AN EMPIRICAL STUDY ON REGIONAL DISPARITIES IN THE LEVEL OF DEVELOPMENT IN INDIA: STATE WISE ANALYSIS

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ABSTRACT

In this research paper, the levels of development has been analysed for measuring the regional imbalance among Indian states applying the Wroclaw Taxonomic Method (Ewusi, 1976; Arief, 1982; Narain et.al. 2003, 2009, 2012; and Ohlan, 2013). The level of development was obtained with the help of composite index based on optimum combination of twenty two socio-economic and environmental sustainability indicators. The state wise data for the year 2011-12 in respect of these indicators were utilized for 10 different states of India. The level of development was estimated separately for economic development, demographic transition, educational development, health development, environmental sustainability and overall development in order to get a clear picture of regional disparities. The state of Maharashtra was ranked first in overall development while state of Bihar was found very deprived in every sector of development. For achieving identical regional development and improving the quality of life the potential targets for various socio-economic facilities along with environmental sustainability have been estimated. The empirical results show that wide disparities in the level of development exist among the different states. The level of socio-economic development along with environmental sustainability are found to be statistically significant and positively associated with the overall development indicating that the growth and progress of all the sectors have been going hand in hand in economy of the country. The results also show that demographic profile of the states is the constraint and not significantly influence overall development. The study suggests that low developed states require immediate attention of the government to improve most of the development indicators for enhancing their levels of overall development.

Keywords: Regional Disparities, Socio-economic Development, Environmental Sustainability, Wroclaw Taxonomic Method, Composite Index.

1. INTRODUCTION

Regional disparity is the outcome of unequal regional development that varies from state to state depending upon socio-cultural, demographic, economic and environmental characteristics. Regional disparities lead numerous economic, social, cultural, and environmental problems. The adverse impact could either come through natural resource depletion and/or adverse health consequences of environmental degradation, e.g., air or water pollution (Brandon and Hommann, 1995). Development has been appropriately conceptualized as a process, which improves the quality of life of inhabitants. In fact, development has got no meaning if there is only social and economic development. The dynamic growth is no doubt good in short run but in the pace of dynamism for growth if we ignore environmental degradation then the growth is just a myth. Since, India's independence, economic planning has been used in the country as an instrument for bringing about uniform regional development because one main objective of development programmes has been a progressive reduction in regional disparity in the pace of development (Siddiqui and Hussain, 2010). Various five years plans have been planned for enhancing the quality of life of the individuals by providing basic amenities as well as enhancement in their socio-economic well being. The recent decades have also been witnessed an increasing interest in the protection of environmental quality and natural resource availability. Thus, overall development i.e. sustainable development is the development for fulfilling the human need to improve their lifestyles and protecting natural resource base on which we have a tendency to and our future generations rely.

India has become independent before 67 years, still we are far away from achieving basic objective which required for fulfilling the basic needs of the individuals such as security of food, proper sanitation facilities, safe and clean water, better health facilities and fulfillment of human wants through education, employment, political and socio-cultural opportunities. In fact, almost every people of India suffer from deprivation of one or another manner. These include poverty, inequality, malnutrition, unemployment, and other things that are violating of minimum standards of human rights and well-being (Kothari, 2013). These problems are often very serious

to cause irremediable health damage, impulsive mortality and suicides. Many of them have roots in customary socio-economic unfair means and discrimination which have been compounded or added to by the inequities and exploitation of modern times (UNDP, 2012). Amidst, these challenges the natural environment is continuously damaging. Whatever natural resource base has been damaged it can't often to the levels that are beyond revival. Natural ecosystems are under threat and decline can be witnessed across most of the country where industrialization, rapid urbanization has been taken place (Shrivastava and Kothari, 2012). The present study is conducted to measure regional disparities in respect to the level of development in the sampled states of India for the year 2011-12 on the basis of twenty two socio-economic and environmental indicators.

2. DEVELOPMENT INDICATORS

Development is a multidimensional process and its impact can't be fully captured by a single indicator. A number of indicators when analysed individually do not provide an integrated and easily comprehensible picture of reality. Hence, there is a need for building up of a composite index of development based on optimum combination of all the indicators (Narain, et.al. 2009). Each state faces situational factors of development unique to it as well as common administrative and financial factors. Development indicators common to all the states have been included in the analysis. Composite indices of development have been obtained for different states by using the data on the following developmental indicators.

Table 1 Development Indicators used in the Analysis

S. No.	Categories	Indicators	Description of Sustainable Development Indicators
1	Economic Development Indicators	X1	Per Capita Income (at Constant Prices 2004-05) in `
		X2	Employment by major Sectors (in millions)
		X3	Percentage of Population below poverty Line
2	Demographic Transition Indicators	X4	Decadal Growth Rate in Population (in Percentage)
		X5	Density of Population (Per Square Km.)
		X6	Sex Patio (Female per 1000 Male)
		X7	Urban Population (percentage of Total)
3	Educational Developmental Indicators	X8	Literacy Rate(in Percentage)
		X9	Literacy Rate Male (in Percentage)
		X10	Literacy Rate Female (in Percentage)

		X11	Net Enrolment Ratio (NER)
		X12	Expenditure on Education (Percentage of Total Expenditure)
4	**Health Development Indicators**	X13	Infant Mortality Rate (IMR)
		X14	Maternal Mortality Ratio (MMR)
		X15	Crude Birth Rate (CBR)
		X16	Crude Death Rate (CDR)
		X17	Life Expectancy Male in years,
		X18	Life Expectancy Female in years,
5	**Environmental Sustainability Indicators**	X19	Forest cover in Square Km (Percentage of total geographical Area)
		X20	Proportion of population with sustainable access to safe drinking water
		X21	Proportion of population with sustainable access to an improved sanitation
		X22	Slum population as percentage of urban population

Sources: Compiled and Computed by author

Out of twenty two indicators, eighteen indicators are directly concerned with social and economic development. Four indicators depict the progress of environmental sustainability. Also they are classified in five categories such as economic development, demographic transition, educational development, health status and environmental sustainability indicators. These indicators may not form an all inclusive list but these are the major interacting components of development.

3. DATA COLLECTION AND RESEARCH METHODOLOGY

3.1 Data and Data Sources

The present study is analytical study based on secondary data. The data has been collected from different sources such as census 2011, Office of the Registrar General of India, Ministry of Home Affairs & Economic Survey 2011-12 and 2012-13, Ministry of Finance, Government of India Reports, National Sample Survey Organisation (NSSO) various rounds, Socio-Economic Survey of the selected States, Compendium Ministry of Environment and Forest, Human Development of India Report 2012, Health Survey of India 2011. Reputed published research papers, working papers etc.

3.2 Research Method of Analysis

There are several statistical methods which are used for estimating the level of development but most of these methods are having their own limitations. The major limitation arises from the assumptions made about the development indicators themselves and their weightage in aggregate index. Keeping in view all the points of limitations of different methods in estimating the level of development, the ***"Wroclaw Taxonomic Method"*** developed by Florek et al. (1952) is used in the study. Therefore, it may be used as a similarity measure in establishing development models. Othe examples of its uses include those by Harbinson et al. (1968), Land (1975), Ewusi (1976), Arief (1982), Narain et al. (2003, 2009, 2012), Bhatia and Rai (2004) and Ohlan (2012). A brief introduction of Wroclow Taxonomic method used in the study is in order. Variables for different developmental indicators are taken from different population distributions and these are recorded in different units of measurement. The values of the variables are not quite suitable for combined analysis. Hence, the variables are transformed for the combined analysis as given below.

Let $[X_{ij}]$ be the data matrix giving the values of the variables of i^{th} state and the j^{th} indicator. Where $i = 1, 2,\ldots\ldots\ldots,n$ (No. of states), and $j = 1, 2,\ldots\ldots\ldots, k$ (No. of indicators). Every state is represented by a vector in a k-dimensional space. Since $[X_{ij}]$ come from different population distributions and the units of measurement of the variables considered are not uniform. They are not quite suitable for simple addition for obtaining the composite index. Therefore, $[X_{ij}]$ is transformed to standardized indicators $[Z_{ij}]$ as follows:

$$[\text{Zij}] = \frac{\text{X}ij - \overline{Xj}}{\text{S}j} \qquad (1)$$

Where $\overline{Xj}$ = Mean of the jth indicators and Sj = Standard Deviation of the jth indicators. Now [Zij] is the matrix of standardized indicators. And these are calculated as

$$\overline{Xj} = \frac{\sum_{i=1}^{N} Xij}{\text{N}}$$

and

$$Sj = \left[\sum_{i=1}^{N} \left(X_{ij} - \overline{X}_j\right)^2\right]^{1/2}$$

From $[Z_{ij}]$, identify the optimal value of each indicator. Let it be denoted by Z_{oj}. The optimal value will be either the maximum value or minimum value of the indicator depending upon the

direction of the impact of an indicator on the level of development. For example, increase in literacy rate would positively affect the development. For obtaining the pattern of development C_i of the *i*th state, first calculate square of the deviation of the individual value of a transformed variate from the optimum value. In other words, calculate P_{ij} as:

$$P_{ij} = \left(Z_{ij} - Z_{oj}\right)^2 \quad (2)$$

For each *i* and *j* pattern of development is given by

$$Ci = \left[\sum_{j=1}^{k} Pij/(CV)j\right]^{1/2} \quad (3)$$

Where $(C.V)_j$ is the Coefficient of variation of the jth indicator in X_{ij} for jth indicators.

"Composite index of Development' or (DI) is given by

$$DI = C_i / C \quad (4)$$

for I = 1, 2, 3,……n. Where $C = \overline{C} + 3Sd_i$

Where $\overline{C}$ = Mean of Ci and calculated as

$$\overline{Cj} = \frac{\sum_{i=1}^{N} Ci}{N}$$

Sd_i = Standard Deviation of Ci and calculated as

and $$Sdi = \left[\sum_{i=1}^{N} \left(C_i - \overline{C}\right)^2\right]^{1/2} \quad (5)$$

Smaller the value of D*i* it will indicate high level of developed in the state, and the higher value of it will indicate low level of development in the state. The value of DI varies from $0 < DI < 1$.

3.2.2 Estimation of Developmental Distances between Pairs of States

For identifying the model states and fixing the potential targets of developmental indicators for low developed states, the developmental distance between pairs of states is calculated. The developmental distance between states *i* and *p* is given by D_{ip} as follows:

$$Dip = \left[\sum_{j=1}^{k} \left(Z_{ij} - Z_{pj}\right)^2\right]^{1/2}$$

Where i = 1,2,3,……, n and p = 1,2,3,……, n. Here the following relationship are apparent: dii = 0, dip = dpi, and dip ≤ dij + dpj.

These relationships produce the following symmetric matrix which is called the distance matrix.

$$[dip] = \begin{matrix} 0 & d12 & \dots & d1n \\ d21 & 0 & \dots & d2n \\ \vdots & \vdots & \vdots & \vdots \\ dn1 & dn2 & \dots & 0 \end{matrix}$$

From the above distance matrix, find out the minimum distance for each row. Denote the minimum distance for row i as d_i, and obtained the Critical Distance (CD) as follows:

$$CD = \overline{d} + 2\,Sd_i \qquad (6)$$

Where $\overline{d}$ = mean of d_i and Sd_i = standard deviation of di.

4. EMPIRICAL RESULTS AND DISCUSSIONS

4.1 The Level of Development

The composite indices of development have been worked out for different Indian states for economic sector, demographic transition, educational development, health development, environmental sustainability and overall development. The states have been ranked on the basis of development indices. The composite indices of development along with the rank of the states are given in Table 2.

Table: 2 Composite Indices of Development (C.I.) and Rank of States

S. No	STATES	Economic Sector		Demographic Transition		Educational Sector		Health Sector		Environmental sustainability		Overall Development	
		C.I.	R	C.I.	R	C.I.	R	C. I.	R	C. I.	R	C. I.	R
1	Andhra Pradesh	0.13	2	0.21	5	0.42	9	0.15	4	0.26	6	0.47	6

2	Assam	0.51	9	0.17	1	0.18	5	0.50	10	0.17	1	0.63	7
3	Bihar	0.65	10	0.38	10	0.57	10	0.34	7	0.25	5	0.82	10
4	Gujarat	0.14	3	0.25	7	0.15	2	0.17	5	0.19	2	0.41	2
5	Haryana	0.17	4	0.20	3	0.17	4	0.20	6	0.27	7	0.42	4
6	Karnataka	0.23	6	0.22	6	0.18	6	0.14	3	0.20	3	0.43	5
7	Maharashtra	0.10	1	0.20	4	0.02	1	0.11	1	0.32	9	0.32	1
8	Rajasthan	0.22	5	0.19	2	0.31	7	0.37	8	0.38	10	0.68	8
9	Uttar Pradesh	0.24	7	0.26	8	0.35	8	0.45	9	0.28	8	0.72	9
10	West Bengal	0.30	8	0.28	9	0.16	3	0.13	2	0.20	4	0.42	3

Note: C. I = Composite Index Score, R = Rank,

Source: Calculated by Author

In case of economic sector, state of Maharashtra was found to be the best developed state whereas the state of Bihar was on the bottom among the selected states of India. The composite index of development in this sector varied from 0.10 to 0.65. In case of demographic transition the state of Assam was on the first position as it have proved to sustain population growth and the state of Bihar, still on the last position. Here the value of composite index varied from 0.17 to 0.38. Similarly in terms of educational development the state of Maharashtra was found on the top whereas again the state of Bihar is on the bottom. The composite indices varied from 0.02 to 0.57. But with respect to health development sector some improvements have been found in the state of Bihar because now state of Assam was found on the last position whereas the state of Maharashtra again on the first position and the value of composite index varied from 0.11 to 0.50. As far as environmental sustainability is concerned the state Assam was found on the top with rank first and the state of Rajasthan was found on the bottom. The main reason behind is the area of forest cover and the values of composite indices varied from 0.17 to 0.38.

As regards the overall development, it is depicted in the last column of the table of the sampled states. The state of Maharashtra was on the top and the state Bihar was on the bottom of its place among the states. The value of composite indices varied from 0.32 to 0.82. In the study, three

most developed states were found to be Maharashtra, Gujarat and West Bengal and three least developed states were found to Rajasthan, Uttar Pradesh and Bihar.

4.2 Different Stages of Development

For classification purposes, a simple ranking of the states on the basis of composite index of development is sufficient. However, a more meaningful characterization of different stages of development would be in terms of suitable fractile classification from the assumed distribution of the mean of composite indices.

Table 3 (a) Number of States in different Stages of Development

S. No	Sector	No of States	Stages of development			
			Low	Low Middle	High Middle	High
1	Economic Development	10	2	1	7	-
2	Demographic Transition	10	1	3	5	1
3	Education Development	10	2	2	5	1
4	Health Development	10	2	2	6	-
5	Environmental Sustainability	10	2	3	4	1
6	Overall Development	10	2	2	5	1

Source: Calculated by Author

For relative comparison, it appears quite valid to assume that the states having the composite indices less than or equal to (Mean-SD) are in high developed categories. The states having the composite indices in between (Mean-SD) and Mean are high middle level categories. The states having the composite indices in between Mean and (Mean + SD) are low middle level developed categories. The states which have composite indices greater than or equal to (Mean + SD) are in low level developed categories. On the basis of above classification, the states are put in four stages of development as high, high middle, low middle and low and table 3 presents the number of states. It is observed from the table that in economic development neither states was found in the high developed stage while 7 states were found in high middle level of development categories and low middle and low level development categories these are 1 and 2 in numbers respectively.

Table 3 (b) Classification of States in different Stages of Development

Sector		Economic Development	Demographic Transition	Education Development	Health Development	Environmental Sustainability	Sustainable Development
Stages of development	Low Level	Assam, Bihar	Bihar	Andhra Pradesh and Bihar	Assam and Uttar Pradesh	Maharashtra and Rajasthan	Bihar and Uttar Pradesh
	Low Middle Level	West Bengal	Gujarat, Uttar Pradesh and West Bengal	Rajasthan and Uttar Pradesh	Bihar and Rajasthan	Andhra Pradesh, Haryana and Uttar Pradesh	Assam and Rajasthan
	High Middle Level	Andhra Pradesh, Gujarat, Haryana, Karnataka, Maharashtra, Rajasthan and Uttar Pradesh	Andhra Pradesh, Haryana, Karnataka, Maharashtra and Rajasthan	Assam, Gujarat, Haryana, Karnataka and West Bengal	Andhra Pradesh, Gujarat, Haryana, Karnataka, Maharashtra and West Bengal	Bihar, Gujarat, Karnataka and West Bengal	Andhra Pradesh, Gujarat, Haryana, Karnataka and West Bengal
	High Level	-	Assam	Maharashtra	-	Assam	Maharashtra

Source: Calculated by Author

In case of demographic transition only one state was found in high developed categories and 5 states were found in high middle level categories of development whereas 3 states were in low middle level of development categories and only one state was found in the low developed category. As educational development is concerned only one state was found in the high level development category whereas 5 states were found in high middle categories and 2 each in low middle and low developed categories of development. But health development status is very vulnerable in these states because neither state was found in high developed category whereas 6 states were found in high middle developed categories. It means they are marching towards sustainable health development. But low middle level and low level development have 2 states each in the categories. In respect of environmental sustainability only one state was found in high developed categories and 4 states were found in high middle level of development categories whereas 3 states were found low middle level of development and 2 states were found in low level development categories. In respect of overall development only one state has provided satisfactory result and fall into the category of high level of development whereas 5 states are progressive towards sustainable development, fall into the category of high middle level of development. The state 2 in number each were found in low and low middle level of

development category. Therefore only state of Maharashtra was found in high developed categories and Uttar Pradesh and Bihar were found in low developed categories.

4.3 Inter- Relationship among Different Sectors of Economy

For proper development and better level of living, it is essential that the sectors of economy should flourish together. System of education envisages overall development of manpower and human resources required for socio-economic activities. The correlation coefficient between developments of different sectors of economy is given below in Table 4.

Table 4 Pearson Correlation Coefficient between development indices of various sectors

S. No	Indicators	ECDI	DEMTI	EDUDI	HELDI	ENVSI	ODI
1	**ECDI**	1	0.543	0.533	0.588	-0.323	0.723*
2	**DEMTI**		1	0.599	-0.014	-0.183	0.432
3	**EDUDI**			1	0.401	0.127	0.799**
4	**HELDI**				1	0.088	0.832**
5	**ENVSI**					1	0.182
6	**SDI**						1

Note: * and ** Correlation is significant at the 0.05 and 0.01 level respectively. Number of Observations N = 10.

Source: Author's own calculation.

It is evident from the table that economic development along with health and education play a statistically significant role in enhancing the level of overall development in the state, estimated correlation coefficient is 0.723, 0.799 and 0.832 for economic, health and education are statistically significant at 5 per cent and 1 per cent level of significance respectively. It indicates that the overall development is highly associated with the development of economic sector, education and health sector these are the part of human development or social development. Similarly, the correlation coefficient between environmental sustainability and overall development is also found to be positively significant with its estimated value 0.182. It is clear from the table that correlation coefficient between health and demographic indicators show negatively associated and same as with environmental sustainability. Therefore, increase in

population; density of population and the increasing rate of urbanisation affect the environmental sustainability as well as overall development.

4.4 Potential Targets of Developmental Indicators for Low Developed States

It is relatively important to investigate the extent of improvement needed in different development indicators for bringing out progress in the level of development of under developed states. These information will help the policy makers and administration for efficient allocation of resources for enhancement of the level of development of backward states. For estimation of potential targets of developmental indicators for low developed or under developed states model states are identified on the basis of composite index of overall development and the developmental distance between different states. The best value of different indicators among the model states are listed in table 5. Model states are better developed in comparison to low developed states. The states Maharashtra, Gujarat, West Bengal, Haryana, Karnataka and Andhra Pradesh are found to be model states for under developed states of Bihar, Uttar Pradesh and Rajasthan.

Table 5 Model States for Under Developed States

S. No.	Under Developed States	Model States
1	Bihar	Maharashtra, Gujarat, West Bengal, Haryana and Karnataka, Andhra Pradesh
2	Uttar Pradesh	Maharashtra, Gujarat, West Bengal, Haryana and Karnataka
3	Rajasthan	Maharashtra, Gujarat, West Bengal, Haryana and Karnataka

Source: Author's Own Calculation.

The best value of developmental indicators of developed states is taken as potential targets for low developed states. The present value of developmental indicators along with the potential targets for the low developed states is presented in Table 6. Potential targets are relatively high in comparison with the present achievements for most of the indicators. Suitable actions are required for achieving potential targets. The broad suggestions for improving the level of development of low developed states are given below.

Table 6 Estimates of Potential Targets and actual achievements in low developed States

S. No.	Indicators	Low Developed States		
		Bihar	**Uttar Pradesh**	**Rajasthan**
1	Per Capita at constant price 2004-05 (in Thousands `)	13.90 **(43.43)**	21.21 **(43.43)**	33.20 **(43.43)**
2	Total Employment of all sectors (in million)	26.90 **(31.52)**	65.90* **(31.52)**	27.20 **(31.52)**
3	Population below poverty line (in Percent)	33.74 **(20.50)**	29.43 **(20.50)**	14.71* **(20.50)**
4	Decadal Growth in Population (in Percent)	25.07 **(17.93)**	20.09 **(17.93)**	21.44 **(17.93)**
5	Density of Population (per square kilometer area)	1102 **(543)**	828 **(543)**	201* **(543)**
6	Sex Ratio (Female per 1000 male)	916 **(933)**	908 **(933)**	926 **(933)**
7	Urban Population (percentage of total population)	11.29* **(29.91)**	22.27* **(29.91)**	24.87* **(29.91)**
8	Literacy Rate (in percent)	61.80 **(72.24)**	67.70 **(72.24)**	66.10 **(72.24)**
9	Literacy Rate of Male (in percent)	71.20 **(80.29)**	77.30 **(80.29)**	79.20 **(80.29)**
10	Literacy Rate of Female (in percent)	51.50 **(63.63)**	57.20 **(63.63)**	52.10 **(63.63)**
11	Net Enrolment Ratio (in percent)	84.30 **(97.71)**	96.00 **(97.71)**	97.10 **(97.71)**
12	Expenditure on Education (percentage of aggregate expenditure)	19.50* **(17.44)**	17.60* **(17.44)**	18.50* **(17.44)**
13	Infant Mortality Rate (Children per 1000 live birth)	44.00 **(42.80)**	57.00 **(42.80)**	52.00 **(42.80)**
14	Maternal Mortality Rate (Female per 100000 live)	261 **(219)**	359 **(219)**	318 **(219)**
15	Crude Birth Rate (Children per 1000 live birth)	27.70 **(21.69)**	27.80 **(21.69)**	26.20 **(21.69)**
16	Crude Death Rate (people per 1000 live)	6.70* **(6.96)**	7.90 **(6.96)**	6.70* **(6.96)**
17	Life Expectancy Male (in percent)	68.60* **(67.69)**	66.00 **(67.69)**	67.60 **(67.69)**
18	Life Expectancy Female (in Percent)	68.70 **(70.27)**	66.90 **(70.27)**	70.70* **(70.27)**
19	Forest Cover of total geographical area (in square kilometer)	7.27 **(13.11)**	5.95 **(13.11)**	4.70 **(13.11)**
20	Population sustainable access to Safe Drinking Water (in percent)	94.00* **(87.48)**	95.10* **(87.48)**	78.10 **(87.48)**
21	Population sustainable access to Safe Sanitation facility (in percent)	52.10 **(66.61)**	54.55 **(66.61)**	52.20 **(66.61)**
22	Slum population of total Urban Population (in percent)	14.36* **(25.04)**	24.46* **(25.04)**	22.40* **(25.04)**

**Note: ***Indicates that actual achievement is better than the potential target. Figures in parenthesis are the potential values of the development indicators based on average of all the sample states.

Source: Author's own calculation

It is clear some of the indicators have the present value more than that of potential targets. These are as reduction in poverty, density of population and decrease in the rate of urban population where the present value is less than that of the potential targeted value. The present value of expenditure on education is higher; the crude death rate is lower than that of potential targets. The present value of life expectancy of female is higher than that of potential targets value. The state of Rajasthan also succeeded to maintain the slum population, the percentage of total urban population on the considerable limit.

In these under developed states of Bihar, Uttar Pradesh and Rajasthan, also known as BIMARU states government required special attention in various dimensions of development so as to achieve equal and uniform development which include:

(1) Increase per capita real income with the help of creating employment as well as reducing the level of poverty.
(2) Infrastructural deficiencies require immediate government action.
(3) An appropriate check is needed to sustain decadal population growth and gender gap.
(4) Enhance the education level and improve the health status in the states as proper medical facilities are not available in these states.
(5) Construct hospitals and appoint doctors to improve the health status in the state.
(6) Provide the facilities to the weaker sections of the society.
(7) The area of total forest cover is extremely low in the states and appropriate action should be taken so as to increase in the forest cover.
(8) The condition of sustainable access to sanitation facilities is very poor it should be enhanced through various schemes by the government of the state.
(9) Decrease the gender gap in each and every dimension of development to maintain the proper equality.
(10) Ensure the environmental sustainability to protect the environment degradation and natural resource base.
(11) To make appropriate utilisation of the states' resources base.
(12) The female literacy rate is very poor in these states so promote the female to get educated with the help of launching various schemes.

Therefore, these states will get sustainability if they follow the strategies of the model states. Sustainable development means development in each and every dimension of developmental indicator then the states are said to be sustainable developed state.

5. CONCLUSION AND POLICY IMPLICATIONS

In the present study, we have measured the development levels of sample states of India. The calculated values of composite indices shows wide disparities in the level of overall development exist among sample states. The level of development in education, health and economic sector is found to be positively and statistically significantly associated with the overall development indicating that the growth and progress of these sectors have been going hand in hand in the country. The states of Maharashtra and Gujarat are found to be the most developed states in terms of economic, education, health sectors. The performance of these states is remarkable high as compared to other states. It is noticed that demographic transition does not have a significant bearing on overall development in the most developed states. Low developed states i.e. Bihar and Uttar Pradesh are poorly developed in every sector of development. For bringing out uniform development, actions should be taken to enhance the education level, health facilities, sustained the rate of urbanisation and increase the environmental sustainability etc. States government along with centre should take effective majors for enhancing the overall development. Improvement in basic infrastructural facilities like employment, health, education etc in low developed states is a prerequisite to improve the quality-of-life of the people and to usher in overall development. Job opportunities should be created in backward states for empowering the rural people. The efforts are needed for availability of proper medical facilities and infrastructural educational development along with the best utilisation of the natural resources base and the actions should be taken to protect the environmental degradation. The policy implication from our study is clear. That if the government wants an equitable distribution of development facilities, attention should be focused on the states whose development has lagged far behind that of model states. It is observed that all dimensions of low developed states are not low developed, but some dimensions are high or middle level developed. To speed up the process of equitable sustainable development, concrete area and dimension specific policy

actions are urgently called for. This will require concerted efforts on the part of states governments and the centre. The determination on the part of government, the ruling elite and the people at large is even more important. The analysis described in the study is necessarily confined. Further work is needed in order to carry out comparisons over different time periods because the sustainable development is long term process. As noted by Arief (1982) that comparative studies such as this are primarily directed towards hypothesis generating objectives rather than to hypothesis testing and are suggested as an additional tool for regional planning.

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