

## **Measuring Inclusive Growth Outcome in Major Indian States: Evidence from Cross Section Data**

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### **Abstract**

Recent policy shift in developing economies towards achieving inclusive economic growth is attracting the attention of researchers across the world. Researchers have been encountering enormous difficulties and challenges for deploying an ideal methodology to measure the inclusive growth outcome. This paper reviews the policy shift in the Indian context towards inclusive growth. This paper develops a composite index for measuring inclusive growth across major Indian states using 20 different socio-economic variables grouped under six dimensions of inclusive growth – economic, amenities, human development, gender equity and financial inclusion, governance and sustainability with cross section data for the years 2001 and 2011. The study used principal component analysis in assigning weightage to these variables in the construction of the composite index. The result show that the states of Kerala, Tamil Nadu Punjab, Maharashtra and Karnataka are best performing states, the states of Uttar Pradesh, West Bengal, Bihar, Assam and Odisha are worst performing states and the states of Andhra Pradesh, Gujarat, Haryana, Rajasthan and Madhya Pradesh are moderately performing states. The robustness of the composite index has been checked through alternate weightage system and alternate aggregation system and found satisfactory. The study contributes in advancing the inclusive growth debate in development economics.

**Key Words:** Inclusive Growth Measurement, Poverty Reduction, Productive Employment Inequality Reduction, Composite Index Major Indian States

**JEL:** F43, D63, O11M 012M 040, 047 and 053

### **Introduction**

Broad based growth can enhance the accessibility of poor to the newly created economic opportunities sharply different from the concept of pro-poor growth which has transferred the benefits of growth to the poor. Economists called this alternate growth strategy as inclusive growth. This marked a paradigm shift in development economics in recent times. However there is lack of theoretical building in the conceptual framework of inclusive growth which give enough scope for detailed investigation. The evolution of inclusive growth in the last couple of decades brought new challenges like inconclusive definition of the term inclusive growth, complexities in the identification of the key drivers of inclusive growth, lack of systematic approach for construction of inclusive growth frame work as a theoretical building and lack of measurement of inclusive growth. The study is organized into four sections. Section I explores the existing literature on measurement issue of inclusive growth. Section II outlines the methodology of the study followed by section III which analyses the result and finally section IV concludes.

### **Section I Review of Literature**

The issue of measurement of inclusive growth dominated the inclusive growth discourse and there are few literature evidences in this connection which are described below.

**Social Opportunity Function – The Opportunity Curve (Ali and Son, 2007)**

Ali and Son (2007) propose a methodology to measure growth inclusiveness in terms of increasing social opportunity function which depends upon Inclusive growth may be measured using the idea of social opportunity function, which is similar to a social welfare function average opportunities available to the population and how these opportunities are shared or distributed among the population. This social opportunity function gives weight to the opportunities enjoyed by the poor.

**Composite Index (McKinley, 2010) – Asian Development Bank**

McKinley (2010) study constructed a composite inclusive growth index at the country level. It used a set of indicators under the following categories. The study used several socio-economic and human development indicators to suggest a diagnostic approach based on weights and scores which can help countries to assess their progress in achieving inclusive growth. The Index is tested through case studies of Bangladesh, Cambodia, India, Indonesia, the Philippines and Uzbekistan. The Composite Index is used by Asian Development Bank – ADB as a starting point for a country's inclusive growth objectives. However the main lacuna of this Index is that weights to various indicators are assigned arbitrarily using value judgment i.e. 50% weightage to the indicators of Economic Growth, Productive Employment and Economic Infrastructure 25% to the indicators of poverty and gender equity, 15% to the indicators of Human Capacity Dimension and 10% to the indicators of Social Protection Dimension of Inclusiveness. The scoring system used for the Composite Index is also not free from loopholes.

**Composite Inclusive Index (CII) – Ramos et al (2013), International Policy Centre for Inclusive Growth – IPC-IG (UNDP)**

Ramos et al (2013) developed a Composite Inclusive Index (CII). In this study inclusive growth analysis is divided into two dimension of inclusive growth – benefit sharing and participation. While benefit sharing dimension is measured through analysis of income inequality and poverty reduction participation dimension is measured through employment indicators. The study constructed the Composite Inclusive Index (CII) for Cross National Comparisons of 43 countries over 10 years period – 1996 and 2006. It considers initial state of each country's poverty and inequality levels at the time point of studies and make a primary assessment of the observed evolution in the indicators and to this analysis the paper add employment interpreted through participation dimension of inclusive growth. The Inclusive Index (II) is built through a min-max normalization of data on poverty, inequality and the inverse of EPR (Employment to Population Rate).

**A Unified Measure of Opportunities: Anand et al (2013) – International Monetary Fund (IMF)**

Rahul et al (2013) apply the micro economic concept of a social mobility function at the macro-economic level to measure inclusive growth that is closer to the absolute definition of Pro Poor Growth (PPG). This dynamic measure helped to focus on inequality as well as distinguish between countries where per capital income growth was the same for the top and the bottom of the income pyramid by accounting for the pace of growth. To integrate equity and growth in a unified measure, the study proposed a unique measure of inclusive growth based on a utilitarian social welfare function drawn from consumer choice literature, where inclusive growth depends on two factors: (i) income growth; and (ii) income distribution.

**Good Growth for Cities Index – PWC and Demos (2015)**

Good Growth for Cities Index" was created by PWC and Demos study (2015). It was created based on the view of the people in UK on what elements economic success mean to them. Within the Index, Good Growth encompasses broader measure of economic well- being including job, income, wealth, skill, work-life balance, housing, transport infrastructure, sectoral balance of the economy, fair distribution of income or wealth etc. The study was conducted based on the annual survey representative sample of UK working age population which asking the people which elements are deemed most important in public opinion.

## Inclusive Growth Monitor (Brookings, 2016)

Shearer et al (2016) of Brookings constructed “Metro Monitor” for tracking growth, prosperity and inclusiveness in 100 largest US metropolitan areas. The study captured the economic growth during 2009-14 during the economic recovery from Great Recession in the US economy followed by the sub-prime crisis. The composite ranks are determined by connecting the change for each indicator into a standard score. The standard score measures how a given value varies from the average of a sample. A metropolitan area’s scores on each indicator in a category are summed and the rank of the sum become the composite rank of the category.

## Inclusive Growth Monitor – Joseph Rowntree Foundation (JRF), UK – 2016

Beatty et al (2016) developed an Inclusive growth Monitor with special reference to England for measuring the relationship between poverty and growth. The study presented data on all 39 LEP areas of England using 18 indicators to capture the relationship between economic performance, poverty and inclusion. Under the theme of inclusion, three dimension were chosen – income, living cost and labor market exclusion and under the theme of prosperity, three dimension were chosen – output growth, employment and human capital. It has provided a strategic framework to shape and monitor inclusive growth agenda in cities and city regions.

## Section II Methodology

### Identification of Indian states

The study identifies 15 major Indian states based on the following three criteria.

Table I Criteria for Identification of Indian States

States	Geographical Area Lac Sq.Km.	% of Population to that of India	% of SDP to India's GDP
Andhra Pradesh	2.75	7.00	7.65
Assam	0.78	2/58	1.61
Bihar	0.94	8.68	2.89
Gujarat	1.96	4.99	6.84
Haryana	0.44	2.09	3.70
Karnataka	1.92	5.05	5.49
Kerala	0.38	2.76	3.85
MP	3.08	6.0	3.48
Maharashtra	3.08	9.29	14.04
Odisha	1.56	3.47	2.71
Punjab	0.50	2.29	3.36
Rajasthan	3.42	5.67	4.09
Tamil Nadu	1.36	5.96	6.88
Uttar Pradesh	2.41	16.49	8.35
West Bengal	0.89	7.55	7.18
<b>Total Share (%)</b>	<b>25.47 Lac sq.km. (77%)</b>	<b>89.77 %</b>	<b>82.12 %</b>

### Selection of Indicators and Sources of Data

The following table shows the list of indicators and dimensions along with the data source for the study.

Table II Indicators and Data Sources

Indicators	Dimension	(Base Year-01-02)	(Current Year-11-12)
Income – MPCE	<b>ECONOMI</b>	2004-05 – NSSO 60 <sup>th</sup> Round	NSSO 68 <sup>th</sup> Round July 2011 to June 2012
Poverty		Planning Commission 2004-05	Planning Commission 2011-12
Employment		Census 2001	NSSO – 68 <sup>th</sup> Round
Inequalities(Gini Coefficient)		Planning commission	Planning Commission
Per Capita consumption Of Electricity	<b>AMENITIES</b>	Central Electricity Authority, Ministry of Power, GOI	Central Electricity Authority, Ministry of Power, GOI
Access to Drinking Water		Census-2001	Census-2011
Access to Toilet		Census-2001	Census-2011
Pucca Houses		Census-2001	Census-2011
Transport – Road Length per 100 Sq.km.	<b>GENDER EQUITY and Financial Inclusion</b>	Economic Survey of Maharashtra – 2005-06	Economic Survey of Maharashtra – 2012-13
% of women in LWF		Census-2001	Census-2011
% of Girls in School Ed		Census-2001	Census 2011
% of HH with banking		Census-2001	Census-2011
Literacy Rate	<b>Human Development</b>	Census-2001	Census-2011
Life Expectancy		Census-2001	Census-2011
Health – IMR		SRS Bulletin 2005-06	SRS Bulletin Oct.2012
% of Dev.Exp to Total Exp	<b>GOVERNANCE</b>	Finance Accounts of States and CSO	Finance Accounts of States and CSO
% of Tax Revenue to GSDP		Finance Accounts of States and CSO	Finance Accounts of States and CSO
Crime Rate	<b>Sustainability</b>	National Crime Records Bureau, Home Ministry, GoI-Report-2001	National Crime Records Bureau, Home Ministry, GoI-Report-2011
Air Quality		Environmental Sustainability Index	Environmental Sustainability Index

## Conceptual Framework

A conceptual framework is constructed based on the significance of different dimensions of inclusive growth like economic growth, poverty reduction, productive employment, human development, gender equity, governance and inequality reduction. A conceptual framework has been developed from the existing literature as shown in the following table.

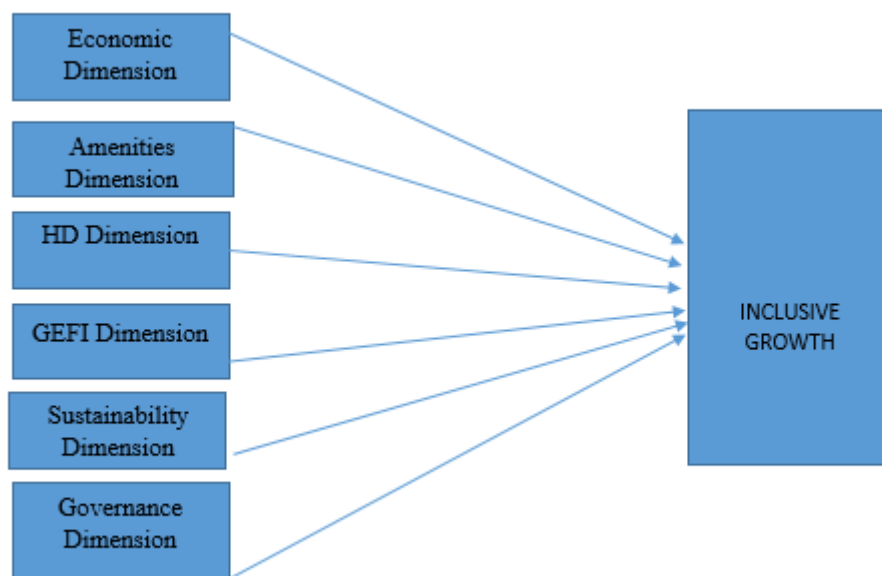
Table III Genesis of Conceptual Framework

Sr.No.	Dimension	Indicators	Studies
1	Economic	Economic Growth, Productive Employment, Poverty Reduction, Inequality Reduction	Ravallion and Chen (1997), Ravallion (2004), World Bank (2006), Ali (2007), Ali and Son (2007), Ianchavichina Elena and Lundistoram Sushana (2009) . Raunier and Kanbur (2010a),(2010b) ADB (2013) Bhagwati

			and Panagariya (2013) Anand et al (2013) Aoyagi and Ganelli (2015)
2	Amenities	Access to Electricity, Access to Pucca House, Access to Drinking Water, Access to Toilet and Access to Road	McKinley (2010), Government of India (2013a),(2013b) ADB(2013),
3	Human Development	Literacy Rate, Expected Life and Infant Mortality Rate	Sen (1999), McKinley (2010), Klasen (2010)
4	Gender Equity and Financial Inclusion	Girl's School Education, Access to Banking	Rangarajan C (2008), Government of India(2013),
5	Sustainability	Crime Rate and Air Quality	Suryanarayana (2013), UN-ESCAP(2015)
6	Governance	Share of Own Tax to GDP and Share of Development Expenditure to Total Expenditure as per State Budget	McKinley(2010), ADB92014A), ADB(2014b), Suryanaraya (2014), Mundle et al (2016)

Based on the evidences from literature review as cited above, the study develops a unique conceptual framework for inclusive growth incorporating the following six different dimensions. Economic Dimension, Amenities Dimension, Human Development Dimension ,Gender Equity and Financial Inclusion Dimension, Sustainability Dimension and Governance Dimension

### Conceptual Framework for Inclusive Growth



**Figure - 1 Conceptual Framework for Inclusive Growth**

#### The Weightage Scheme

The Weightage Scheme is done using the statistical tool of Principal Component Analysis (PCA) rather than equal weightage scheme which is followed by Human Development Reports and other Indices.

## The Normalization Procedure and Aggregation Method

The raw data obtained for different socio-economic variables are normalized through Z score before the component index is prepared by multiplying the Z score with the weight of the concerned indicator. Linear aggregation method is used for the construction of the Composite Index for Inclusive Growth and then different aggregation method of Average of Average has been used to check the robustness of the Composite Index for Inclusive Growth.

## Section III Result and Discussion

### Weightage Scheme:

The study resorted to principal component analysis (PCA) technique in assigning the weight to different socio-economic variables rather than the equal weight system followed by the UN in the preparation of Human Development Reports (HDRs). The principal component analysis (PCA) tool has been employed with the help of SPSS 19 software and weights have been assigned to different indicators as follows. The weights assigned to different variables have undergone some changes from the year 2001 to the year 2011. For example, the weight for income (MPCE) is 0.02 for the year 2001 but became 0.15 for the year 2011 signifying the growing influence of income and consumption expenditure as a basic parameter for welfare measurement. Similarly, the weight given for IMR is only 0.08 in the year 2001 but it is 0.32 for the year 2011 which indicates the emerging health priorities of the government across major Indian states. Similarly, the weight given to toilet for the year 2001 was 0.03 but became 0.20 for the year 2011, indicating the government's efforts in eradicating open defecation, building pucca houses with toilet facility and other clean environment policies pursued by different state governments across India. The weight given to per capita consumption of electricity is 0.10 for the year 2001 but it is increased to 0.20 for the year 2011, signifying government's successful policies in the rural and urban electrification.

Table IV Description of Weights obtained from PCA

Indicators	Dimension	2001	2011
Income – MPCE	Economic	0.02	0.15
Poverty		0.34	0.24
Employment		0.21	0.20
Gini – Rural		0.22	0.20
Gini – Urban		0.21	0.21
		Total	100%
Per Capita consumption Of Electricity	Amenities	0.10	0.20
Access to Drinking Water		0.20	0.21
Access to Toilet		0.03	0.20
Pucca Houses		0.46	0.21
Transport – Road Length per 100 Sq.km.		0.21	0.18
	Total	100%	100%
% of women in LWF	Gender Equity and Financial Inclusion	0.33	0.33
% of Girls in School Ed		0.33	0.33
% of HH with access to banking		0.33	0.33
	Total	100%	100%
Literacy Rate	Human Development	0.37	0.36
Life Expectancy		0.55	0.32
Health – IMR		0.08	0.32
	Total	100%	100%
% of Development Exp to Total Exp	Governance	0.50	0.50
% of Tax Revenue to GSDP		0.50	0.50

	Total	100%	100%
Crime Rate	Sustainability	0.50	0.50
Air Quality		0.50	0.50
	Total	100%	100%

### Construction of Composite Inclusive Growth Index – 2001

Actual data is converted into z-score for each dimension which is multiplied by the concerned weight to get the value of each indicator. Then the index value of all the indicators are aggregated to get the index of each dimension and the sum of score of all the dimensions have been taken as the composite score for a state. This study has developed the composite inclusive growth index Indian context both for 2001 and 2011.

This is the unique measure of inclusive growth developed perhaps for the first time in India using inter-temporal study for comparing the inclusive growth outcome of major Indian states for two different time period – 2001 and 2011. This adds new dimension to the ongoing debate on inclusive growth in India. This chosen time period of 2001 and 2011 is the most happening period of India in the post reform period when different state governments resorted to a number of development programmes towards achieving the objective of inclusive growth. There were criticisms that robust economic growth unleashed by the reforms also created high level of income inequality and crony capitalism. The nexus between politicians and few large business groups resulted in middle income trap where crony capitalism creates oligarchies that slow down the growth. In view of these two severe criticism of reforms this study assumes greater significance (Rajan, 2014)

Table V Composite Index for Inclusive Growth – 2001

States	Economic Dimension		Amenities Dimension		Human Development Dimension		GEFI* Dimension		Governance Dimension		Sustainability Dimension		CI	R
	Index	R	Index	R	Index	R	Index	R	Index	R	Index	R		
AP	1.07	1	0.01	8	-0.22	9	0.11	8	0.78	4	-0.20	7	1.55	6
Assam	0.19	6	-1.26	14	-0.81	12	-0.63	12	-0.54	10	1.12	1	-1.94	10
Bihar	-0.34	12	-0.49	10	-1.07	15	-0.58	11	-1.46	15	-0.41	12	-4.34	14
Gujarat	0.31	5	0.4	4	0.08	8	0.18	6	1.10	2	-0.39	11	1.69	5
Haryana	0.44	3	0.44	3	0.29	5	0.4	5	0.95	3	0.38	4	2.89	3
Karnataka	0.31	5	0.12	6	0.15	7	0.53	3	1.30	1	-0.22	8	2.18	4
Kerala	-0.51	11	0.52	2	2.48	1	0.54	2	0.04	8	0.15	5	3.23	1
MP	-0.30	7	-0.62	12	-0.93	13	-0.13	10	0.18	7	-0.37	10	-2.17	11
MAHA	-0.47	10	0.2	5	0.78	3	1.08	1	0.26	6	-0.50	13	1.35	8
Odisha	-0.43	9	-0.83	13	-0.76	11	-0.67	14	-0.76	12	0.76	2	-2.69	13
Punjab	0.91	2	1.42	1	0.79	2	0.15	7	-0.92	13	0.58	3	2.93	2
Rajasthan	0.43	4	-0.01	9	-0.54	10	0.05	9	-0.03	9	-0.59	14	-0.69	9
TN	-0.51	11	0.4	4	0.53	4	0.41	4	0.70	5	-0.07	6	1.46	7
UP	-0.79	13	0.02	7	-0.94	14	-0.83	15	-0.71	11	-1.09	15	-4.34	14
WB	-0.32	8	-0.3	10	0.17	6	-0.63	12	-0.92	14	-0.25	9	-2.25	12

\*GEFI: Gender Equity and Financial Inclusion

Column R indicates the rank of respective states against respective dimension.

## Classification of States according to Inclusive Growth Index (2001)

The states have been classified into three categories-highly performed, moderately performed and worst performed.

Table VI – Classification of States based on Inclusive Growth Outcome

Highly Performed	Rank	Moderately Performed	Rank	Worst Performed	Rank
Kerala	1	Andhra Pradesh	6	MP	11
Punjab	2	Tamil Nadu	7	West Bengal	12
Haryana	3	Maharashtra	8	Odisha	13
Karnataka	4	Rajasthan	9	UP	14
Gujarat	5	Assam	10	Bihar	14

## Construction of Composite Inclusive Growth Index – 2011

Table VII Composite Index for Inclusive Growth – 2011

States	Economic Dimension		Amenities Dimension		Human Development Dimension		GEFI* Dimension		Governance Dimension		Sustainability Dimension		CI	R
	Index	R	Index	R	Index	R	Index	R	Index	R	Index	R		
AP	0.89	1	0.32	4	-0.57	12	-0.35	5	-0.22	7	0.68	3	1.45	6
ASSAM	-0.14	9	-0.58	13	-0.77	13	-0.99	15	0.65	3	-0.47	11	-2.30	12
Bihar	0.14	7	-0.61	14	-0.77	13	-0.58	13	-0.36	9	-0.60	13	-2.77	13
Gujarat	0.37	2	0.42	3	0.11	6	-0.08	8	-0.26	8	0.40	5	0.96	7
Haryana	-0.08	8	0.68	2	-0.03	8	-0.2	10	0.17	4	0.30	6	0.84	8
KARN	-0.50	14	0.03	8	0.05	7	0.49	4	-0.16	6	1.55	1	1.47	5
Kerala	-0.08	8	0.24	5	2.63	1	0.88	2	0.12	5	-0.48	12	3.31	1
MP	-0.40	12	-0.49	11	-0.87	11	0.14	6	-0.46	10	0.71	2	-1.38	10
MAHA	0.09	6	0.15	6	0.88	2	0.68	3	-0.55	12	0.26	7	1.51	4
Odisha	-0.39	11	-0.59	12	-0.66	10	-0.6	14	0.72	2	-0.03	8	-1.56	11
Punjab	0.27	4	1.04	1	0.39	4	0.05	7	0.81	1	-1.05	14	1.51	3
RAJ	0.26	5	-0.3	10	-0.61	9	-0.09	9	-0.46	10	-0.09	9	-1.28	9
TN	0.33	3	0.14	7	0.76	3	1.03	1	-0.22	7	0.48	4	2.51	2
UP	-0.44	13	-0.16	9	-0.87	11	-0.49	12	-0.88	13	-0.21	10	-3.06	14
WB	-0.36	10	-0.3	10	0.34	5	-0.47	11	-0.54	11	-1.44	15	-2.77	13

\*GEFI: Gender Equity and Financial Inclusion

Column R indicates the rank of respective states against respective dimension.

The states have been classified into three categories-highly performed, moderately performed and worst performed.

Table VIII Classification of States according to Inclusive Growth Index (2011)

Highly Performed	Rank	Moderately Performed	Rank	Worst Performed	Rank
Kerala	1	Andhra Pradesh	6	Odisha	11
Tamil Nadu	2	Gujarat	7	Assam	12
Punjab	3	Haryana	8	Bihar	13
Maharashtra	4	Rajasthan	9	West Bengal	13
Karnataka	5	MP	10	UP	15



From the above table it is clear that the state of Kerala continue to remain the leading state in the composite index for inclusive growth for the year 2011 also. However there are major shift in the case of Tamil Nadu and Maharashtra. While the former moved from 07<sup>th</sup> rank to 2<sup>nd</sup> rank the latter moved from 08<sup>th</sup> rank to 04<sup>th</sup> rank which are mainly due to higher industrial growth which generated more productive employment which is indispensable for inclusive growth. The state of Haryana has moved back from 03<sup>rd</sup> rank in the year 2001 to 08<sup>th</sup> rank in the year 2011 due to policy logjam during the period.

### **Robustness Checking**

The study checked the robustness of the composite index for inclusive growth by resorting to the following three different mechanism.

- (1) Equal Weightage Scheme instead of PCA
- (2) By Comparing with the Underdevelopment Index developed by Dr.Raghuram G Rajan (Government of India, 2013)
- (3) By alternate aggregation method of Average of Average instead of Linear.

The composite index for inclusive growth using PCA and that of using equal weight have been put to correlation analysis and the result is that there is high correlation of 0.99 for the year 2001. There is strong correlation between the composite index for inclusive growth using Principal Component Analysis and Equal Weightage Scheme and the correlation coefficient is 0.99.

This Composite Index for Inclusive Growth is also correlated with the Underdevelopment/Need Index of Government of India (2013) which was constructed under the Chairmanship of Dr.Raghuram G Rajan, Ministry of Finance, Government of India for the purpose of identifying the criteria for allocating funds from the Centre to the states based on the states' development needs as well as development performance. The Composite Index for Inclusive Growth is strongly and negatively correlated with the Underdevelopment/Need Index with a spearman's rank correlation coefficient of -0.84. It is important to note here that higher value of Underdevelopment/Need Index denote greater underdevelopment unlike the Composite Index for Inclusive Growth where higher value denote greater development. This further confirms the robustness of the composite index for inclusive growth developed in this study. This study also checked the robustness of the composite index for inclusive growth by resorting to an alternate aggregation method i.e. Average of Average instead of Linear aggregation. Under Average of Average we compute the summation of all the scores of a particular dimension and then divided by the number of variables considered in that particular dimension. For example in the case of Economic Dimension there are 05 indicators and the aggregate index score for economic dimension will be divided by 5 and this exercise will be done for all the six dimensions. Finally the Composite Score will be arrived by the summation of all dimension score which is then divided by 6(since there are six different dimensions). The result shows that there is a strong correlation coefficient (Spearman's Rank Correlation) of 0.88 and correlation coefficient (Pearson's correlation) of 0.93 for the year 2001. For the year 2011 the correlation coefficient for Spearman's Rank Correlation is 0.88 and that for Pearson correlation is 0.94 which shows the robustness of our study. This further confirms the robustness of the composite index for inclusive growth developed in this study.

### **Validation of the Findings of Composite Index for Inclusive Growth**

The findings of the Composite Index for Inclusive Growth has been validated with the findings of other major studies conducted by Government of India and other important research agencies. The study has identified the six best performing states as follow.

**Table IX Best Performing States**

The study has also identified six worst performing Indian states as given below.

Underdevelopment Index(GoI, 2013)	Economic Freedom of States of India(Debroy et al,2013)	Policy Effectiveness Index – India Public Policy (Malhotra,2014)	Governance Performance Index (Mundle et al, 2016)	India Human Development Report, 2011	Composite Index for Inclusive Growth**
Kerala	Gujarat	Punjab	Gujarat	Delhi*	Kerala
Tamil Nadu	Tamil Nadu	HP*	Tamil Nadu	Kerala	Tamil Nadu
Punjab	AP	Karnataka	AP	Goa*	Punjab
Maharashtra	Haryana	Haryana	Kerala	HP*	Maharashtra
Karnataka	HP*	Maharashtra	Punjab	Punjab	Karnataka
Gujarat	MP	Tamil Nadu	Karnataka	Maharashtra	AP

**Six Worst Performing Indian States on Inclusive Growth Outcome**

\*These states are not considered in this study

**Table X Worst Performing States**

Underdevelopment Index(GoI, 2013)	Economic Freedom of States of India(Debroy et al,2013)	Policy Effectiveness Index – India Public Policy (Malhotra,2014)	Governance Performance Index (Mundle et al, 2016)	India Human Development Report, 2011	Composite Index for Inclusive Growth**
Odisha	Odisha	Kerala	UP	Jharkhand*	UP
Bihar	UP	West Bengal	Bihar	Odisha	Bihar
Madhya Pradesh	West Bengal	Assam	Jharkhand*	Chhatisgargh*	West Bengal
Assam	Jharkhand*	MP	Odisha	MP	Assam
Uttar Pradesh	Assam	Bihar	West Bengal	Bihar	Odisha
Rajasthan	Bihar	Odisha	Assam	UP	MP

**Section IV Conclusion**

The discourse on inclusive growth is the paradigm shift in development economics. This has been acknowledged by World Bank, IMF, ADB and UNDP International Policy Centre for Inclusive Growth. The shift from pro poor growth to inclusive growth is a major game changer in development economics. This study is a pioneering exercise in this connection in India. A larger study which can accommodate a broader range of indicators based on state-specific need rather than common indicators, drawn from a wider set of household surveys, would help deepen the understanding and measuring of growth inclusiveness. More grounded theories are necessary for further advancing the debate on inclusive growth. There are few issues which remain unresolved like the relationship between fiscal redistribution and inclusive growth, the impact of monetary policies in general and inflation in particular on inclusive growth, the impact of technological advancement on growth inclusiveness, the relationship between structural reforms and inclusive growth and the impact of labour market reforms on inclusive growth.

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