UNIT 13 REGIONAL DISPARITY IN INDIA

Structure

13.0 OBJECTIVES

After going through this unit, you will be able to:

- state the meaning of regional disparity;
- discuss the basic theoretical framework relating to regional disparity;
- analyse the regional disparity in terms of macro economic aggregates like growth rate, per capita GDP, sectoral contribution in GDP, etc.;
- examine the regional disparity in agriculture;
- identify regional disparity in infrastructural development; and
- review the regional disparity in human development.

13.1 INTRODUCTION

In India the inter-state/regional disparity has been a major challenge for planers and policy makers. Despite plethora of development programmes regional disparity persist over time. 'There has been a huge gap between active and vibrant region

and hinterland during the pre-independence period in terms of availability of facilities. This itself manifests unequal level of development. During successive five year plan period, the regional disparity has been on rise. In India not much theoretical work has been done relating to regional disparity. But many empirical works have been done by researchers on development questions. Prof. Mathur (1987) explains the regional disparity in terms of regional growth. Most of the empirical studies relating to regional disparity in income and consumption reflects a growing trend of disparity. Das and Barua (1996) opined that Indian economy continues to grow at the cost of widening regional inequality. Dreze and Sen (1995) opined that there has been a wide variation in regional development resulting remarkable internal diversities. Dutt and Ravallion expressed their view that long term progress in rising rural living has been diversed across Indian states. Likewise the National Human Development Report, 2001 reveals a considerable differences in human development across Indian states during 1981-2001. The report reveals that the human development index of the states like Bihar, UP, MP, Rajsthan and Orissa has extremely low. In this background, this unit examines the regional disparity in India. Here we shall discuss the regional disparity in terms of macroeconomic aggregates, infrastructural development, agricultural development, industrial development and human development.

13.2 REGIONAL DISPARITY: CONCEPT AND THEORY

The term '**disparity'** is very frequently used in the arena of social science research. This term has evolved from Latin word 'disparitas' which means 'divided'. Hence the term disparity literally means inequality or disproportion in particular phenomena. The American Heritage® Dictionary defined disparity as inequality or difference, as in age, rank, wages, etc. The regional disparity means the disproportionate performance of inter or intra geographic region or sectors in different economic and non-economic indicators.

Regional disparity refers to a situation where different indicators such as per capita income, consumption level, food availability, agricultural and industrial development, infrastructural development are not similar among regions. The problems of regional development is mostly universal in nature except its intensity differs in different countries (developed/developing). Almost all countries face the regional disparity during their process of development.

Sharp differences are observed in the theoretical analysis of regional disparity. There is general agreement for an inverted U-shapes curve of regional disparities with growth. The development theories put forwarded by the regional experts like Simon Kuznets (1963), Hirschman (1958), Mera (1965), opined for a regional disparity during the socio-political development and modernisation. According to these theories, urban primacy, socio-spatial and individual inequalities increase during the initial period of development, but this will reduce over time with the advanced stage of development. Myrdal and Hirschman come up with the backwash effect vs. spread effect and polarisation vis-à-vis trickled down effect. Myrdal concept of multiplier-accelerator mechanism produce increasing returns in favoured region. Appearance of development difference creates a chain of cumulative expansion in favoured region. Myrdal defines this as a backwash effect, on other region and a development differences persist. In the context of backwash effect, policies must be designed to reduce the backwash effect (what Hirschman called

polarisation effect of interregional development. He coined for a good policy framework that strengthen trickledown effect. The trickled down effect favours the development of backward region. Myrdal called such effect as spread effect. The tricked down effect or spread effect consists of the increased demand of backward area products and the diffusion of technology and knowledge. Myrdal (1957) argues that the backwash effect is weaker than spread effect and if the backwash effect is to be narrowed, the state comes up with effective regional policies. Lloyd (1990) also supported this view. Hence the difference increases over time unless countervailing measures are taken to reduce the problem. Adelman and Morris (1973) analysing the data taken from 74 underdeveloped countries during the period 1957-68 found that there was a asymmetrically U shaped relationship between the level of economic development and income share of poorest 60 per cent of population. The study by Elizondo and Krugman (1992) explains that the inter regional inequality tend to decrease as the economy move from the restrictive trade to open trade. However, one cannot deny the usefulness of these theories in understanding regional disparity. Their applicability to reduce regional disparity depends upon the objectives of a particular nation (Rajasekhar et.al 2004)

The bulk of new theoretical literature on growth and inequality has focused on models which generates divergence across nations. Many theoretical and empirical presentation by Barro, Robert J. (1990, 1991, 1999), Borro, Robert J. and Jong-Wha Lee (1994), Barro, Robert J., N. Gregory Mankiw, and Xavier Sala-i-Martin (1991, 1992a, 1992b, 1992c, 1997, 2007), Baumol (1986), Cashin (1995), Cashin and Sahay (1996), Delong (1988), Dowrick and Nguyen (1989), Easterlin (1960a, 1960b), Quah (1993, 1995, 1996a, 1996b) etc. deal with process of convergence/divergence at national as well as international level.

13.3 REGIONAL DISPARITY AND DOMESTIC PRODUCT

During last six decades Indian economy has been growing at an annual growth rate of about 5.08 per cent. From time to time the growth has been fluctuating. The structural share of Gross Domestic Product itself shows a wide variation over time.

Some of the sub-sectors have exhibited very wide variations in the annual growth rates. Among these, agriculture and allied activities is generally subject to considerable fluctuations. Mining and Quarrying also falls in the same category. Manufacturing is normally more steady. Growth in service sector, on the contrary, has shown a continuous rise.

From the perspective of distribution of national product, it is more useful to analyse data relating to trends in per capita net state domestic product. The relevant data is summarised in Table 13.1 below. The data reflects trend of gap in per capita income in different time period in India as well as the income gap between India and other states and among different states.

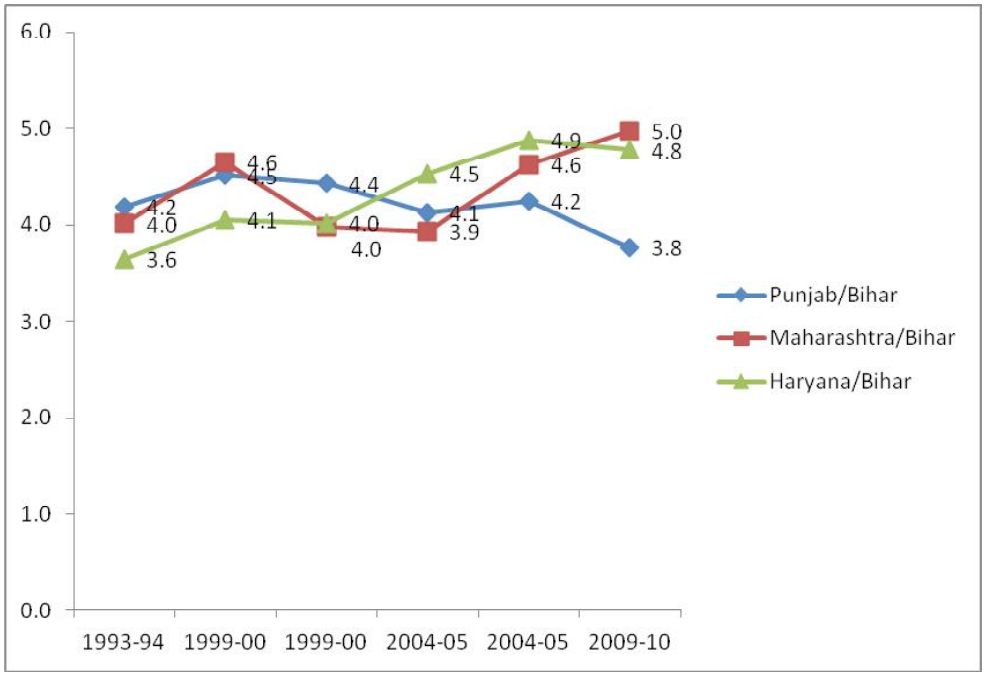
Table 13.1: Per capita net State Domestic Product and its growth rate

	(Base: 1993-94)			(Base : 1999-2000)			(Base: 2004-05)		
State / Union Territory	**1993-94**	**1999-00**	**Growth**	**1999-00**	**2004-05**	**Growth**	**2004-05**	**2009-10**	**Growth**
Andhra Pradesh	7416	9445	4.1	15427	19963	5.3	25321	36345	7.5
Arunachal Pradesh	8733	8890	0.3	13990	19339	6.7	27271	39679	7.8
Assam	5715	5785	0.2	12282	13946	2.6	16782	20279	3.9
Bihar	3037	3282	1.3	5786	6772	3.2	7759	11558	8.3
Jharkhand	5897	7238	3.5	11549	12869	2.2	18512	22780	4.2
Gujarat	9796	13298	5.2	18864	23346	4.4	32021	49030	8.9
Haryana	11079	13308	3.1	23222	30690	5.7	37842	55214	7.8
Himachal Pradesh	7870	11051	5.8	20806	26244	4.8	32564	40690	4.6
Jammu & Kashmir	6543	7384	2.0	13816	15414	2.2	21314	26739	4.6
Karnataka	7838	10912	5.7	17502	19840	2.5	26745	37464	7.0
Kerala	7983	10430	4.6	19461	25122	5.2	31871	46511	7.9
Madhya Pradesh	6584	8248	3.8	12384	12032	–0.6	15442	19736	5.0
Chhattisgarh	6539	6692	0.4	11629	14070	3.9	18559	25835	6.8
Maharashtra	12183	15257	3.8	23011	26603	2.9	35915	57458	9.9
Orissa	4896	5742	2.7	10622	13311	4.6	17380	24098	6.8
Punjab	12710	14809	2.6	25631	27905	1.7	32948	43539	5.7
Rajasthan	6182	8555	5.6	13619	14908	1.8	18565	23669	5.0
Tamil Nadu	8955	12167	5.2	19432	22975	3.4	30105	46823	9.2
Uttar Pradesh	5066	5675	1.9	9749	10421	1.3	12840	16182	4.7
Uttarakhand	6896	7256	0.9	13516	19524	7.6	24740	41126	10.7
West Bengal	6756	9320	5.5	15888	19367	4.0	22654	30504	6.1
Delhi	18166	24003	4.8	38913	45157	3.0	61560	89037	7.7
All India	7690	10071	4.6	15881	19331	4.0	24143	33731	6.9

Source: RBI

The per capita Net State Domestic Product increased from 24143 rupees to 33731 rupees during the time period 2004-05 to 2009-10 with a growth rate of 6.9 per cent. On the other hand, the growth rate of NSDP during 1993-94 to 1999-00 is only 4.6 per cent. The state having highest per capita NSDP is Rs. 89000 in Delhi followed by Maharashtra (Rs. 57458). The states that registered lowest growth rate are Bihar (Rs. 11558) and Uttar Pradesh (Rs. 16000). The rank of states in terms of per capita income shows the disparity among different states. The rank of Bihar in terms of PCI is the lowest in the period 1993-94, 1999-00 and 2009-10. Whereas the top rank in terms of per capita NSDP captured by Delhi in all the three periods of study.

Graph 13.1: Ratio of Per capita Net State Domestic Product of Bihar with Punjab, Maharashtra and Haryana.



Graph 13.1 shows the gap in per capita net state domestic product between the richer and poorer states. Here we have taken Bihar as a poorer state whereas Punjab, Maharashtra and Haryana are considered representing developed states. We have found out the ratio of NSDP of the three developed states with the representative backward state Bihar. The higher ratio indicates the higher disparity within the states. The graph clearly depicts that the ratio of Per capita NSDP between Maharashtra and Bihar is 5. This means that Bihar's per capita NSDP is one-fifth of Maharashtra. The same trend is observed in other two states also.

13.4 AGRICULTURAL DEVELOPMENT AND REGIONAL DISPARITY

As discussed above, the contribution of agricultural sector to the total GDP has been gradually decreasing over time. Agriculture's contribution reduced from 51.9 to 14.5 per cent during the period 1950-51 to 2009-10. During 2003-5, the agricultural sector contributed 21.3 per cent to GDP where as in 2001 it contributed 58 per cent of total work force. The statewise analysis shows that in the developed states like Punjab and Haryana, the contribution of agricultural sector to GDP is high and the labour force participation in agriculture is comparatively low.

Table 13.2: Share of agriculture to SGDP and total workforce in India and States.

	Share of Agriculture in GDP (per cent) of 1993/94 Prices		Share of Agriculture in Total Workforce (per cent)	
	1981/83	2003/05	1981	2001
Bihar	43.6	30.7	79.1	77.6
Uttar Pradesh	44.4	30.4	74.5	69.2
Orissa	44.8	23.6	74.7	68.1
Rajasthan	43.7	24.9	68.9	67.8
West Bengal	27.3	21.6	55.0	47.7
Madhya Pradesh	36.4	24.4	76.2	75.5
Karnataka	40.0	17.3	65.0	58.1
Kerala	31.2	12.7	41.3	23.7
Tamilnadu	23.8	12.9	60.9	52.1
Himachal Pradesh	31.1	17.8	70.8	69.7
Andhra Pradesh	38.4	23.5	69.5	65.2
Gujarat	36.3	16.2	60.1	52.7
Maharashtra	22.3	10.5	61.8	56.5
Haryana	47.9	27.8	60.8	52.6
Punjab	48.6	36.9	58.0	40.4
India (15 states)	37.2	21.3	66.5	58.2

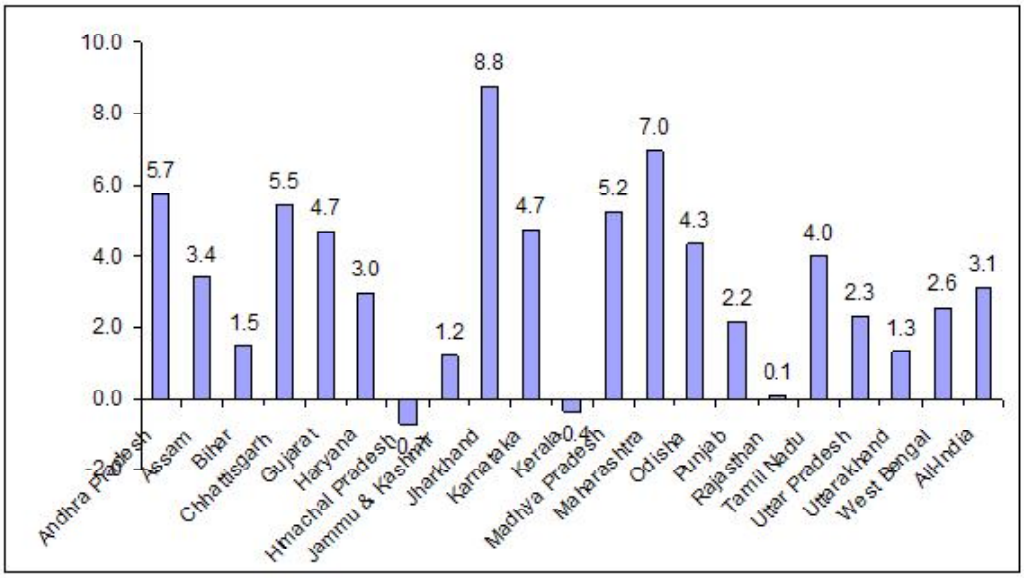
* Compiled from Census of India 1981 and 2001

Source: Calculated from CSO data downloaded from '*mospi.nic.in/*'

Table 13.2 presents the contribution of agricultural sector to total GSDP of each of the important states. The contribution of agricultural sector in 1980-81 is 35.7 per cent which reduced to 15.6 in 2008-09. The state level picture also show the same declining trend in the contribution of agricultural sector. In the year 1980-81, the proportion of agricultural sector to Indian GDP was 37.2 per cent. The states getting highest and second highest share in the year 1990 are the Odisha (54.59 per cent) and Bihar (52.45 per cent). On the other hand in the developed states like Maharashtra, Tamil Nadu and West Bengal, the contribution of agriculture has declined. The contribution of Tamil Nadu is less than one half of the contribution of Odisha. On the other hand, the contribution of West Bengal is more than two third of Bihar. In the year 2008-09, the contribution of agricultural sector in India declined to 15.6 per cent. This means there was a 20.2 per centage point decline. The states experiencing low contribution to primary sector includes Tamil Nadu (10 per cent) and Maharashtra (13.35 per cent) which shows a decline of 14.25 and 12.18 per centage points respectively. Bihar marked a 26.71 per centage point decline.

Graph 13.2 explains the growth rate of Domestic product from agriculture from 2004-05 to 2009-10. The growth rate of agriculture in India is 3.1 per cent. Among the states the highest growth rate is marked by Jharkhand, followed by Maharashtra. On the other hand, Kerala and Himachal Pradesh show a negative growth rate.

Graph 13.2: Growth rate of domestic product from agriculture, 2004-2010.



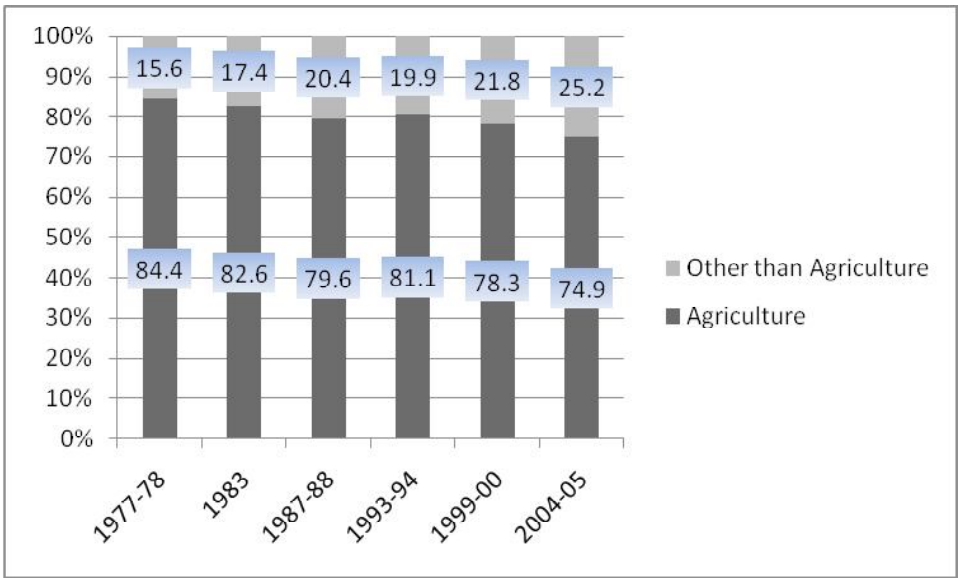
A sectoral disaggregation of the workforce shows that the share of agricultural sector to the total workforce has declined but at a very low pace. As expected, there has been a decline in the share of workforce in agriculture from 84.4 per cent to 74.85 per cent between 1978-79 to 2004-05. During this period, the dependence of workforce declined by 9.55 per centage point whereas the contribution of agricultural sector has declined by 19.1 per centage point. Table 13.3 shows the statewise contribution of farm sector to total employment. At all India level, the contribution of farm sector declined from 81.4 per cent to 67.9 per cent between 1983 to 2009-10. In 2009-10, among the major states Chattisgarh and Madhya Pradesh contributed the highest proportion of farm employment, whereas in the states like Kerala and West Bengal, the share of farm sector in employment was 35.7 per cent and 56.3 per cent respectively to the total employment.

Table 13.3: State-wise share of farm sector in rural employment.

State	1983	1993-94	2004-05	2009-10	Point Change (1983-2009)
Andhra Pradesh	80.0	77.3	71.7	68.7	11.3
Assam	79.0	78.7	74.2	70.5	8.5
Bihar	84.4	83.1	77.9	66.9	17.5
Chhattisgarh	93.0	90.6	86.1	84.9	8.1
Gujarat	84.8	79.3	77.2	78.3	6.5
Haryana	76.9	71.4	64.0	59.8	17.1
Himachal Pradesh	87.1	77.2	69.4	62.9	24.2
Jammu & Kashmir	79.7	72.0	63.8	59.7	20.0
Jharkhand	81.4	76.1	69.9	54.8	26.6
Karnataka	84.3	81.7	80.9	75.7	8.6
Kerala	62.8	57.7	42.0	35.7	27.1
Madhya Pradesh	89.0	86.2	82.5	82.4	6.6
Maharashtra	85.7	79.7	79.9	79.4	6.3
Odisha	79.1	78.1	69.0	67.6	11.5
Punjab	82.2	77.3	66.8	61.8	20.4
Rajasthan	86.5	80.8	72.8	63.3	23.2
Tamil Nadu	74.4	68.7	65.3	63.7	10.7
Uttar Pradesh	82.1	79.3	72.6	66.9	15.2
Uttarakhand	81.9	65.1	78.2	69.5	12.4
West Bengal	73.6	73.1	62.7	56.3	17.3
All India	81.4	78.3	72.6	67.9	13.5

Source: Calculated from NSSO unit level data (38th, 50th, 61st and 66th rounds) given in Anjani Kumar et.al (2011).

Graph 13.3: Per centage distribution of workers.



Source: NSS reports 531;Employment unemployment situation in India.

The labour productivity in agriculture has been growing very slowly. A recent study on the subject shows that between 1965-68 to 2003-06, the triennium growth of labour productivity was just 1.07 per cent. This is the reason why we find a wide gap between the GDP per worker in agriculture and non-agricultural sector. The slow growth is largely due to the following factors: (i) the impact of green revolution was limited to a very few states and (ii) the process of diversification of labour from agriculture to non-agriculture has barely started. The growth rate of workers' productivity as can be expected, in the year 2003-06, is highest in Punjab (Rs. 34255) followed by Haryana (Rs. 15447). The states having lower productivity in agriculture are Bihar (Rs. 1749), Himachal Pradesh (Rs. 2584), Madhya Pradesh (Rs. 5196) and Maharashtra (Rs. 5781). It is interesting to note that in the year 2003-06, agricultural worker productivity in Punjab, was twenty times higher than that in Bihar (Rs. 1749). Between 1962-65 to 2003-06, the overall growth rate of agricultural worker in terms of their productivity has been only 0.3 per cent.

In short, agricultural performance has varied among different states, accounting partially though significantly, for prevalent wide disparities in income among different states.

Check Your Progress 1

1) State the concept of Regional Disparity.

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2) What is backwash effect vs. spread effect?

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3) List the name of researchers who have done empirical work on regional disparity in Indian context.

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4) Name the state which has ranked lowest in growth rate.

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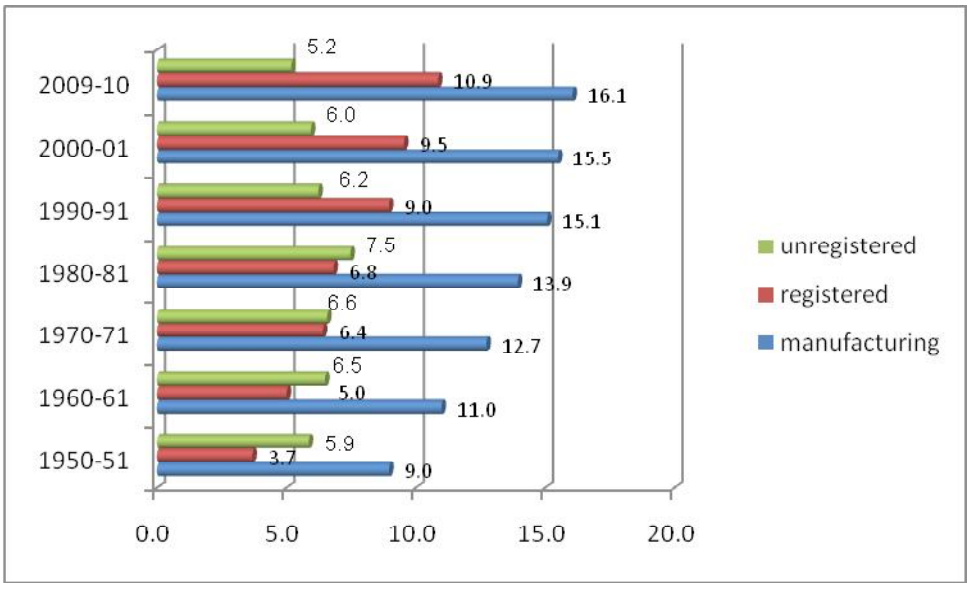
13.5 INDUSTRIAL DEVELOPMENT AND REGIONAL DISPARITY

Like other developing countries, industrial concentration is observed in some of the pockets of India. Keeping this in view, Government of India has adopted a plethora of measures to achieve a balanced regional development. The policies are guided by industrialisation mixed with highly regulated policies with many industries reserved for public sector. After opening up of the economy with minimum role of the state in industrial growth and development, it has been argued that the industries have concentrated in the economically advanced states due to their comparative advantages in social and economic infrastructure. This argument has been supported by other country level studies.

Graph 13.4: Share of manufacturing (registered and unregistered) to total GDP in India.



Source: www.mospi.gov.in

Notwithstanding various policies to address regional disparities in industrial development, the issue of balanced regional industrial development still remains in India. The share of manufacturing in the Gross State Domestic Product (GSDP) varies widely among the Indian states. The share of manufacturing industry in India increased from 15.4 per cent in 2004-05 to 16.1 per cent in 2009-10. The share of manufacturing in total GSDP in major states ranges between 5.6 per cent in Bihar to 33.7 per cent in Jharkhand in the year 2004-05. The industrially developed states like Gujarat and Maharashtra also showsd a higher contribution of manufacturing in total GSDP of the state as a whole. In the year 2009-10, the contribution of manufacturing to GSDP in Jharkhand has reduced to 19.2 per cent during the two time periods. The contribution of Bihar and Gujarat was again the lowest and highest respectively among the major states in India. The industrial activity among the states depends on the registered and unregistered status of the manufacturing status of industry. At all-India level, the ratio of registered and unregistered manufacturing was 67.7:32.3. The share of registered sector marginally increased from 64.5 per cent to 67.7 per cent in total manufacturing. When we compare the share of registered sector among the states, we observed that the contribution of registered part is higher in most of the states. In states like Bihar (39.4 per cent), Jammu and Kashmir (37.4 per cent), Kerala (44.1 per cent), the contribution of registered manufacturing is lower then their unregistered counterpart. Within the registered sector, the share of registered manufacturing in Chattisgarh and Orissa is higher.

The share of unregistered part in India has declined from 35.5 per cent to 32.3 per cent during 2004-05 to 2009-10. Among the states in the year 2009-10, the three newly created states Chattisgarh, Uttarakhand and Jharkhand contribute higher as compared to other states. Orissa has also contributed low to the unregistered manufacturing.

The growth rate of Industry has been 10.3 per cent between 2004-05 to 2009-10. The highest growth rate is marked by Bihar (15.1 per cent) and Uttarakhand (15.9 per cent). Jharkhand (–1.1 per cent) and Assam (0.5 per cent) show a lower growth rate.

The same conclusions are brought out when we analyse the trend in share of service sector in GSDP of different states, as shown in Table 13.4 below.

Table 13.4: Share of services in total GSDP (per cent) at 1993-94 prices.

Major States	1980-81	1990-91	2000-01	2008-09
1. Andhra Pradesh	39.26	41.71	46.54	51.25
2. Bihar (+)	28.02	31.95	39.6(43.39)	45.41(51.28)
3. Gujarat*	33.22	37.34	44.18	44.38
4. Haryana**	25.39	29.81	40.18	46.43
5. Karnataka	31.59	39.17	46.13	54.53
6. Kerala*	40.92	50.35	56.09	60.73
7. Madhya Pradesh (+)	27.99	33.36	39.82(40.55)	38.22(39.71)
8. Maharashtra*	39.94	43.86	53.36	57.20
9. Orissa	27.16	34.76	43.38	45.07
10. Punjab	36.18	33.48	36.92	41.27
11. Rajasthan	33.94	35.12	41.15	41.90
12. Tamil Nadu	36.73	39.98	47.93	57.10
13. Uttar Pradesh (+)	33.94	37.90	40.30(40.34)	42.00(42.44)
14. West Bengal*	40.38	43.38	49.35	53.50
India	36.60	40.60	46.90	59.30

Source: www.mospi.gov.in as quoted in *Papola et.al (2011).*

Table 13.4 shows the share of service sector to total GSDP in 14 major states and India. The contribution of service sector increased from 36.60 per cent to 57.30 per cent between 1980-81 to 2008-09. This means there is a marked 20 per centage point increase in the said period. In the year 1980-81 West Bengal shows a highest share in service sector (40.38 per cent) and Haryana shows a lowest share in service sector. In 2008-09, Kerala and Maharashtra shows a high share of service sector to total GSDP. In the same year, Punjab and Rajasthan shows a lowest share. The per centage point change among states between 1980-81 to 2008-09 shows that Karnataka and Haryana shows highest change 22.94 and 21.04 respectively whereas Punjab and Rajasthan show a low change in share of service sector (5.09 and 7.96 respectively). In short, the States like Bihar, Gujarat, Haryana, Kerala, Maharashtra, Orissa, Tamil Nadu and Uttarakhand show higher growth rate as compared to all India figure. On the other hand the States like Andhra Pradesh, Assam, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Punjab, Rajasthan, Uttar Pradesh and West Bengal show low growth rate as compared to All India figure. The states Jammu & Kashmir (7.3 per cent) and Uttarakhand (15.9 per cent) show the lowest and highest growth rate respectively among states during the said period.

13.6 INFRASTRUCTURAL DEVELOPMENT AND REGIONAL DISPARITY

The importance of infrastructure in economic development, trade, employment and in reducing disparity within the country/region has been acknowledged by many scholars (Iqbal and Suleman 2010; Siddiqui and Hussain 2010; Sarkar 2009; Hangaragi 2008; Narendra and Aneja 2008; Kundu 1999). As learnt in Unit 4, availability of adequate infrastructure especially the physical infrastructure facilities is the pre-condition for sustainable economic and social development. Non-availability or inadequate availability of infrastructure poses a serious threat to growth. We shall examine the prevalent situation in regard to available infrastructure in different states of the country.

13.6.1 Social Infrastructure

The social infrastructure broadly includes health, education and sanitation. The indicators used to access the availability of education infrastructure in India are number of elementary schools (primary schools and upper primary schools) across states. These indicators are converted on per 10,000 population basis to facilitate comparison among states.

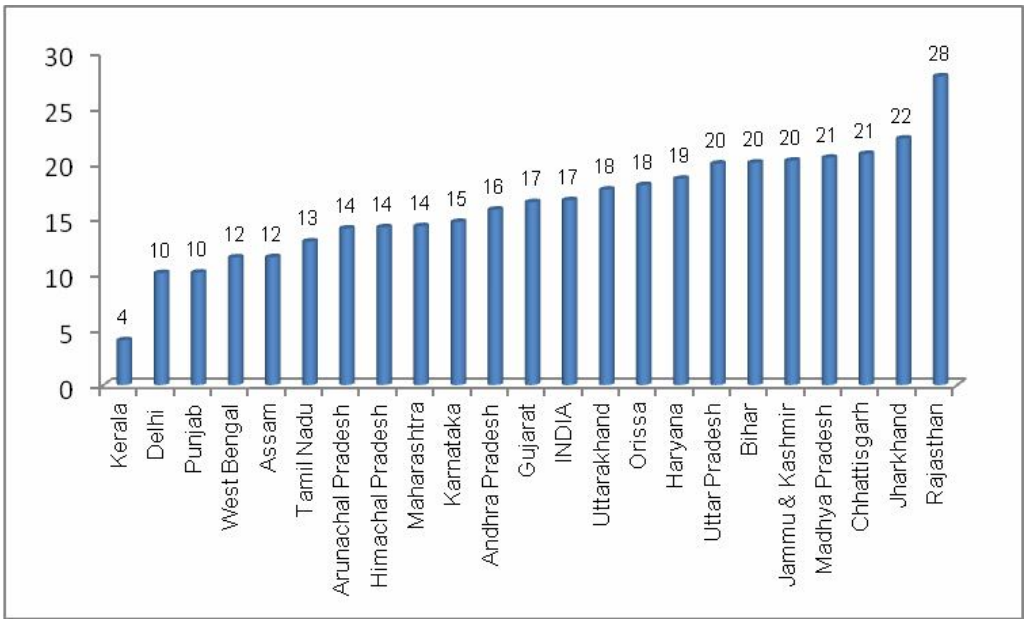
Education

It is well recognised that the literacy of any region or area has a positive relation to the overall development. It enables people to access new opportunities to participate in society in different ways. The census data shows that the literacy rate increased from 18.3 per cent in 1951 to 74.04 in 2011. However, there are wide inter-state and intra-state disparities among different states. Likewise, the male-female gap in literacy is high in India.

Regional disparity can also be observed from the gap in literacy level in different states in India. The gap is worked out by deducting the female literacy rate from male literacy rate form 2011 literacy data set. Graph 1.6 reflects the statewise literacy gap by gender. A clear pattern emerging from the graph is that the developed states like Kerala, Delhi, Punjab registered a low gender gap in literacy rate whereas the low developed states like Rajasthan, Jharkhand, Chattisgarh registered

a high gender literacy gap. Among the major states, Rajasthan shows a high gap in literacy rate (28 per centage point) and Kerala (4 per centage point) registered a low literacy gap between male and female.

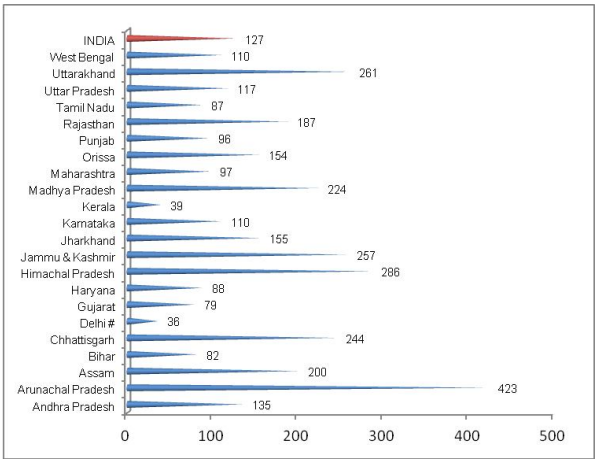
Graph 13.6: Gap in male-female literacy rate (Per centage point change), 2011.



Source: Census of India, 2011 downloaded from http://www.censusindia.gov.in/2011-prov-results.

The education infrastructure plays an important role in the literacy rate of a particular region. The supply side factor, like the availability of school, good condition building, adequate number of teachers, facility like toilet, drinking water are the major determinants of the quality of education within a region. Graph 1.7 shows the number of elementary schools (primary and secondary) per lakh population in 2009-10 (provisional). The number of elementary schools per lakh population in India is 127. Arunachal Pradesh (423), Himachal Pradesh (283), and Jammu and Kashmir (253) registered a high number of Elementary school per lakh population. On the other hand Bihar, Kerala and Delhi registered a low number of elementary schools per lakh population.

Graph 13.7: Number of primary and upper primary school per lakh population, 2009-10 (provisional).



Source: DISE database downloaded from www.**dise**.in

Note: Total number of school is pertaining to all school upto upper primary level both government and private and for the year 2009-10.

The regional disparity in education can also judged from some other cherecteristics like per centage of single class room school, per centage of single teacher school. In India 6 per cent elementary schools have only a single class room. Among the states Andhra Pradesh and Arunachal Pradesh registered a high proportion of single room schools whereas Kerala, Delhi, Haryana, Chattisgarh show a low proportion of school with single class room. The other important indicator is the single teacher school. In India 9.3 per cent of schools have only a single teacher. Among the states, Arunachal Pradesh and Rajasthan registered a high single teacher schools. Kerala and Gujarat have low proportion of single teacher schools in the year 2009-10.

Some of the basic facilities in schools also influence the educational development. These facilities include toilet facility, drinking water, girls toilet facility, condition of school building. In India only 45 per cent of schools are having toilet facility. West Bengal and Orissa have a high per centage of schools with common toilet facility. On the other hand in the states like Jharkhand, Arunachal Pradesh and Chhatisgarh, a low proportion of schools are having common toilet facility.

One of the important indicators of education is the pupil-teacher ratio (PTR). The higher the PTR, the lower the quality of education imparted to children. In India 3.5 per cent schools are having PTR greater than 100. The backward states like Bihar (14.8 per cent) and Uttar Pradesh (8.9 per cent) have a large proportion of schools with a >100 PTR. The quality of school building is an important indicator to analyse the school infrastructure. In India 73.5 per cent of elementary schools are running in pucca school building. Rajasthan and Utarakhand have a high proportion of schools with puuca school building. Arunachal, West Bengal and Orissa show a low proportion of schools with pucca school building. 11 per cent of schools do not have any school building. The states like Chhattisgarh, Andhra Pradesh, Bihar, Jharkhand and West Bengal show a high proportion of schools without a school building.

To sum up, the above brief review helps to bring out that (i) the existing social infrastructure in India is weak and inadequate, and (ii) wide dipartites prevail between different states.

13.6.2 Physical Infrastructure

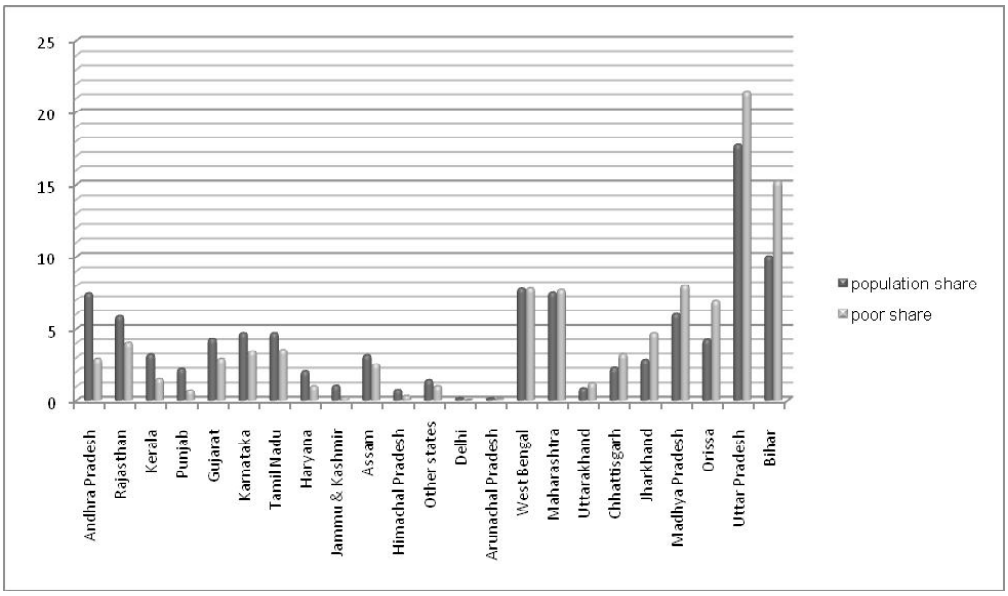
The physical infrastructure includes transport, communication, electricity etc. As observed earlier in Unit 4, India suffers from inadequate availability of physical infrastructure, as measured by any accepted indicator. Not only is infrastructure inadequate and weak, it varies from state to state, and even within each state from district to district.

The per capita consumption of electricity is one of the important indicators of development. The per capita electricity consumption for India was 778.71 kwh, which is quite low when compared with many countries like Canada 17053 kwh China 2471 kwh, USA 13647 kwh. The per capita electricity consumption for the world is 2,782 kwh. The per capita electricity consumption by states, shows a huge disparity between the various states. The developed states like Delhi, Gujarat and Punjab show the highest per capita consumption of electricity. The states like Bihar reflects one seventh part of per capita consumption of electricity of all India average and one fifteenth part of consumption of Punjab.

The household level data on consumption of electricity in rural India shows that 55 per cent of household in India have the access to electricity having the rural

and urban average as 43.5 and 83.5 respectively. The state having lowest per centage of households having access to electricity are Bihar (5.13 per cent), Jharkhand (9.99 per cent), Uttar Pradesh (19 per cent) in rural area. On the other hand the states like Himachal Pradesh (94.48 per cent) and Madhya Pradesh (92.76 per cent) have highest per centage of households having access to electricity (Census of India, 2001).

Graph 13.8: State-wise square of population and poor population



Note: The population share is calculated from Census of India 2001 and the share of poor is calculated from NSS consumption expenditure, 2004-05.

Graph 13.8 shows the share of the state population to total population and share of state's poor population in to total poor population in India. This clearly indicates that the backward states have a higher proportion of poor as comparison to share of total population. Bihar and Uttar Pradesh consists of 10.01 and 17.73 per cent of all India population respectively whereas these two states absorb 15.2 and 21.4 per cent of all India poor. Contrary to this, Andhra Pradesh which absorb 7.5 per cent of total population, but contributes to 2.9 per cent of all India poor in rural areas.

Talking of the disparity in HDI, Kreala maintained the first place in the three round of HDI rank with the value of 0.500, 0.591 and 0.631 in three survey period respectively. On the other hand, Bihar maintained the last position bearing the index value of 0.237, 0.308, 0.367 in the three said period respectively. When we compare the three surveys, Rajasthan shows some improvement during the three period i.e. it reduced from 12th rank in 1981 to 11th in 1991 to 9th in 2001. Again Assam witnessed a decreasing position in HDI. Its rank increased from 10th in 1981 to 14th in 2001 among 15 states under study. Four states i.e. Bihar (15th rank), Kerala (1st rank), Punjab (2nd rank), and West Bengal (8th rank) stood in identical position in three study periods (Table 13.5).

Table 13.5: Statewise value and rank of human development index, 1998-2001.

States	1981		1991		2001	
	HDI	Rank	HDI	Rank	HDI	Rank
Andhra Pradesh	0.298	9	0.377	9	0.416	10
Assam	0.272	10	0.348	10	0.386	14
Bihar	0.237	15	0.308	15	0.367	15
Gujarat	0.360	4	0.431	6	0.479	6
Haryana	0.360	4	0.443	5	0.509	5
Karnataka	0.346	6	0.412	7	0.478	7
Kerala	0.500	1	0.591	1	0.638	1
Madhya Pradesh	0.245	14	0.328	13	0.394	12
Maharashtra	0.363	3	0.452	4	0.523	4
Orissa	0.267	11	0.345	12	0.404	11
Punjab	0.411	2	0.475	2	0.537	2
Rajasthan	0.256	12	0.347	11	0.424	9
Tamil Nadu	0.343	7	0.466	3	0.531	3
Uttar Pradesh	0.255	13	0.314	14	0.388	13
West Bengal	0.305	8	0.404	8	0.472	8

Source: Planning Commission (2002) National Human Development Report2001, Government of India, New Delhi.

13.7 CAUSES OF REGIONAL DISPARITIES

In India like in other developing countries, regional disparities date back primarily to the colonial rule. At that time, the areas lying farther away from the sea coast, began to fall behind those close to it, though the differences in the state of development were also influenced by other factors which cannot be attributed to the colonial period alone. The important factors are summarised below:

1) Disparities in per capita income can be explained in terms of the economic sector thesis of Colin Clark; it maintains that the levels of income are higher in those regions where a larger proportion of working population is engaged in manufacturing and tertiary sectors. Per capita income has tended to be higher in those States where a larger proportion of population is engaged in tertiary occupations.

2) Location pattern of industrial growth in the past had been influenced by the early pattern of railway construction. These centres of industrial location, therefore, in conformity with Gunnar Myrdal's thesis, have attracted a considerable portion of industrialisation towards themselves because of conglomeration economies.

3) Historically, the developed states have had relatively more efficient systems of governance in terms of skills, responsiveness and quality of delivery systems. Unlike capital – which is highly mobile across regions and continents – good governance cannot be transplanted in an area, as it evolves basically within the prevailing socio-political structure over a long period. An outmoded social structure can never bring about or sustain good governance in the modern sense. On the contrary, it can frustrate exogenous attempts at good governance by its debilitating and corrupting influence.

4) A related historical factor has been the development of infrastructure. The better developed regions owe it to their inbuilt infrastructure dating back to the time when they were still princely states. In other regions, the princely states did not pay much attention to the development, priding themselves on being messengers of God or something believing they were born to rule.

5) Similarly, in more recent times, there has been substantial decline in the government's budgetary support for financing infrastructure. Developed states and, especially large cities and towns have been the major destinations for domestic institutional funds as well as external assistance.

6) Operations of the term-lending institutions as also the commercial banks have also shown a distinct tendency towards concentration of investments in the relatively more developed States. Subsidised lending by banks for financing priority credit and refinancing facilities given by financial institutions have helped the richer states to gain greater access to investible funds at subsidised rates.

   Likewise, the approach of full cost recovery for urban basic services and the of strict financial discipline on state governments by the RBI has resulted in the further concentration of funds in the developed states and larger cities.

7) There exist glaring regional imbalance and disparity among different states in the country in the provision of educational and training facilities, specially the technical education.

8) Operations of the system of public finance in the country have also contributed to the creation and aggravation of inter-State disparities.

   - In the low income States, the level of public investment, infrastructural growth and standard of administrative services are lower compared to those in the high income States, thus perpetuating disparities.
   - The system of sales taxation enabled the richer states to export a significant portion of their tax burden to the residents of poor states.
   - Subsided lending to the states from the Central Government has led to regressive inter-governmental transfers.

9) With increasing globalisation, India has chosen a skill-intensive path to growth; wages for skilled labour are already being bid up. In this situation, it is necessary for firms to have scale to ensure the proper use of scarce skilled labour. But it is only in the fast-growing states that the environment and infrastructure exist for scale. This further identify disparities.

10) In the pre-reform period, the public sector had played a crucial role in maintaining regional equality by directing resources to backward areas. With a change in the focus of the public sector following the reforms, this process has become weaker.

The economic reforms gave greater freedom and impetus to the private sector and export-oriented production. These sectors, which were attempting to reduce costs and become competitive, were attracted to areas that were relatively more developed. As a result, investment and activity shifted to these areas, strengthening the forces of divergence.

In short, the richer states are rich because of higher infrastructure spending. A positive significant correlation is observed between infrastructure and real per capita gross state domestic product across states.

Check Your Progress 2

1) Name the states whose agriculture sectior's contribution in GSDP have declined since 1980-81.

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2) What are implications of relatively lower decline of agricultural sections contribution in total SDP.

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3) State whether regional disparities in industrial development have declined over a period of time.

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4) State the indicators of educational development.

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13.8 MEASURES TO REMOVE REGIONAL DISPARITIES

The various programmes undertaken to remove/reduce regional disparities can be identified as follows:

1) **Resource Transfers from the Centre to the States, Weighed in Favour of Backward States:** The resource transfers, take place via (a) the Planning Commission mainly in the form of plan transfers, and (b) the Finance Commission in the form of non-plan transfers. The location of Central projects and Centrally-sponsored schemes are determined in the planning process by

the Planning Commission in collaboration with the relevant wings of the Government.

A recent study on the subject suggests that the poorer states have been receiving proportionately larger amount of funds for developmental purpose relative to their rich counterparts.

2) **Priority given to Programmes which spread over the entire Area within the Shortest Possible Time:** Programmes of agriculture, community development, irrigation and power, transport and communications and social services have the widest coverage, and aim at providing basic facilities ands services to people in all the regions. Since, these programmes are included in the plans of States, it is largely through the shape given to State plans and the changes through which they pass in the course of the plan period that the benefits of development are carried to every part of the country.

3) **Provision of Facilities in Areas which Lag Behind Industrially:** River valley projects form the most important segment in the plans of several States and large investments have been made in multi-purpose projects. These and other projects are essential for the development of vast regions in the country, some of which suffer from scarcity or unemployment or are otherwise poorly developed. The implementation of agricultural production and community development programmes, and of education and health schemes also carries the benefits of development to the remotest areas.

4) **Programmes for the Expansion of Village and Small Industries:** Village and small industries are spread all over the country and various forms of assistance provided by the Central and State Governments are made available in the areas according to programmes undertaken. Industrial estates have been set up in all States, and increasingly, they are being located in smaller towns and rural areas.

5) **Diffusion of Industrial Activity:** In the location of public sector projects, the claims of relatively backward areas have been kept in view wherever this could be done without giving up essential technical and economic criteria. The location of several important projects has been determined on the basis of expert study and on economic considerations. But as they are situated in areas which were hitherto industrially backward, the latter will benefit.

   While in the selection of sites for basic capital and producer goods industries, proximity to raw materials and other economic considerations have naturally been important, it is felt that in a wide range of consumer goods and processing industries, it is possible to foster a regional pattern of development.

   To some extent, the development of new processes and new uses of raw materials have assisted in the spread of industry. To encourage such elements, care need to be taken to ensure that a balance is maintained in the regional spread of industrial activities.

6) **Schemes for Development of Backward Areas:** The present policy for the development of backward areas comprises a set of special schemes under which plan funds are provided over and above the funds allocated for general sectoral programmes. The special schemes can be classified as follows:

   - **Schemes focusing on areas with special features:** The Desert development programme, the Drought-Prone Area Programme, the

Command Area Development Programme, the Hill Area Development Projects and sub-plans, the North Eastern Council set-up, and the Tribal Area Sub-Plans and Tribal Development Agency projects).

- **Schemes focusing on target group:** Small farmers' development agencies and the special component plan for Scheduled Castes).
- **Schemes providing incentives and concessions** for particular activities in backward areas (concessional finance from financial institutions, tax relief, investment subsidy, transport subsidy and priority in raw material allocations and hire-purchase of machinery, for industries located in 246 backward district/areas, and relaxed viability and loan repayment terms for extensions of electricity by the Rural Electrification Corporation in backward areas).
- **Rashtriya Sam Vikas Yojana** has been launched in 150 districts. A Rs. 25,000 crore Backward States Grant Fund has been set up; the Fund will be operational for five years starting 2005-06.

13.8.1 Major Limitations

1) A great drawback of all schemes is that there is hardly any feedback about the actual physical progress of these schemes in the field. There is a widespread feeling that most of the plans are paper plans without techno-economic teeth and without a corresponding real action on the ground. Leakage of vast funds into the bureaucracy itself and/or the local oligarchy is also suspected.

2) Although the amounts of funds earmarked for area development schemes nominally appear to be large, the total development outlays per capita available to less-developed areas remain small in comparison with those in the more developed regions.

3) The effects of industrial and transport subsides remain unevaluated. But the scrappy evidence available suggests that subsidies have an inducement effect only if basic infrastructure is accessible.

4) There was no uniformity and consistency of norms for identification of backward areas from different States and Union Territories for either income tax concession or Central investment subsidy scheme and licensing. As a result, the existing procedures for selection of backward areas may have detracted from the potency of the provision in promoting the growth of regions and areas which were backward in all India perspective.

13.9 SUGGESTIONS FOR BALANCED REGIONAL DEVELOPOMENT

A recent study on the subject suggests following measures for balanced regional development:

1) Investment in agriculture needs to be stepped up especially in the lagging regions. The backward and forward linkages of agriculture in poorer regions need to be emphasised more. Investment in water harvesting, soil conservation, rural roads, warehouses, processing activities and promotion of high value crops should be emphasised. Since agricultural growth is found to be different in different regions, steps to equalise it will certainly reduce the regional imbalances.

2) Service sector has been found to be the new driver of the growth process, the banking and insurance sector and infrastructure have contributed to acceleration of growth in many states. There is a need to promote these sectors, on priority, in backward regions.

3) Improvement in basic infrastructure facilities like power, transport, telecommunication and irrigation in backward states is a precondition to improve the quality of life of people and to usher in sustainable development in them. Availability of assured power supply, developed transport system and modern telecommunication facilities are important factors to attract private investments in these states.

4) Devolution of financial Resources: The formulae according to which Centrally-collected resources are transferred to the States should be made steadily more progressive. In the formulae used by the Finance Commission and the Planning Commission for the distribution of the resources among the States, the main factors used are: (a) population, (b) tax collection, (c) some index of backwardness, and (d) outlays required for large irrigation and power projects or, for the upgrading of particular service. The emphasis on the population factors to which 70 to 90 per cent weight has been given in different formulae is understandable, but allocations in proportion to tax effort and the expenditure on big projects generally tend to be regressive in character. Tax collection and project formulation capabilities are systematically higher in States with a high per capita income. It is, therefore, desirable that these criteria be omitted altogether from all allocation formulae. Allocations need be made only in proportion to population and an appropriate index of backwardness.

5) Further, it need be pointed out that backward regions within states are not considered when Centre-State transfers are set. It is not the size of such transfers that affects poverty but more important is how such transfers are used. Hence, it is necessary that unit of resource allocation ought to be district rather than States, with highest priority to be given to the most backward districts. Instead of spreading the butter too thin by scattering funds and concessions all over the place, it could be more beneficial to concentrate on intensive resource deployment by identifying the priority investment areas on the basis of industrial backwardness.

6) Direct public sector investment by the Central Government in the states is likely to dry up gradually due to severe budget constraint of the Centre. Under such circumstances, important factor that influences the economic progress of a state is the quality of governance. A better administered state is more efficient in raising revenues and putting them to better use. There are the states, which will attract more investment both from domestic and foreign sources. Such states are also in a position to prepare viable projects and successfully bid central assistance or external funding. Hence, governance needs to be given immediate attention, especially in the backward states.

7) In the coming years, a key factor affecting choice of location in investment decision-making will be environmental policies of states. Global rules and agreements are creating demand for a coherent set of policies related to the environment, particularly for the extractive industries such as oil and metals. The states need to pay more attention to this aspect.

Ultimately, the key to balanced regional development lies not merely in increasing resource flows to backward regions but in creating an enabling environment to attract more resources, using them properly and assuring a fair deal to investors. The overall investment climate and governance need to be upgraded.

13.10 CONVERGENCE THEOREM

The Convergence Theorem postulates that when the growth rate of an economy accelerates, initially some regions with better resources would grow faster than others. But after sometime, when the law of diminishing marginal return sets in, first growth rates would converge, due to differential marginal productivity of capital (higher in poorer regions and lower in richer regions), and this in turn would bridge the gaps in the level of income across regions.

However, in India, as brought out above, there is no evidence of convergence so far.

Check Your Progress 3

1) List the causes of regional disparities in terms of Colin Clark's thesis.

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2) State the role of term landing institutions in narrowing down the regional disparities.

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3) Which steps have been taken by Govt. of India towards removing regional disparities.

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13.11 LET US SUM UP

Regional disparity in India has been a major challenge for planners and policy makers.

Despite a number of development programmes overtime, regional disparities have persisted. Regional disparities are observed in growth rates, per capita SDP, per capita consumption expenditure, sectoral contribution to GSDP, agricultural development, Industrial development, infrastructural development and also in human

development. The important factors responsible for regional disparities are: variation in the occupational structure of workers, historical factors like variation in infrastructure development, decline in budgeting support for financing infrastructure, financial institutions, provision of education and training facilities etc. various programmes have been launched towards removal of regional disparities. However, all these schemes and programmes have suffered from several limitations and a lot need to be done for ensuring balanced regional development.

13.12 KEY WORDS

Regional Disparity : means divergence or inequality of characters, phenomena or processes having specific territorial allocation (can be allocated in defined territorial structure) and occurring at least in two entities of the territorial structure'.

Backwash Effect and Spread Effect : Once economic and social forces occur in favoured region development produce a state of disequlibrium. According to Myrdal once an economy obtains a growth advantage it will tend to keep it. The cumulative movements of labour, capital, and trade which tend to economically weaken region were termed backwash effects. The benefit of trade will accrue to the host region. The spread effect or positive externalities is that such a new growth stimulus might induce other region, such as increased demand for backward areas product, diffusion of technology and knowledge. However, the spread effects are weaker than backwash effect, and interregional differences remain widen.

The Coefficient of Variation (CV) : is a method of measuring intrinsic variation in a population and is found out by dividing standard deviation by its mean and this is explained in per centage terms. A higher per centage value of CV refers to higher variation within the group and vis-à-versa.

GDP and NDP: Gross domestic product (GDP) refers to the market value of all final goods and services produced within a country in a given period. The net domestic product (NDP) equals the gross domestic product (GDP) minus depreciation on a country's capital goods.

The Credit-Deposit Ratio : is one of the most widely used banking indicators for analysing the role of banks in promoting productive sectors and contributing to economic growth. In a bank-based financial system, the CD ratio assumes greater significance as an aggregative measure for

gauging the effectiveness of credit delivery system. Higher the CD ratio implies for greater credit orientation of banks.

Human Development Index : The Human Development Index (HDI) is a composite statistic used to rank countries by level of "human development", taken as a synonym of the older term standard of living. This is a comparative measure of life expectancy, literacy, education and standards of living.

13.13 EXERCISES

1) In the context of regional disparity, what do you mean by multiplier-accelerator mechanism? How will you examine the regional disparities of a country?

2) What do you mean by the term regional disparity? Examine the sectoral disparities in India.

3) Empirically examine the role of infrastructural development in explaining the regional imbalances in India.

4) Critically evaluate the various steps taken by Govt. of India towards removal of regional disparities. Which suggestions would you like to overcome the problem of regional imbalances?

13.14 SOME USEFUL BOOKS

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13.15 ANSWERS OR HINTS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) See Section 13.2

2) See Section 13.2

3) See Section 13.1 and 10.2 (Last para)

4) Bihar

Check Your Progress 2

1) See Section 13.4

2) See Section 13.4

3) See Section 13.5

4) See Sub-section 13.6.1

Check Your Progress 3

1) See Section 13.7

2) See Section 13.7 under point (6)

3) See Section 13.8