದ್ ತಾಂಬೆ, ಪಿಎಸಿ ನಿರ್ದೇಶಕ ಜಿ. ಗುರುಚರಣ್ ಇದ್ದಾರೆ - ಪ್ರಜಾವಾಣಿ ಚಿತ್ರ

ಅಗ್ರ ಐದು ದೊಡ್ಡ ರಾಜ್ಯಗಳು		
ಸ್ಥಾನ	ರಾಜ್ಯ	ಸೂಚಂಕ
1	ಕೇರಳ	1.011
2	ತಮಿಳುನಾಡು	0.823
3	ಆಂಧ್ರಪ್ರದೇಶ	0.353
4	ಕರ್ನಾಟಕ	0.353
5	ಪಂಜಾಬ್	0.089

ಅಗ್ರ 5 ಸಣ್ಣ ರಾಜ್ಯಗಳು		
ಸ್ಥಾನ	ರಾಜ್ಯ	ಸೂಚಂಕ
1	ಗೋವಾ	1.1
2	ಹಿಮಾಚಲ ಪ್ರದೇಶ	0.985
3	ಮೇಘಾಲಯ	0.891
4	ಅರುಣಾಚಲ ಪ್ರದೇಶ	0.619
5	ಮಿಜೋರಾಂ	0.581

‘ಶಿಕ್ಷಣಕ್ಕೆ ಒತ್ತು’

ಶಿಕ್ಷಣ ಕ್ಷೇತ್ರದ ಉತ್ಕೃಷ್ಟತೆಗೆ ಒತ್ತು ನೀಡಿ ಎಂಥ ರಾಜ್ಯ ಸರ್ಕಾರಕ್ಕೆ ಪಿಎಸಿ ವರದಿಯಲ್ಲಿ ಸಂಕೇತ ನೀಡಲಾಗಿದೆ. ಮುಖ್ಯವಾಗಿ, ಹಿರಿಯ ಪ್ರಾಥಮಿಕ ಶಾಲಾ ಹಂತದಲ್ಲಿ ಶಾಲೆ ಬಿಡುವವರೆಗೆ ಸಂಖ್ಯೆ ಹೆಚ್ಚಾಗಿದ್ದು, ಇದನ್ನು ತಡೆಯುವ ಗಮನ ಹರಿಸಬೇಕು ಎಂದು ಅದು ಹೇಳಿದೆ.

‘ನೀತಿ ನಿರೂಪಣೆ:

ಸಾಧನೆ ಕಳೆದ

ಸ್ವಲ್ಪ ನೀತಿ-ನಿರೂಪಣೆಯಲ್ಲಿ ರಾಜ್ಯವು ಕಳೆದ ಸಾಧನೆ ಮಾಡಿದೆ. 30 ದೊಡ್ಡ ರಾಜ್ಯಗಳ ಪಟ್ಟಿಯಲ್ಲಿ -1.371 ಸೂಚಂಕದೊಂದಿಗೆ ರಾಜ್ಯವು 28ನೇ ಸ್ಥಾನದಲ್ಲಿದೆ. ಈ ಪಟ್ಟಿಯಲ್ಲಿ ಹಿಮಾಚಲ ಪ್ರದೇಶ ಮೊದಲ ಸ್ಥಾನದಲ್ಲಿದೆ.

ಉತ್ತರದಾಯಿತ್ವ, ಸರ್ಕಾರದ ಕ್ರಿಯಾಶೀಲತೆ, ಕಾನೂನುಬದ್ಧ ಆಡಳಿತ, ಗುಣಮಟ್ಟ ಮತ್ತು ಭ್ರಷ್ಟಾಚಾರ ನಿಯಂತ್ರಣದ ಆಧಾರದ ಮೇಲೆ ಈ ನೀತಿ-ನಿರೂಪಣೆಯನ್ನು ನಿರ್ದೇಶಿಸಲಾಗುತ್ತದೆ.

Karnataka tops country in sustainability, but fails in equity

BENGALURU, DHNS

When it comes to sustainability, Karnataka ranks first among the 18 states with a population of over 2 crore, a report by Bengaluru-based think-tank Public Affairs Centre (PAC) said.

Interestingly, south Indian states have grabbed all the top five slots. The Public Affairs Index report is based on analysis of the government data and grades the states in three parameters of growth, sustainability and equity tailored to analyse smaller (less than 2 crore popu-

lation) and large states.

The state emerged a topper among the 18 large states in adopting the sustainable development goals set by the UN.

Sustainability is the effectiveness of the government in undertaking measures that encourage use of non-conventional sources of energy, conservation of forest and prevention of land desertification.

The report called for enabling evidence-based and community-led climate-sensitive adaptation and mitigation strategies in a diverse, decentralised model to inform devel-

opment planning for building climate change resilience.

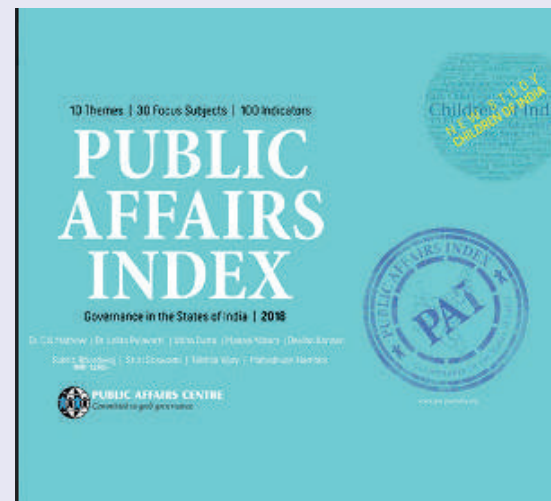
While Karnataka's performance (fourth position) was moderate, it came third among the 18 large states when it comes to growth. However, the state hit near-rock bottom with 17th position when it comes to equity where Tamil Nadu emerged topper followed by Chhattisgarh and West Bengal. Dr K Kasturirangan, chairman of PAC, said the states would do well to ask themselves why growth has eluded the specific population in specific geographies.



G Gurucharan, director, Public Affairs Centre; K Kasturirangan, chairman and Milind Tambe, director, Center for Research In Computation and Society launch the Public Affairs Index 2019 at a programme in Bengaluru on Thursday. DH PHOTO



Public Affairs Index 2016



Public Affairs Index 2018



Public Affairs Index 2017

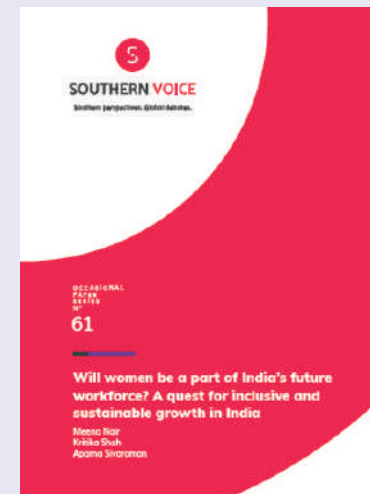


Public Affairs Index 2019

PAC Key Publications



Assessment of Karnataka - German Technical Training Institute (KGTTI)



Will Women be a Part of India's Future Workforce? A Quest for Inclusive and Sustainable Growth in India



Enhancing School Management Outcomes, Community Ownership and Social Accountability

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 2020** is an amalgamation of 3 Pillars, 5 Themes, 13 SDGs and 50 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.