Assessment of Inclusive Economic Growth in Major Indian States

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The policy initiatives of Government of India shifted the global policy debates from pro poor growth to inclusive growth This paradigm shift to inclusive growth is evident from the Approach Papers of 11th Five Year Plan of Government of India 2007-12 which focused on faster and more inclusive growth and 12the Five Year Plan 2012-17 which focused on faster sustainable and more inclusive growth This paper explores the inclusive growth outcome in major Indian states by constructing Composite Inclusive Growth Index using Principal Component Analysis and cross sectional data for 2001 and 2011 using a set of socio-economic variables.

1. Introduction

1.1 Shift in Development Economics

The paradigm shift to inclusive growth is evident from the Approach Papers of 11th Five Year Plan of Government of India (2007-12) which focused on **"faster and more inclusive growth"** and 12the Five Year Plan (2012-17) which focused on **"faster, sustainable and more inclusive growth".** Inclusive growth is broad based high growth in which the poor not only benefits there from but also participate in the growth process. It not only creates new economic opportunities but also ensures the equal access to them by all, particularly the poor the maximum possible extent. This paper explores the shift in development economics in the last two decades from Pro Poor Growth (PPG) to Inclusive Growth (IG). The policy initiatives of Government of India shifted the global policy debates from pro poor growth to inclusive growth. While Pro Poor Growth is only an outcome – that is the trickle down dimension of economic growth, Inclusive Growth is both an outcome and process. Inclusive Growth not only advocates the trickle- down effect of economic growth but also ensures that the poor and the marginalized people also participate in the process of new economic opportunities and share the benefits therefrom. This paradigm shift in development economics unleashed new energy to empower the marginalized people so much so that their voices can also be incorporated in the main stream of capacity building of the nation as a whole.

This paper is organized as follows. Section 2 deals with literature review followed by Section 3 which deals with methodology Section 4 describes the result of the research - outcome of the study and finally section 5 concludes.

2. Literature Review

Ali and Son (2007) defines inclusive growth as the growth process that increases the social opportunity function which depends upon the average opportunities available to the population and how these opportunities are shared among the population. According to Ali (2007) the key elements in inclusive growth are employment and productivity, development in human capabilities and social safety nets and the targeted intervention. Habitat (2009) defines inclusiveness of economic growth as gross domestic product growth that leads to significant poverty reduction. Elena and Susana (2010) of World Bank focused on both the pace and pattern of growth and have identified the employability of the poor and the cost of capital, geography and infrastructure as building blocks of inclusive growth analytical framework. Elena and Susana (2010) defined inclusive growth as that growth which can reduce poverty and allow people to contribute to economic growth and benefit from the growth process. They pointed out that rapid pace of growth is unquestionable necessary for substantial poverty reduction but for growth to be sustainable in the long run should be broad based across the sectors and inclusive of the large part of the country's labor force. McKinley (2010) identifies that inclusive growth entails achieving sustainable growth that will create and expand economic opportunities and ensuring broader access to these opportunities so that members of society can participate in and benefit from growth. In reviewing the ADB literature Raumiyar and Kanbur (2010) point out that while there is no agreed and common definition of inclusive growth or inclusive development, the term is understood to refer to "growth coupled with equal opportunities and consisting of economic, social and institutional dimensions. They further pointed out that inclusive growth is accompanied by lower income inequality so that the increment of income accrues disproportionately to those with lower incomes.

Asian Development Bank (ADB, 2013) defines inclusive growth economic growth that results in a wider access to sustainable socio economic opportunities for a broader number of people, regions or countries while protecting the vulnerable, all being done in an environment of fairness, equal justice and political plurality. Ramos et al (2013) follow the concept of benefit sharing and participation to measure inclusiveness. Exchange rate coordination, improved international tax capacity, coordinated fiscal stimulus, global resource system, issue of macro-economic imbalances are some of the key policy

actions that will stimulate inclusive growth in developing countries (Maritns and Lucy, 2013). Inclusiveness of growth is the growth elasticity of poverty (Han and Thorat, 2013) in the sense that poverty reduction is the overall objective of any policy debate over a period of time. It depends upon two factors (a) income growth and (b) income distribution.

3. Methodology

It is evident from the literature review that so far there were two attempts in constructing composite index for measuring inclusive economic growth. They are discussed below.

3.1 Inclusive Growth Criteria and Indicators: An Inclusive Growth Index for Diagnosis of Country Progress (McKinley, 2010)

McKinley (2010) constructed this index covering the two dimensions of inclusive growth. (1) Achieving sustainable growth that create and expand economic opportunities and (2) ensuring broad access to these opportunities so that all the people can participate and benefit from them. It identified suitable indicators in the form of growth, productive employment, economic infrastructure, income poverty equity including gender equity, human capabilities and social protection in the form of safety needs. The overall objective of this index was to guide the Asian Development Bank in providing foreign aid to the countries to foster inclusive growth. The Index was tested in six different countries – Bangladesh, India, Indonesia, the Philippines, Cambodia and the Uzbekistan. The composite index was based on scoring methodology and weighting scheme which involved value judgments. The weights were assigned as follows.

1. Growth, Employment and Economic Infrastructure: 50% weight
2. Poverty and Inequality Reduction: 25% weight
3. Human Capabilities(Health, Education, Water and Sanitation): 15% and
4. Social Protection: 10%

The composite index was constructed on a weighted average score of 0-10 based on country performance on each of the above four components and each of the four components are in turn a weighted average of subcomponents. Such an index will fail to justify the weightage scheme since it lacks statistical accuracy and the value judgment cannot escape bias and therefore the index could not be used as a standard measurement of inclusive growth.

3.2 China's Inclusive Growth: Measurement and Evaluation (Min and Xiaolin, 2012)

The inclusive growth index is prepared to measure the sustainability of economic growth, income poverty and equity, fair access to economic opportunities as well as social security. The authors made sincere attempt to evaluate the level of inclusive growth in China and determined the impact of specific factors on inclusive growth. The biggest lacuna in this index is that they relied on expert opinion on weightage scheme of the indicators and assigned the weightage as follows.

1. Economic Growth : 15%
2. Job Opportunities : 15%
3. Income Inequality : 20%
4. Poverty Reduction : 10%
   Reduction
5. Health, Nutrition and : 30%
   Education (Equitable
   Access to Economic
   Opportunities)
6. Basic Social Security : 10%

Since the weightage scheme was based on expert opinion the index did not adequately represented by proper scoring of the indicators. For example, according to world bank study of Elena and Susana (2009) productive employment and poverty reduction are the cornerstone of inclusive growth but this index has given only 25% weightage to job opportunities and poverty reduction together. Therefore this index could not capture the vital facet of inclusive growth. Again according to the Handbook on Constructing Composite Indicators (OECD, 2008), the first step of constructing a Composite Index is to develop a theoretical framework but this index is not supported by a strong theoretical framework and therefore invalidated the very purpose of composite index.

3.3 Report of Committee for Evolving a Composite Development Index for States (GOI, 2013).

Apart from the above two composite indices which were attempted in measuring inclusive growth, this study also considered the Report prepared by **the Ministry of Finance under the chairmanship of Shri Raghuram G Rajan** which has prepared an underdevelopment index and mapped it to fund allocation to various states in India.

The underdevelopment index of the Report included the following 10 sub-components: (1) monthly per capita consumption expenditure, (2) education (3) health, (4) household amenities, (5) poverty rate, (6) female literacy, (7) percentage of SC-ST population, (8) urbanization rate, (9) financial inclusion and (10) connectivity. **However this index did not consider a very important dimension of development – governance and therefore could not capture accountability and transparency.** The Report constructed the underdevelopment index by assigning weightage scheme both by principal component analysis

(PCA) and by giving equal weightage to all the indicators. The Report found that the indices were highly correlated with a correlation coefficient of 0.99.

3.4 Identification of Major Indian States: Present study construct the inclusive growth composite index for 15 major Indian states which have been identified based on the following three criteria.

Table 3.1 *Identification of Major 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
Madhya Pradesh	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
Total Share (%)	25.47 Lac sq.km. **(77%)**	**89.77 %**	**82.12 %**

Source *Census, 2011*

3.5 Selection of Indicators and Sources of Data

This study considers a large number of variables which can be grouped into the following dimensions – Economic, Amenities, Gender Equity and Financial Inclusion, Human Development, Sustainability and Governance. The data sources are given below.

Table 3.2 *Selection of Indicators and Sources of Data*

Indicators	Dimension	(Base Year-01-02	(Current Year-11-12
Income – MPCE	**ECONOMIC**	2004-05 – NSSO 60th Round	NSSO 68th Round July 2011 to June 2012
Poverty		Planning Commission 2004-05	Planning Commission 2011-12
Employment		Census 2001	NSSO – 68th Round
Inequalities(Gini Coefficient)		Planning commission	Planning Commission
Per Capita consumption Of Electricity	**AMENITIES**	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.		Economic Survey of Maharashtra – 2005-06	Economic Survey of Maharashtra – 2012-13
% of women in LWF	**GENDER EQUITY and Financial Inclusion**	Census-2001	Census-2011
% of Girls in School Ed		Census-2001	Census 2011
% of HH with banking		Census-2001	Census-2011
Literacy Rate	**Human Development**	Census-2001	Census-2011
Life Expectancy		Census-2001	Census-2011
Health – IMR		SRS Bulletin 2005-06	SRS Bulletin Oct.2012

% of State Finance (Budget) to Social Sector	**GOVERNANCE**	State Finances: A Study of Budgets OF 2013-14, RBI	State Finances: A Study of Budgets of 2013-14, RBI
No. of man days of Employment		MGNREGA Report 2006-07	MGNREGA Report 2011-12
MGNREGA Wage		MGNREGA Report 2006-07	MGNREGA Report 2011-12
% of Women in participation of MGNREGA		MGNREGA Report 2006-07	MGNREGA Report 2011-12
Crime Rate	**Sustainability**	National Crime Records Bureau, Home Ministry, GoI-Report-2001	National Crime Records Bureau, Home Ministry, GoI-Report-2011
Air Quality		CPCB,GoI, 2004	CPCB,GoI, 2011

3.6 The Indicators

Following indicators have been selected to capture the dynamics of inclusive growth.

1. **Economic Growth:** Sustainable economic growth is pre requisite for a achieving the goal of inclusive growth. However researchers normally face the problem of selecting the right indicator and therefore the choice of indicator of economic growth is very important. One needs to choose between the Per Capita Income and Per Capita Consumption Expenditure. One concern with per capita income at the state level is that it may not adequately measure what reaches the people. Resource rich states may have high levels of average income, which is likely to be appropriated by resource-extracting corporations that may or may not be owned in the state. As a result, average consumption at the household level may still be low. Conversely, states with many emigrants may see inflows from remittances that tend to raise average consumption, even if average state incomes are low. (GOI, 2013). Therefore MPCE can better capture the dynamics of inclusive growth than the PCI.
2. **Employment:** Growth to be inclusive needs to be pro employment. The concept of productive employment as a fundamental element of inclusive growth was stressed by large number of studies on inclusive growth and development which are the knowledge products of IMF and World Bank.. The concern with the growth and distribution of employment growth was expressed by Elena and Susana (2010). While many low- and middle-income countries have weathered the economic crisis since 2008 well, and economic growth rates have remained high or have recovered, many of the imbalances that caused the crisis and remain responsible for persistent deprivation continue to exist. At the core of this global challenge is a need to enhance populations', and particularly poor and marginalized groups', access to productive opportunities, to find decent jobs, or to maintain and promote their small businesses. The nature of these challenges is different in each country and region. However, across these contexts it is important for research to move beyond the growth-redistribution dichotomy, and advance conceptual and empirical knowledge that identifies the conditions for inclusive growth (Haan and Throat, 2013). The inclusive growth approach takes a long term perspective as the focus is on productive employment rather than on direct income distribution (Growth Report, 2010). While paying attention to marginally excluded groups, we need to focus on descriptions of inc0ome earning activities of self or wage employed distinguished by sector, size of firm, by geographical area, type and other features(Elena and Susana, 2010)
3. **Poverty Reduction**: Growth to be inclusive needs to be pro poor. The Medullar Committee has moved over from a calorie determined poverty line to a food expenditure determined poverty line. The Report (GOI, 2009) has a concept of inclusive growth wherein the state does not take on itself such pro poor responsibilities but provides for a concept of income supplements for private expenditures for them.(Alag,2010)
4. **Inequality Reduction:** Growth to be inclusive needs to ensure income equality. Inclusive growth is that which is accompanied by declining income inequality (Raunier and Kanbur, 2010). Measures are needed to track the adverse distributional changes that affect not only the extremely and moderately poor, but also the disadvantaged non-poor (McKinley, 2010). Countries that have successfully reduced poverty but have witnessed increasing income inequality will need to design policies to expand job opportunities and access to social services and infrastructure for regions and populations that are left behind to achieve the goal of inclusive growth (ADB, 2013)
5. **Human Development:** Growth to be inclusive needs to enhance human capabilities. The supply side of the inclusive growth dynamics needs to be addressed i.e. whether the working population possesses the human capabilities necessary to be productively employed to take advantage of available economic opportunities (McKinley, 2010). Access to health and education and other vital infrastructure such as safe drinking water and adequate sanitation decides the quality of human capital. Within the analytical framework of inclusive growth, health and education can also be utilized as a barometer of the degree of equality of opportunity that a country's population enjoys. This implies that all members of a society should be provided with the means to form the basic human capabilities that are an essential foundation for social inclusion. Macro-Economic stability, human capital and structural changes are found to be the key determinants of inclusive growth in emerging world (Anand et al, 2013).
6. **Gender Equity:** Growth to be inclusive needs to ensure gender equity. Achieving greater gender equity is an important aspect of fostering greater inclusiveness of growth including enhancing human capabilities. (McKinley, 2010). Regardless of gender, ethnicity and religion people from all social sectors should be able to contribute to and

benefit from economic development. Both Economic growth and equity are importance to advance the inclusive growth in an economy (Anand et al, 2013)

7. **Basic Socio-Economic Infrastructure:** Growth to be inclusive needs to develop economic infrastructure so that all sections of the society will have ***access to safe drinking water, electricity, housing, toilet and transport.*** Inclusive growth results in a wider access to sustainable socio economic opportunities for a broader number of people, regions or countries while protecting the vulnerable, all being done in an environment of fairness, equal justice and political plurality. (ADB, 2013)
8. **Financial Inclusion:** Financial inclusion may be defined as the process of ensuring access to financial services and timely and adequate credit (Rangarajan, 2008). Financial development creates enabling conditions for growth when access to safe, easy and affordable credits is recognized as pre condition for growth. The Report of the Committee on Financial Inclusion (2008) advocated the effective improvement within the existing formal credit delivery mechanism, leveraging on technology based solutions, financial literacy and credit counseling, extensive support of micro finance institutions for enhancing the outreach of micro finance to micro, small and medium enterprises and recommended to set up the National Rural Financial Inclusion Plan. Considering the importance of financial inclusion, the proposed research strongly advocates the financial inclusion as an important dimension of inclusive growth and therefore the indicator of access to banking has been selected.
9. **Sustainability Dimension:** Inclusive growth needs sustainable economic growth in the long run. Therefore there is an urgent need for policy intervention to protect the environment. The pollution levels in the air and water should be controlled with regulator in place or else the fast economic growth will come with a huge cost of environment degradation. Therefore this study considered air quality as an important variable to indicate the state progress in sustainable growth. Further the law and order problem is also considered and the variable indicating crime rate recorded in the states as percentage to national crime rate has been selected. Both the variables of air quality and crime rate can foster the robustness of the composite inclusive growth index.
10. **Governance:** Governance deficit is considered as a crucial hindrance towards achieving inclusive growth (McKinley, 2010). Many developmental programmers were only outlay based, not outcome based. Therefore to be inclusive governance standards have to be lifted and huge elements of accountability and transparency in governance are indispensable. To implement inclusive policies successfully government effectiveness will have to be strengthened (ADB, 2013). Inclusive growth focuses on expanding the opportunities for all while targeting social protection interventions at chronically poor (Ali, 2007). Therefore social protection through social safety nets should be incorporated as an additional dimension of inclusive growth strategic framework (McKinley, 2010).

    Considering the importance of governance the study has considered both outlay variable and outcome variable. The outlay variable is represented by the share of state budget to social sector development. The implementation of Mahatma Gandhi National Employment Guarantee Act across major Indian states has been identified as the outcome variable. This is because MGNREGA is the major flagship programme of the central government initiated primarily to foster inclusive growth.

3.7 A Description of Principal Component Analysis (PCA)

PCA is a multivariate statistical technique that when applied to a data set, reveals which variables in the set form coherent subsets that are relatively independent of one another. The variables that are highly correlated are combined into components. The components are expected to reveal the underlying processes that have created the correlation among the variables. PCA aims to extract the maximum variance from a data set with each component. The first principal component is the linear combination of observed variables that maximally separate subjects by maximizing the variance of their component scores. The second component is computed from the residual correlations. It is the linear combination of observed variables that extract maximum variability. The variability is uncorrelated to the first component. The subsequent components also extract maximum variability from the residual correlations and are independent from all other components (Tabachnick & Fidell, 2007). The extracted components represent most of the variance of the original data set and can be used in further analysis.

Factor Loading: After the components have been extracted the factor loadings of each of the variables on the components are calculated. The factor loadings are the correlation between the latent components and a variable. The aggregation of the scores of the components was done on the basis of weights assigned to the components, ***the weights being the proportion of variance explained by the component*** (Prabhu and Sarkar, 1992). The factor loading is multiplied by the weight of the component to get the individual score. The Composite Inclusive Growth Index Score for each state is derived by summing up the component scores for each dimension of the inclusive growth framework – Economic, Amenities, Financial and Gender Equity, Sustainability and Governance. From the **rotated factor loadings and the corresponding total variance explained in the rotated sum of squared loadings** it is found that the weights for economic indicators are as follow (For example the highest rotated factor loading against first component is poverty with .971 and the total variance explained against the first component in the rotated sum of squared loadings is 34.423% and therefore the weight assigned to poverty is .34 or 34%. Likewise the weights are determined for other indicators with highest rotated factor loadings in the remaining components and the weights are determined as follows. **Weights have been determined according to various dimensions of inclusive**

growth dynamics. All the dimensions have been given equal weightages but within the dimension the weightage of different indicators are determined according to the PCA concept.

3.8 The Weights assigned to indicators- Year 2001 and 2011

Table 3.3 *Weightage Mechanism*

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%	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 Expectency		0.55	0.32
Health – IMR		0.08	0.32
	Total	100%	100%
% of State Finance (Budget) to Social Sector	Governance	0.25	0.25
No. of man days of Employment		0.25	0.25
MGNREGA Wage		0.25	0.25
% of Women in participation of MGNREGA		0.25	0.25
	Total	100%	100%
Crime Rate	Sustainability	0.50	0.50
Air Quality		0.50	0.50
	Total	100%	100%

4. Result

From the **rotated factor loadings and the corresponding total variance explained in the rotated sum of squared loadings** it is found that the weights for economic indicators are as follow (For example the highest rotated factor loading against first component is poverty with .971 and the total variance explained against the first component in the rotated sum of squared loadings is 34.423% and therefore the weight assigned to poverty is .34 or 34%. Likewise the weights are determined for other indicators.

4.1 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 which are aggregated to get the index of each dimension and the sum of score of all the dimensions have been taken as the aggregate score or composite score for a state. For example the MPCE indicator for all the states produce the following index score.

The index score for Economic Dimension – **MPCE** for the year 2001 is calculated as follow

Table 4.1 *MPCE Score For 2001*

States	MPCE-2001(zscore)	Weight	Score
AP	0.07	0.02	0.0014
Assam	-0.28	0.02	-0.0056
Bihar	-1.31	0.02	-0.0262
Gujarat	0.21	0.02	0.0042
Haryana	0.93	0.02	0.0186
Karnataka	-0.63	0.02	-0.0126
Kerala	2.31	0.02	0.0462
MP	-1.3	0.02	-0.0260
Maharashtra	0.57	0.02	0.0114
Odisha	-1.12	0.02	-0.0224
Punjab	1.17	0.02	0.0234
Rajasthan	-0.2	0.02	-0.0040
Tamil Nadu	0.31	0.02	0.0062
Uttar Pradesh	-0.87	0.02	-0.0174
West Bengal	0.18	0.02	0.0036

The Dimension Index Score; is calculated by aggregating the index score of all the indicators. For example the Economic Dimension Index Score is calculated as follows.

Table 4.2 *Economic Dimension Index for 2001*

Dimension Index - Economic	RANK	State
1.07	**1**	Andhra Pradesh
0.19	**6**	Assam
-0.34	**12**	Bihar
0.31	**5**	Gujarat
0.44	**3**	Haryana
0.31	**5**	Karnataka
-0.5;1	**11**	Kerala
-0.30	**7**	Madhya Pradesh
-0.47	**10**	Maharashtra
-0.43	**9**	Odisha
0.91	**2**	Punjab
0.43	**4**	Rajasthan
-0.51	**11**	Tamil Nadu
-0.79	**13**	Uttar Pradesh
-0.32	**8**	West Bengal

Finally the Inclusive Growth Composite Index for the year 2001 is constructed by aggregating the score of all the dimensions as given below.

Table 4.3 *Inclusive Growth Composite Index 2001*

States	Economic	Amenities	HD	GEFI	SUS	GOV	Composite Score	RANK
AP	1.07	0.01	-0.29	0.11	0.66	-1.13	**0.43**	**6**
Assam	0.19	-1.26	-0.86	-0.63	0.54	0.59	**-1.43**	**10**
Bihar	-0.34	-0.49	-1.16	-0.58	-0.33	-0.42	**-3.32**	**13**
Gujarat	0.31	0.4	0.06	0.18	-0.5	-0.05	**0.40**	**7**
Haryana	0.44	0.44	0.23	0.4	0.1	-0.04	**1.57**	**3**
Karnataka	0.31	0.12	0.3	0.53	-0.27	0.19	**1.18**	**5**

Kerala	-0.51	0.52	2.42	0.54	0.34	-0.14	**3.17**	**2**
MP	-0.30	-0.62	-0.97	-0.13	-0.28	0.76	**-1.54**	**11**
Maharashtra	-0.47	0.2	0.75	1.08	-0.77	-0.58	**0.21**	**8**
Odisha	-0.43	-0.83	-0.81	-0.67	1.03	0.38	**-1.33**	**9**
Punjab	0.91	1.42	0.73	0.15	1	-0.29	**3.92**	**1**
Rajasthan	0.43	-0.01	-0.58	0.05	-0.8	1.31	**0.40**	**7**
Tamil Nadu	-0.51	0.4	0.31	0.41	0.42	0.19	**1.22**	**4**
Uttar Pradesh	-0.79	0.02	-0.39	-0.83	-1.03	-0.39	**-3.41**	**14**
West Bengal	-0.32	-0.3	0.26	-0.63	-0.19	-0.38	**-1.56**	**12**

Analysis: Punjab is ranked FIRST in the aggregate inclusive growth composite index with a score of 3.92 and the worst performer is UP with a negative score of -3.41. Punjab's all round development helped to increase its rank and therefore is a lesson to other states particularly the laggards like Bihar, Odisha, UP and Assam to take note of it and improve its position.

4.2 Construction of Composite Inclusive Growth Index – 2011

The above exercise has been repeated for the year 2011 which produced the following Composite Inclusive Growth Index for the year 2011.

Table 4.4 *Inclusive Growth Index 2011*

Name of States	Economic	Amenities	HDI	GEFI	SUS	GOV	C Score	RANK
AP	0.89	0.32	-0.48	0.35	-0.43	1.16	1.81	**4**
Assam	-0.14	-0.58	-0.72	-0.99	0.41	-0.65	-2.67	**12**
Bihar	0.14	-0.61	-1.03	-0.58	-0.26	-0.69	-3.03	**14**
Gujarat	0.37	0.42	0.05	-0.08	-0.1	-0.2	0.46	**8**
Haryana	-0.08	0.68	0.2	-0.2	0.06	0.08	0.74	**6**
Karnataka	-0.50	0.03	0.09	0.49	0.03	0.34	0.48	**7**
Kerala	-0.08	0.24	2.52	0.88	1.14	0.4	5.10	**1**
MP	-0.40	-0.49	-0.9	0.14	-0.74	-0.5	-2.89	**13**
Maharashtra	0.09	0.15	0.88	0.68	-0.44	0.29	1.65	**5**
Odisha	-0.39	-0.59	-0.46	-0.6	0.47	0.74	-0.83	**10**
Punjab	0.27	1.04	0.55	0.05	1.45	-1.06	2.30	**3**
Rajasthan	0.26	-0.3	-0.72	-0.09	-0.73	0.5	-1.08	**11**
Tamil Nadu	0.33	0.14	0.76	1.03	0.36	0.32	2.94	**2**
Uttar Pradesh	-0.44	-0.16	-0.88	-0.49	-0.78	-0.54	-3.29	**15**
West Bengal	-0.36	-0.3	0.15	-0.47	0.54	-0.18	-0.62	**9**

Analysis: Kerala, Tamil Nadu and Punjab are the good performers in the inclusive growth composite index. Kerala's high score in HDI has helped it to gain the FIRST POSITION. Tamil Nadu is ranked 2nd in the inclusive growth composite index because of its overall good performance in every indicator.

4.3 Comparison between 2001 and 2011

Table 4.5 *Rank of Major Indian States on Inclusive Growth Composite Index*

Name of the State	Rank – 2001	Rank - 2011
Andhra Pradesh	06	04
Assam	10	12
Bihar	13	14
Gujarat	07	08
Haryana	03	06
Karnataka	05	07
Kerala	02	**01**

Madhya Pradesh	11	13
Maharashtra	08	05
Odisha	09	10
Punjab	**01**	03
Rajasthan	07	11
Tamil Nadu	04	02
Uttar Pradesh	14	15
West Bengal	12	09

5. Conclusion

Perhaps for the first time in India an effort has been made to rank Indian states according to the inclusive growth dynamics. The result can be interpreted to diagnosis the state progress in the inclusive growth dynamics and right kind of policy intervention that is necessary for revamping the lagging states in fostering the inclusive growth. The result can be useful for budgetary allocation to the states which are lacking in access to basic amenities. Further those states which are lagging in the index can attract huge investment to bridge the gap and foster expansion in production capacity.

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