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## Spatial Scenario of Development in India-

(A comparative zonal level analysis)

1 Dr. A.K.Pathak

1 Vice- Principal,KVS

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### Abstract

Development refers to qualitative changes in a society. Since independence, India is moving towards the highest peaks of development day by day. But is it the picture of all over country or else one? In this concern the present study is a comparative analysis of contemporary situation of development attended by different zones of the country. The study is based on secondary data taken from planning commission of India (E-statistical handbook, 2013).

The zone wise level of development is determined with the help of 21 indicators. On the base of composite Z score, the level of development of six planning zones is calculated. The study reveals that performance of the northern zones is lower, economically and socially than South zones. The Southern zones have undertaken wide-ranging reforms whereas northern zones have initiated reforms in a limited way. Zones of both the regions have a long way to go in restoring fiscal balance and revitalising their agriculture and industry, While the states of northern zones must concentrate on education, agro industrial development, population sensitizations and administrable leagues.

**Keywords:-** Development in India, comparative analysis, economic growth and reforms.

### INTRODUCTION

Along with faster economic growth, Indian economy has been experiencing disparities in economic and social development across the regions. The inter-regional disparities among different segments of the society have been the major planks for adopting planning process in India since independence. The performance of India depends on the performance of its constituent states. So In Tenth Five Year Plan, first time, specifies targets for each state of growth rate at 8 percent per annum is given. In the last decade reforms saw an improvement in economic growth and social development in the country as a whole, but the performance of all the states has not been uniform during this period and a number of states have underperformed. The southern states and, to some extent, the western states made significant

progress than northern states. It has sharpened inter-state disparities so it is a matter of serious concern for planners and policy makers. In this concern the present study seeks to focus on the development status attended by different zones in the country. In the study the States have been grouped into various zones as per six Zonal Councils of India and seventh zone is BIMARU zone. An attempt has been made in this paper to understand the various facts of underperformance of the northern zone and BIMARU zone in comparison with other zones particularly the southern zone. It suggests the possible ways by which these zones could raise their future economic and social performance. The scope of this study is restricted to a comparative analysis of the emerging trends in six zones in respect of a few key parameters which have an intrinsic bearing on social and economic development. A limitation of inter-regional analysis using Zones as units is the fact that this may not be able to capture the significant intra-State disparities in economic and social development which exists today. The larger Zones in both the groups have regions within themselves, which are vastly different in terms of various indicators of development. After discussing the inter-zonal disparities in development, the study is concluded with suggestion for sustainable development and planning in the country.

**2-Objectives**– Seeing the spatial variation of development in India, The present study analyse the spatial scenario of development of different zones in India. It will try to identify the factors responsible for this variation in development in India by zone level analysis and will try to suggest the important strategies for balanced development in India.

**3-Methodology**- The Present study is based on secondary data of statistical hand book 2013. To meet the needs of an aggregate zone level index, several studies have been attempted. Here the zones are taken as same as Indian zonal councils in which North Zone consist Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan, Delhi and Chandigarh , central zone covers Uttar Pradesh, Uttarakhand, Chhattisgarh, Madhya Pradesh, northeast zone covers Arunachal Pradesh, Manipur , Meghalaya, Mizoram, Nagaland, Tripura, Sikkim, Assam, East zone covers Jharkhand, Bihar, Orissa, West Bengal, A.& N.Islands , South zone covers Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Puducherry, west zone covers Maharashtra, Goa , Gujarat, D.& N.Haveli , Lakshadweep , Daman & Diu and BIMARU zone covers Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Rajasthan, Uttar Pradesh, Uttarakhand . Accordingly, the collected data of states are converted into zone level data. Keeping in view to whole India data of various indicators the percentage value of every zone is

calculated. Using composite Z score the development level is decided and with the help of computer and statistical tools, the study is completed.

### ANALYSIS-

**1-Population profile - A-Population density and distribution-** The Population density and distribution are the basic aspects of population analysis of an area. In the study the distribution pattern is analysed on the base of population concentration index (PCI) while population density is analysed as person per square KM area as per data of census 2011. Column1 of Table-1 shows that BIMARU zone consist 38% of total area of country, while among six zonal Councils, Central zone consist largest area followed by Northern zone. In aspect of population the central zone consists highest percentage i.e. 25.4% followed by East zone. In the aspect of population density, the eastern zone has highest density i.e.634p/km<sup>2</sup> followed by Central zone. Here one thing is noticeable that in the aspect of area, population and density the south and west zones are in third or fourth ranks within the six zones of country.

**Table 1- Population density and distribution**

SN	Zone	Area	Population			PCIndex	Pop. Density
			Male	Female	Total		
1	India gross	3287240	623724248	586469174	1210193422	35.0	368.1
2	North	21.8	13.4	12.9	13.1	4.6	221.8
3	Central	22.4	25.7	25.2	25.4	8.9	417.2
4	North east	8.0	3.7	3.8	3.8	1.3	173.9
5	East	13.0	22.4	22.3	22.3	7.8	634.0
6	South	19.4	20.3	21.5	20.9	7.3	397.0
7	West	15.5	14.6	14.3	14.4	5.1	344.2
8	Bimaru	38.1	42.8	42.0	42.4	14.8	409.3

Source – Statistical hand book of India 2013, census of India 2011

**B- Population change-** The population growth rate is also a good indicator to assess the level of development in developing countries. The population growth is the net effect of natural growth and net

migration. The migration may be important for a smaller State; but the natural growth contributes mainly to the population growth in larger Zones. A lower population growth could be a reflection, either of high birth rate high death rate combination or low birth rate low death rate combination. A higher population growth in the Indian context is a reflection of a State in early stage of demographic transition where death rate has come down but birth rate has not yet followed suit. Table 2 explains that in western and south India the birth rate is less than all other zones but it is higher in BIMARU and central zone. In aspect of death rate the western zone have lower death rate than others. An important indicator of the quality of health care in a society is the infant mortality rate (IMR). The worst IMR figures are that of Central zone followed by Bimaru and eastern zone while better in south and west zone. If we see the average population growth rate, we found that southern zone shows lower and stable growth rate while Bimaru and central zone shows higher growth rate. In the case of population change, the population growth rate decline faster in north and southern zones than other area. The picture explains the level of understanding, religious maturity and development in southern zone in comparison to northern zones.

**Table 2- Birth, Death and changing annual population growth rate in India**

Zone	Birth rate	Death rate	Infant mortality rate	Average annual population growth rate				Change in population Growth rate		
				1911-21	1941-51	1971-81	2001-11	1921-51	1951-81	1981-11
India gross	18.9	5.7	34.6	-0.03	1.33	2.47	1.76	1.36	1.13	-0.70
North	19.3	5.9	38.9	0.02	0.95	3.10	1.95	0.93	2.15	-1.15
Central	25.1	5.7	53.0	-0.26	1.09	2.54	2.03	1.35	1.45	-0.51
North east	18.7	5.6	27.6	1.83	1.90	2.67	1.69	0.07	0.77	-0.97
East	21.3	5.3	41.4	-0.16	1.05	2.31	1.90	1.21	1.26	-0.41
South	16.9	7.3	26.0	0.19	1.65	2.16	1.26	1.46	0.51	-0.90
West	14.2	4.9	28.0	-0.09	1.88	2.56	1.71	1.97	0.68	-0.86
Bimaru	25.8	6.2	51.0	-0.25	1.12	2.60	2.15	1.36	1.48	-0.45

Source – Statistical hand book of India 2013

**C- Population composition-** Population composition reflects the equality, maturity and development scenario of an area. It is analysed on various bases as age, sex, education etc. *Sex ratio* is the most revealing index of gender disparities, equality and sensitization level, in the society and also affected by education, development and migration scenario. It is calculated here as female per thousand males and given in Table 3. The Sex ratio of India is 940; itself is a reflection of the neglect ion of women's health due to relatively lower economic and social value assigned to women, in general, in this country. It is highest in Sothern zone Followed by north east zone while lower in north zone followed by central zone. It clearly shows that females are discriminated in north India and needs an immediate reform measures for women empowerment. The high sex ratio of southern zone also explains the women equality and development of south Indian society. In child sex ratio case (0-7 year's age group) it is 946 in southern zone and which is higher than the average of country and other zones. The national child sex ratio is 914 which is a problematic picture in concern to overall sex ratio. The child sex ratio is much lower in north and central zones. The zones having tribal and Christians dominating societies have also high sex ratio than other zones. If we see the change in average sex ratio in different zones we found that the southern zones are more stable than other zones. Table 3 also explains that the central, western and Bimaru zones are today also showing declination in sex ratio while in rest of India it is increasing.

**Table 3- Changing sex ratio in India**

Zone	Sex ratio/000males						Change in sex ratio		
	1921	1951	1981	2011	0-7 years	7 years+	1921-51	1951-81	1981-2011
India gross	955	946	934	940	914	944	-9	-12	6
North	825	853	873	904	866	910	28	20	31
Central	954	954	934	922	907	924	1	-21	-12
North east	862	838	908	956	956	956	-24	70	49
East	863	895	908	939	939	940	31	13	31
South	1011	1003	986	999	946	1005	-8	-17	13
West	1021	1023	978	922	885	928	2	-45	-56

Bimaru	962	957	935	923	912	925	-5	-22	-12
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Source – Statistical hand book of India 2013

**D- Literacy and urbanization** – The level of literacy and urbanization is the most important indicator of development of a society. Invariably, male literacy is higher than female literacy in any society. Often there may be significant gender gap in literacy. The true indicator of development of a society is the level of female literacy which can be considered as the bottom line as far as literacy is concerned. The Zone wise percentage of literate females above 7 years is given in Table 4. In all the three aspects of analyzing the literacy level, the southern and western zone represent better percentage while Bimaru, Central and east zones represent poor scenario. It is quite evident that the critical precondition for stabilization of Indian population is to raise the female literacy in all areas of country. The urbanization level is much higher in western and southern zone but lower in north east, east and central zones than other areas. This explains that the zones of south India are more developed than other areas of the country.

**Table 4- Literacy and Urbanization level in different zones of India (In percent)**

Zone	Literacy in percent			Urbanization level		
	Total	Male	Female	Total	Rural	Urban
India gross	74.04	82.14	65.46	1210193422	68.8	31.2
North	78.0	85.4	69.7	13.1	63.7	36.3
Central	72.8	82.4	62.6	25.4	76.1	23.9
North east	79.6	84.1	74.9	3.8	81.6	18.4
East	73.7	81.4	65.4	22.3	79.3	20.7
South	80.8	86.7	75.0	20.9	59.0	41.0
West	84.4	90.7	77.0	14.4	55.5	44.5
Bimaru	69.9	80.3	59.0	42.4	78.5	21.5

Source – Statistical hand book of India 2013

**2-Education facilities, Teacher availability and student enrollment scenario** - The educational facility situation is the mirror of development of an area. Table 5 explains that, the average number of schools is higher in North and Bimaru zone than south Zone while on the other side, the percentage of Education College, agricultural college and polytechnic college is much higher in south zones than north zones. The picture explains that the south zone have given more attention in vocational education than north. So it is necessary to develop the higher education and vocational educational facilities in central, north and Bimaru zone.

**Table 5- Educational facilities in different zones of India**

(In percent)

Zone	Uni vers ity	Colleg e for	Educa tion Colleg e	Agric ulture	Polyte chnics	Prima ry/	Jr. Basic	Sr. Basic	Secon dary	Total school
India gross	436	11524	8325	2444	1492	67822	82316 2	36774 3	19064 3	14493 70
North	20.4	16.1	16.9	17.3	12.7	0.1	13.2	17.9	20.5	14.8
Central	17.9	11.9	13.1	0.1	15.2	2.0	34.2	30.1	18.4	29.5
North east	4.8	5.1	1.2	2.7	1.2	5.3	5.9	5.8	5.4	5.8
East	14.4	16.4	6.0	16.0	6.7	0.2	23.0	15.6	12.8	18.7
South	26.6	27.4	46.9	35.0	56.9	9.6	15.3	16.5	26.9	16.9
West	15.8	23.2	16.0	28.8	7.3	82.8	8.3	14.2	16.0	14.3
Bimaru	29.8	28.8	17.5	5.6	21.1	2.1	47.9	49.0	31.5	43.9

Source – Statistical hand book of India 2013

**In** Teacher availability and student enrollment scenario case if we see Table no. 6 in the aspect of teacher availability situation, at one side the percentage of general education teachers is higher in central, east and Bimaru zone while on the other side the percentage of technical education teachers is higher in south zone. If we see the enrollment scenario in higher education in India, the Table6 explains that the 39.7 percent PhD enrollments were from south zone which is very less in other zones. The percentage of students enrolled in science and technology subjects is much higher in southern zone than other zones while the students enrolled in Art and commerce and law is higher in central and Bimaru zones. This explains that educational status is more developed in southern zones than northern zones.

**Table- 6-Avalability of teacher and Students enrollment scenario in different zones of India (In percent)**

Zone	Teachers					Students					
	Prim ary/J unior	Midd le /Sr Basic	High/ Post Basic	High er Seco ndar y	Total No. of Teac her	Arts	Scien ce	Com merc e	Profe ssion al	Res ear ch	Total
India gross	2480	1912	1310	1028	6732	7057	2588	2269	3722	91	15729
North	12.9	19.7	15.1	28.0	17.6	12.8	8.1	12.7	18.5	21. 5	13.4
Central	32.3	16.4	11.8	23.8	22.5	35.0	27.5	20.8	14.4	15. 7	26.7
North east	6.0	6.8	7.5	3.7	6.2	3.7	2.2	1.2	2.0	3.5	2.7
East	22.8	13.4	7.7	19.7	16.7	21.1	15.0	7.0	11.4	8.7	15.7
South	16.0	22.3	32.6	19.0	21.5	28.4	32.6	26.0	33.9	39. 7	30.1
West	10.1	21.4	25.2	5.9	15.6	12.1	14.5	32.4	19.7	12. 2	17.2
Bimaru	44.6	37.2	21.1	36.2	36.7	49.3	37.2	28.6	22.0	20. 2	37.7

Source – Statistical hand book of India 2013

**3- Health-** Health is prime need for development. If citizens of a nation are healthy the nation will develop very fast. The situation of health can be analysed by the availability of health facilities in area. Table 7 explains that the concentration of hospitals is same in central and south zone but number of beds in hospitals is much higher in south and west zone in comparison to other zones. The Table also explains that the government has tried to establish the hospitals, PHCs in all the zones but the facilities are not available in those centers equally and north Indian zones are lacking behind specially central and Bimaru zones than southern zones. This is the effect of high technical education low corruption in southern zones than northern zones.



**Table 7-Situation of Health facilities in different zones of India**

(In percent)

Zone	Gov.H ospitals	Doctor s	N.of beds in 000	Hosp.U nd. Ayush	Distri ct hospit al	CHC	PH C	Othe r	Clini cs
India gross	11805	70969	737.92 6	3145	597	4801	2384 8	1479 90	7121 21
North	12.2	4.0	7.7	6.2	18.4	16.1	13.7	14.1	11.7
Central	18.9	5.8	13.9	64.5	26.3	21.9	24.4	24.5	20.2
North east	6.1	1.0	2.9	1.7	13.4	5.1	6.3	4.9	4.9
East	26.8	2.0	15.2	2.0	18.1	20.6	18.2	20.8	27.0
South	20.5	9.7	24.5	19.9	15.4	22.3	24.9	23.4	13.1
West	15.5	77.6	35.8	5.6	8.4	14.1	12.4	12.2	23.0
Bimaru	32.1	7.6	20.7	69.9	41.5	35.1	40.0	41.5	47.0

Source – Statistical hand book of India 2013

**4-Land use pattern-** In agriculture based society the land use pattern plays important role in development. Table 8 shows that in different zones percentage of area under forest, land not available for agriculture, and follow land is higher in south zones than central zone while area under pasture land, wasteland and net shown area is higher in north and Bimaru zone. This explanation shows that central and Bimaru zones are more utilizing the land for agricultural practices while south zone are concentrating for non-agricultural practices also.

**Table8- Land use Pattern in different zones of India**

(In percent)

Zone	Land use pattern										
	Area ur.land	Forest	NA cultivatio	Pasture	Land ur.misl.	Cultivable Waste	Follow land	Current follow	Net shown	Total cropped	Area shown

India gross	3056 11	7004 2	4295 4	1014 9	3351	1285 7	1048 4	1575 3	1400 22	1921 97	5217 5
North	16.4	6.0	16.7	33.0	5.0	37.3	20.1	15.1	18.6	19.8	23.2
Central	24.3	28.8	19.0	24.2	22.9	17.4	14.2	13.2	26.4	27.5	30.5
North east	7.6	16.5	7.6	1.8	17.4	4.6	5.4	2.0	3.1	3.1	3.1
East	13.9	15.1	17.3	6.2	22.0	6.1	13.5	21.3	12.4	14.3	19.4
South	20.8	17.8	23.7	15.7	25.1	11.6	35.3	37.2	19.6	17.5	12.1
West	16.4	10.4	15.7	19.1	7.6	22.9	11.5	11.2	19.9	17.7	11.7
Bimaru	41.2	36.8	37.0	42.2	33.5	55.2	44.8	41.7	43.2	43.5	44.1

Source – Statistical hand book of India 2013

**5-Irrigation facilities** –The Irrigation facilities are the base of agricultural development. Table9 shows that average percentage of area irrigated by canal and tanks is higher in south zones while by wells and other sources in central and north zones. The irrigated food area is almost same while percentage of irrigated nonfood area is higher in south zones. So government should make effort for the development of canal and tube well in north zone. This on one side fulfills the needs of irrigation facilities while on the other side a canal will also be helpful in environment conservation and flood management.

**Table9- Irrigation facility in different zones of India**

(In percent)

Zone	Total	Canal	Tanks	and other	Other	Food area	Non food area
India gross	86422	16697	1639	39042	5879	71583	14842
North	24.6	24.6	1.4	23.4	3.1	21.7	38.6
Central	32.5	28.4	20.3	40.6	18.7	36.2	14.8
North east	0.7	1.5	0.2	0.0	4.4	0.8	0.2
East	15.6	13.6	8.9	7.3	60.3	17.0	9.1
South	15.7	20.4	65.4	14.6	11.5	15.3	17.5
West	10.8	11.5	3.8	14.1	2.0	8.9	19.8
Bimaru	46.5	42.0	30.2	57.8	21.5	48.5	36.8

Source – Statistical hand book of India 2013

**6-Cropping pattern and productivity** - Table 10 explains that percentage of cropped area under cereals and food grains which is higher in central, north and Bimaru zones while area under fruits, vegetable, and spices is higher in south zone. It reflects that in southern zone, the commercialization of agriculture is more fast than north and other zones. The second part of the Table shows the agricultural productivity scenario in different zones of India. It explains that the cereals productivity is higher in south and north zone while pulse and oil seeds productivity is higher in west zone. The other cash crop and food productivity is higher in south zone. The productivity in central and north east zone is lesser in maximum crops. The crop area and productivity scenario also explains the technology use and cash crop preference is higher in south zone, while even having fertile land, due to illiteracy and high population, the central and eastern zone couldn't represent the same.

**Table10- Cropping Pattern in different zones of India**

Zone	Crop wise percentage of cropped area (In percent)						Productivity scenario ton / hectare				
	T.cereals	Pulses	Oilseeds	O.cash crops	Fruits	Vegetable	T. cereals	Pulses	Oils seeds	O.cash crops	Fruits
India gross	10036 2.1	2640 6.6	27227	6748 .4	6383	8494.6	2.3	0.7	1.2	70.1	11.7
North	23.0	19.0	22.6	4.6	11.1	9.9	2.7	0.7	1.3	65.1	8.0
Central	30.0	32.3	31.1	44.2	12.7	18.2	2.2	0.7	1.1	56.3	13.6
North east	3.8	0.8	1.6	2.5	6.5	4.9	1.9	0.7	0.7	38.4	8.3
East	16.4	8.0	4.7	15.7	14.2	35.5	1.9	0.7	0.9	54.0	10.8
South	14.1	21.1	16.1	14.6	25.8	18.2	2.8	0.6	1.0	95.6	17.1
West	12.7	18.7	23.9	18.4	29.7	13.4	1.6	0.8	1.5	82.8	8.9
Bimaru	46.9	54.3	52.4	53.5	19.3	32.8	1.9	0.7	1.1	55.9	13.3

Source – Statistical hand book of India 2013

**7- Animal husbandry-** The following Table 11 explains that percentage of cattle's is much higher in central and east zone while percentage of buffalos is higher in north and central zone. The percentage of sheep and poultry is higher in south zone. The milk production percentage is higher in north and

central zone, egg production is higher in south zone while wool production is higher in north followed by south zone than others. This explains that the northern India has more facilities of agriculture and animal husbandry but need to be technically sound and commercialized.

**Table11- Live stock and product in different zones of India**

(In percent)

Zone	No. of Live stock 000No.					Production 1000 tan/10 mil.		
	Cattle	Buffaloes	Sheep	Goats	Poultry	Milk	egg	wool
India gross	199075.03	105342.4	71557.787	140537.38	648828.8	121843.6	6302.61	42.9
North	10.7	23.0	23.8	18.3	8.0	26.4	14.4	53.8
Central	26.4	34.0	2.8	19.9	5.1	25.4	5.3	5.6
North east	6.7	0.6	0.6	4.2	6.8	1.0	1.6	0.0
East	26.6	9.6	5.7	27.8	20.1	11.7	12.0	2.6
South	17.4	18.7	60.2	19.1	47.8	21.2	57.8	28.0
West	12.2	14.1	6.9	10.8	12.2	14.3	8.9	10.0
Bimaru	43.2	52.3	19.4	47.1	9.3	42.9	8.2	35.2

Source – Statistical hand book of India 2013

**7- Mining-** The mines plays important role in the development of an area. The Table-12 shows that percentage of number of total mines is higher in south zone followed by west zone while less in north zone. In the case of fuel mines number eastern zone have highest concentration followed by south zone. The concentration of metallic and non metallic minerals is higher in south and west zone. The second part of Table shows the mineral production scenario which explains that the production percentage of total mineral, fuel and metallic minerals is higher in eastern zone west central and south zone while the production percentage of non metallic and other minerals is higher in south zone followed by north zone. This explains that south and western zones are also sound in mines and minerals.

**Table12- Mining situation in different zones of India**

(In percent)

Zone	Mines				Total production 0000 m tons				
	Total minerals	Fuel minerals	Metallic minerals	Non-metallic	Total minerals	Fuel minerals	Metallic minerals	Non-metallic	Others
India gross	2928	573	687	1622	138462	88332	45156	4892	19623
North	8.1	2.6	0.4	13.4	10.0	10.7	6.1	31.3	24.7
Central	15.2	23.6	11.9	14.1	18.1	17.2	20.3	16.6	24.3
North east	17.0	6.6	19.2	18.0	9.0	14.1	0.0	0.8	0.2
East	10.2	30.4	8.7	3.5	29.4	25.0	40.7	6.2	2.1
South	27.4	26.0	27.2	28.8	14.8	13.5	15.1	36.0	43.4
West	22.0	10.8	32.5	22.1	18.6	19.5	17.8	9.1	5.3
Bimaru	26.3	54.8	20.7	18.7	39.8	44.3	30.3	47.7	48.4

Source – Statistical hand book of India 2013

**8-Industries** – The industries are heart of development. The following Table13A shows that south and west zone have more than 60 percent concentration of factories while it is very low in northeast, east and central zone. The scenario is not only in case of numbers of factories but also in case of fixed capital working capital, productive capital, invested capital workers and total output also.

It proves that there is huge disparity in zone wise industrialization pattern, and explains that if Gov. concentrates to develop the industries in central and eastern zones the areas may become developed very soon, because for it the infrastructure and education will automatically increase.

**Table13A- Industry situation in different zones of India**

(In percent)

Zone	Number of Factories	Fixed Capital	Working capital	Productive	invested capital	workers	Total output
India gross	158877	1352181	387741	1739929	1833050	9157802	11792057
North	17.0	10.3	15.2	11.4	11.8	16.0	15.8
Central	11.9	12.2	25.3	15.1	13.3	12.1	12.2
North east	1.9	1.0	1.8	1.2	1.0	1.8	1.7
East	8.1	14.2	7.2	12.6	13.3	9.1	8.7
South	37.2	27.7	13.2	24.5	28.7	37.4	36.7
West	24.0	34.6	37.4	35.2	32.0	23.7	25.0
Bimaru	18.6	18.0	29.4	20.5	19.1	17.4	17.4

Source – Statistical hand book of India 2013

If we see the sector wise industry location pattern, the following Table 13B explains that the percentage of industries located in agricultural and allied sector is higher in west zone followed by south and east zone while in mining and quarrying south followed by west and east zone. The 41 percent of manufacturing industries are concentrated in west and 20 percent in south which is very less in other zones. The electricity and gas related industries are higher in south followed by west zone. The construction industries are higher in west followed by east zone, and wholesale industries are in east followed by west zones. The near to 50 percent industries related to transport finance and social sector companies are located in west zone and the 2nd most concentration of these sector companies is in south zone.

The Table explains that not only the mineral based industries but technology and other sector industries are also concentrated in west and south zone while rest of zones have less concentration of industries which is the most important reason of backwardness of the states of these zones.

**Table13B- Sector wise industry situation in different zones of India**

(In percent)

Zone	Agriculture and Allied	Mining and Quarrying	Manufacturing	Electricity, Gas and	Constructions	Wholesale & Retail	Transport, Storage and	Finance, Insurance, Real	Community, Social and
India gross	1571	823	11968	1256	7269	13076	2210	23946	5301
North	9.4	16.6	9.8	9.9	8.5	8.6	8.6	8.7	9.6
Central	9.7	9.4	7.6	5.7	9.8	4.8	5.2	8.8	9.8
North east	2.0	1.2	0.7	1.8	1.3	3.8	0.7	0.9	0.7
East	20.4	17.4	12.1	6.0	22.4	43.1	9.2	12.1	9.7
South	27.8	28.3	20.9	40.9	18.9	11.7	25.7	25.5	23.5
West	30.7	27.1	49.0	35.7	39.0	28.0	50.6	44.0	46.7
Bimaru	17.2	25.9	13.8	8.4	21.8	12.0	9.7	13.7	15.5

Source – Statistical hand book of India 2013

**9-Transport facilities-** The transport facilities scenario is mirror of development level of the country. Here in the study the roads and vehicle position is taken to check the transport facility in different zone of the country.

The Table14A shows that percentage of total and surfaced roads and highways is higher in south followed by central and western zone. But in case urban roads in total and surfaced road categories the highest concentration percentage is in east zone followed by central zone. The percentage of concentration of project roads is higher in central zone followed by east and south zone. In the case of concentration of star hotels, the highest percentage is in north zone followed by south zone which is due to picnic spots in north and development of hotel industry in Punjab and Delhi areas.

**Table14A- Situation of road and Tourism in different zones of India**

(In percent)

Zone	Total		Highways		Urban Roads		Project Roads		Star class hotels
	Total	Surface d	Total	Surface d	Total	Surface d	Total	Surface d	

India gross	3790344	2341479	3089966	1972740	411839	291894	288539	76845	2483
North	12.5	16.2	12.4	16.6	15.8	16.8	9.2	3.8	34.8
Central	19.3	21.7	16.9	21.2	25.0	23.8	36.2	26.1	13.7
North east	9.9	4.6	11.5	5.1	1.9	2.0	4.2	1.4	2.1
East	18.8	10.6	17.3	7.6	29.9	28.2	19.9	22.1	2.7
South	24.2	25.9	25.9	26.8	16.9	18.1	16.5	30.4	32.6
West	15.3	20.9	16.0	22.6	10.3	11.1	14.0	16.2	14.1
Bimaru	29.7	33.2	28.4	33.9	30.6	29.1	42.1	30.7	21.9

Source – Statistical hand book of India 2013

The vehicle density is an important indicator of overall quality of transport service in a State. In this case the following Table 14B explains that the percentage of total vehicles is much higher in southern zone than other zones of country. The same picture is also seen in the case two wheelers, car, mortar, buses taxis and good vehicles also. This explains that at one side the income status of peoples of south zone is higher than other zones while on the other side proper road development can also be imagined.

**Table14B- Availability of vehicles in different zones of India** (In percent)

Zone	Two-Wheeler	L.M. Vehicles	Jeeps	Cars	Taxis	Buses	Goods Vehicles	Miscellaneous	Total
India gross	101014499	4011804	1973193	15149287	1785461	1232927	7019188	8043510	140634670
North	18.2	12.0	31.3	28.3	12.3	17.7	19.5	23.1	19.5
Central	19.1	6.3	12.7	10.8	10.5	6.9	9.5	25.4	17.4
North east	1.4	2.8	5.2	2.7	3.9	2.5	4.9	1.0	1.9
East	8.6	9.8	9.0	6.5	26.0	7.3	12.8	7.8	8.8
South	30.5	40.2	13.7	29.2	32.8	52.4	29.0	24.0	30.2



West	22.3	28.8	28.2	22.4	14.4	13.1	24.2	18.6	22.2
Bimaru	28.7	16.2	31.1	16.4	33.9	16.1	21.1	38.9	27.1

Source – Statistical hand book of India 2013

**10- Electricity and Power Sector-** Power plays most critical role in the growth of economy. The Table 15 shows that the installed capacity of electricity generation is higher in south zone than other zones. In the aspect of installed capacity of renewable energy generation is higher in south zone than other zones. In the case of production, south and west zone produce more electricity than others. Now this sector is bristling with problems in all the zones of India. The basic issue is that power is predominantly produced by government entities and distributed by them at much below costs to agriculture and household sectors, partly compensated by prohibitive prices, charged on industry and commercial sectors. The overall returns on these public utilities are chronically negative and create commercial loss. The restoration of financial viability of state power entities is the crux of the problem and this is crucially dependent on the progress of distribution reforms.

**Table 15-Electricity installed capacity and production scenario in Different Zones of India (In percent)**

	Total installed capacity non renewable				Total installed capacity Renewable							Total production
	Hydro	Steam	Diesel	Total	Biomass	Water	Wind	Solar	Solar	Total		
<b>India gross</b>	33408	60903	29319	147966	2664	72	14155	3042	35	19970	<b>741167</b>	
<b>North</b>	17.2	12.0	8.0	12.7	6.9	12.8	10.8	25.3	27.4	16.6	17.7	
<b>Central</b>	12.0	15.9	6.0	12.4	31.4	10.6	1.9	8.7	1.5	10.8	16.2	
<b>North east</b>	0.8	0.1	1.9	0.9	0.0	0.0	0.0	9.1	0.1	1.8	0.8	
<b>East</b>	9.6	12.6	0.9	9.4	1.0	0.0	0.0	7.6	3.6	2.4	9.9	
<b>South</b>	32.8	14.4	50.2	26.0	45.7	68.7	55.5	39.7	39.7	49.9	29.3	

West	12.3	22.1	22.5	20.8	15.1	7.9	31.7	9.6	27.7	18.4	26.1
Bimaru	15.3	22.8	10.6	17.9	34.5	10.6	12.7	11.6	16.2	17.1	23.6

Source – Statistical hand book of India 2013

**11-Housing-** The housing pattern and facility situation shows the economic development level of a region. In this concern the following Table 16 shows that the percentage of residential houses and household honors is higher in south zone followed by central zone. The percentage of flats is higher in north zone while the percentage of kattcha houses is higher in northeast and eastern zone. The percentage of electrified villages and houses is much higher in south, west and north zone but lower in east and Bimaru zone. In case of toilet facility, the houses northeast and west zone are more facilitated than other zones but in central east and Bimaru zone the situation is very pathetic.

**Table16- Housing situation in different zones of India**

(In percent)

Zone	Residential houses situation (In percent of Total Residential Houses)					Type			Facility		
	Total R.Houses	No. of households	Independent	Flat	Others	Pucca	Semi Pucca	Kattcha	electrified villages	Electrified houses	Toilet facility
India gross	306162799	246692667	82	3.6	14.3	91.7	6.2	2.1	81.9	67.2	46.9
North	13.1	12.1	77.2	13.5	9.33	96.8	2	1.24	84.7	90.5	68.6
Central	22.8	22.5	77.3	5.18	17.3	90.1	8.7	1.1	81.9	66.6	38.7
North east	4.0	3.8	92.7	3.4	3.3	72.2	23.4	4.44	74.8	69.8	77.6
East	21.7	22.2	85	6.48	8.46	68.1	8.08	3.74	66	49.2	39.2
South	23.5	24.6	84.9	5.62	9.44	90.6	7.38	2.04	100	93.7	62.5
West	14.9	14.8	83	6.25	10.7	79.5	3	0.83	91.9	94.2	70.1

Bimaru	37.9	37.8	82.3	3.6	3	13.9	89.6	7.7	6	2.56	74	56.5	33.6
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Source – Statistical hand book of India 2013

**12-Forest and Environmental conservation** – forest situation is today most important indicator for sustainable development. The following Table 17 showing zone wise forest and conservation scenario reveals that the actual, dense and forest percentage is higher central zone followed by north east zone. In case of shrubs it is higher in south zone. The percentage of area under conservation projects and waste land is higher in north zone followed by central zone. The Table shows that zone wise forest concentration and conservation is better in north zones than south zones.

**Table17- Forest availability and conservation situation in different zones of India (In percent)**

Zone	Forest Type on type of plant						area under projection		Waste land
	Actual	Dense	Moderate	Open	Mangrove	Shrub	N. park	W. l.senct.	
India gross	1296043	83471	320736	287820	4662	42176	38024	155937	638518
North	8.2	9.0	6.5	9.9	0.0	16.5	25.1	20.6	32.7
Central	25.3	20.6	27.6	23.1	0.0	17.9	31.0	19.2	17.0
North east	24.8	30.6	23.9	24.7	0.0	2.9	17.7	11.8	12.3
East	13.7	19.9	13.0	14.0	64.2	13.4	11.6	11.4	7.6
South	18.4	8.4	20.6	17.5	8.6	35.9	9.8	15.8	15.2
West	9.7	11.6	8.3	10.9	27.2	13.4	4.9	21.3	15.2
Bimaru	32.1	24.1	33.1	31.9	0.0	30.1	43.4	28.8	36.8

Source – Statistical hand book of India 2013

**13-Social level and morality** -The following Table 18 explains that the percentage of households having job card is higher in north and Bimaru zones but total work taken up is higher in Bimaru and southern zone. The percentage of newspaper is also higher in south comparatively. If we see the crime situation

Table also explains that percentage of registered cases is much higher in north and Bimaru zones, it is also thinkable that percentage of total cases under trial and total death in a year is also much higher in north and Bimaru zones. This explains that the northern zones are not much stable in comparison to south; this also much affects the development level of zones.

**Table18- Revenue and morality situation in different zones of India** (In percent)

Zone	Job cards	Works Taken	News paper	cases under IPC	Police strength	cases under trial	Death in year
India gross	119561881	5460474	130709	3146326.0	1660151.0	8939161.0	23690.0
North	10.6	6.1	26.7	14.6	22.1	13.8	27.2
Central	24.5	29.9	28.1	16.5	19.4	17.4	13.8
North east	5.4	2.8	1.7	5.8	8.8	2.0	3.8
East	28.2	19.1	11.6	19.5	15.5	20.0	30.2
South	23.1	39.6	19.5	28.9	18.5	19.8	14.8
West	8.2	2.5	12.5	14.7	15.7	27.0	10.3
Bimaru	46.5	41.4	37.3	31.7	31.4	31.6	35.7

Source – Statistical hand book of India 2013

**14- Intra-zonal Disparities and level of Development-** Availability of adequate infrastructure facilities is an important pre-condition for sustainable economic and social development. In this concern at one side the banking infrastructure in certain zones of north India is reasonably good while in case of telecom density needs lot of efforts than south zone. The most common indicator of the economic development of a society is the per capita annual income generated by it. The PCI and growth rate is much lesser in east and central zone than south and west zone. The level of poverty or the share of population which do not have minimum income to meet its basic requirements is an indicator of the level of economic development as well as the inequality in the income distribution. The important aspect is the significant level of regional disparities which exist within different Zones. An important cause of regional tensions, which lead to popular agitations and at some time the militant activities, is such regional disparities in

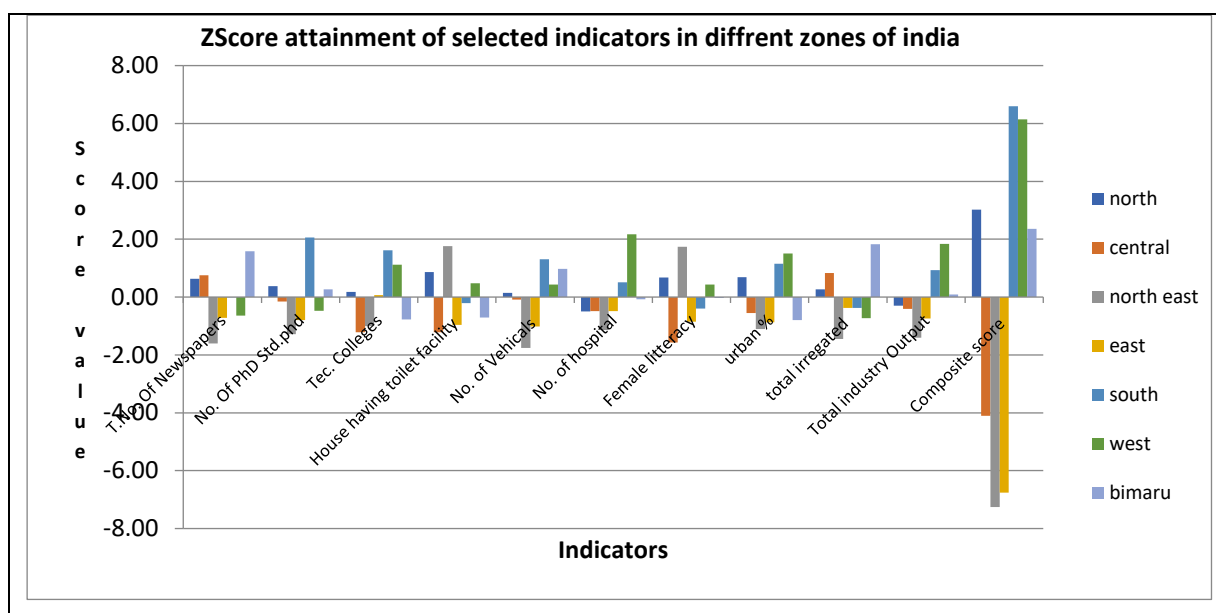
economic and social development which exist within some of the Zones. A number of Zones included in our analysis have clearly identifiable regions which are at different stages of development and which have distinct problems to tackle. Creation of new states, certainly, may not be a solution to such regional disparities. At the same time, it is important to recognize such intra- State regional disparities explicitly and tackle them through special efforts. The action may be initiated by making the zonal councils as second level elected governing body. This will helpful to reduce the tensions and also will be helpful in developing states and reducing corruption.

In the study the development level of different zones is calculated by using composite index of Z score. The score is based on 10 indicators i.e. female literacy, sex ratio, Total number of newspaper/periodicals, no. Of PhD Students, Total no. of technical colleges, percentage of houses having toilet facility, No. of Vehicles, No. of hospitals, Percentage of urbanization, Total irrigated area and total industry output. Table 19 shows that the level of development among different zones is much higher in south zone (6.59) followed by western zone (6.14). While lower in north east, east and central zone. It is also seen that corruption, crime and militancy situation is higher in this area than zones with high score states. This explains the need of special attention in these zones for sustainable Indian development.

**Table19- Level of development in different zones of India**

Zone	Indicators (in Z Score values)										Composite score
	T.No. Of	No. Of PhD	Tec. College	House having	No. of Vehicle	No. of hospital	Female literacy	Urban %	Total irrigate	Total industry	
North	0.63	0.38	0.18	0.86	0.14	0.50	0.68	0.69	0.26	0.30	3.03
Central	0.76	-0.16	-1.22	-1.22	0.09	0.48	1.57	0.56	0.83	0.40	-4.11
North east	-1.61	-1.28	-1.00	1.76	1.76	1.13	1.74	1.11	1.44	1.40	-7.25
East	-0.72	-0.80	0.07	-0.96	1.01	0.49	0.85	0.88	0.38	0.74	-6.76
South	-0.01	2.06	1.62	-0.21	1.31	0.51	0.39	1.15	0.37	0.93	6.59

West	-0.64	-0.47	1.12	0.48	0.44	2.17	0.43	1.50	-	0.72	1.83	6.14
Bimaru	1.58	0.27	-0.77	-0.71	0.97	0.07	0.03	0.80	-	1.83	0.09	2.36



**Conclusion and suggestions-** The present analysis reflects that a marked dichotomy between south and north Zones has been emerging. The south and western zone are seems as forward Zones in comparison to other zones. The population concentration scenario, birth, death and infant mortality rate is higher while literacy, sex ratio and urbanization level is lower in northern zones especially in East and Bimaru zones than south and west zones. To improve the level of social services massive investment in primary education and primary health services are required which brings down the rate of growth of population. In case of educational and health facility scenario the south and western zone have more number of technical education centers, teacher and student’s enrollment scenario, doctors and number of beds in hospitals than east, central and Bimaru zones. In land use and agriculture scenario case, the northern zone are performing better but the productivity and production percentage of cash crop products is higher in southern zones even after having the lack of proper irrigation facility.

In case of infrastructural facility vehicles and industrialization, the south and western zones are having much better situation than north zones. In case of banking infrastructure in certain northern zones is

reasonably good while in case of telecom density needs lot of efforts than south zone. The PCI and growth rate is much lesser in east and central zone than south and west zone. The most challenging aspects for northern zones are crime, deaths, regional disparities, militant activities and corruption which are much higher in northern zones than south zones. A closer examination of nature of backwardness of zones explain that each region have a specific reason for its development level. At one side the south and west faced the scarcity of water for agriculture but have high concentration of industries while on the other side the eastern and central zones are tribal centered and faced neglecting of ruling elite, topography, low education, industry concentration and criminalization. A better administered State attracts more private investment both from domestic and foreign investments.

In the east and central Zones, the corruption and inefficiency coexist and the Private sector is willing to deal with political and bureaucratic corruption which discourages the investors. The study reveals that Improvement in the basic infrastructural facilities like power, irrigation, transport, telecommunication and better quality of governance in the north India's Zones is a precondition to attract private investments, improving the quality of life of the people and to usher in sustainable economic development in those Zones. Similarly, the development of irrigation potential will helpful in improving the productivity of agriculture and will improve the rural income substantially and reduce the rural poverty significantly. To conclude the northern regions are socially and economically much behind then southern and western regions, but have vast economic potential and has registered rapid growth of the export-oriented software industry. Now the concerted efforts and determination on the part of the State government, the ruling elite and the people are required. Meaningful decentralisation of decision making and financial powers with appropriate accountability at all levels will facilitate faster socio-economic development of the northern regions where people are likely to take up considerable share of the developmental responsibilities. The zonal councils may be established as second level of elected governing body. This will helpful to reduce the tensions and also will be helpful in developing states and reducing corruption. The study has indicated a high correlation between economic prosperity and social progress, So now the governments in most of northern zones have a golden opportunity to set these zones into a high trajectory of growth and social progress because India cannot come forward firmly so long as the big zones of northern India like Uttar Pradesh and Rajasthan continued to be lagging behind.

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