

**Report of the Working Group on Issues relating to
Growth and Development at Sub-national Level
For Twelfth Five-year Plan (2012-17)**



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CHAPTER-I

SUB-NATIONAL LEVEL GROWTH AND DEVELOPMENT

- AN INTRODUCTION

1.1 Planning Commission is in the process of formulating the Twelfth Five Year Plan. Basic objective of the Twelfth Five Year Plan is: Faster, More Inclusive, and Sustainable Growth. For growth to be more inclusive we need better performance in agriculture, faster creation of jobs, especially in manufacturing, stronger efforts at health, education and skill development, improve effectiveness of programmes directly aimed at the poor, special programmes for socially vulnerable groups, and special plans for disadvantaged/ backward regions.

1.2 To have balanced regional development, it is very important to look into the growth and development issues concerning the underperforming regions. In this context, the indicators which are important from the point of view of policy interventions to achieve the objective of broad, faster and inclusive growth needs to be identified. Analysis of contribution of sectoral GSDP to total GSDP, income and consumption data and infrastructure development at sub-national level may help in policy formulation.

1.3 To analyse the present status of regional indicators and data availability for better policy intervention during Twelfth Five Year Plan, Planning Commission constituted a Steering Committee on 'Estimation of Investment, its Composition and Trend and Issues relating to Growth and Development at Sub-national Level' on May 26, 2011. The mandate of this Steering committee was divided into two working groups namely 'Working Group on Estimation of Investment, its Composition and Trends' and 'Working Group on Issues relating to Growth and Development at Sub-national Level'.

1.4 The Composition of the 'Working Group on Issues relating to Growth and Development at Sub-national Level' is as under:

1.	Sh. Ramesh Kolli, former ADG, National Accounts Division, Central Statistical Division, MOSPI	Chairperson
2.	Prof. N.R. Bhanumurthy, National Institute of Public Finance and Policy, New Delhi	Member
3.	Ms. P. Bhanumati, Director, Central Statistical Office, Ministry of Statistics and Programme Implementation	Member
4.	Mr. M. A. Basith, Sr. Director, Dept., of planning, Government of Karnataka	Member

5.	Secretary, Dept., of Planning, Government of Tamilnadu	Member
6.	Secretary, Dept., of Planning, Government of Himachal Pradesh.	Member
7.	Secretary, Dept., of Planning, Government of Assam.	Member
8.	Secretary, Dept., of Planning, Government of West Bengal.	Member
9.	Secretary, Dept., of Planning, Government of Gujarat.	Member
10.	Dr. Savita Sharma, Adviser (DPPD), Planning Commission	Member - Secretary

1.5 The Terms of Reference of the Working Group are as follows:-

- (a) Assessment of state level growth prospect.
- (b) Inter -state and intra-state income inequality.
- (c) State specific growth scenario in agricultural sector.
- (d) Infrastructure development at state level.

1.6 This Group met twice on 06.07.2011 and 01.10.2011. In keeping with the TOR, it was noted that the Twelfth Five Year Plan envisages a growth rate of 9% under the broad aim of 'faster, more inclusive and sustainable growth'. Achieving this growth target would require at least 4% growth rate in agriculture, assisted by better functioning markets.

1.7 Members of the committee expressed their concern on the problems of consistency of data for comparison across states given the lack of uniform base reference years for number of indicators. Acknowledging the issues of data inconsistency, committee decided to analyse estimates on industry wise GSDP for the purpose of assessing state level growth prospect from 2004-05 onwards which is discussed in **Chapter-II**. It was felt that there is a need to focus on growth trends with a stress on the structural shift in the economy. For intra-state comparison it was decided to analyse district income indicator.

1.8 For studying the growth scenario in agriculture, data on yield rate, seed quantity used, crop-wise irrigated area; and gross cultivated area have been analysed. Moving average for 3 years of GSDP from Agriculture sector has been used at the state level to measure growth pattern in agriculture sector. In **Chapter-III** data has been analysed for five broad crop groups like rice & wheat, coarse grains, pulses, oilseeds and sugar & cotton.

1.9 As Regards infrastructure development at the state level, the group was of the view that only physical infrastructure such as irrigation, communication, electricity, banking and transport should be considered. **Chapter-IV** examines the type of data available on infrastructure indicators and proposes state wise infrastructure index.

1.10 All the Members of the Working Group actively participated in the deliberations and provided valuable inputs. The Working-Group would like to place on record its deep appreciation of the guidance provided by Dr. Saumitra Choudhary, Member, Planning Commission. The research support provided by Sh. Shivam Srivastava, Research Officer, Ms. Muzna Alvi, Ms. Ankita Dhingra, Young Professionals and Ms. Shivani Gupta, the then intern in the Planning Commission are also gratefully acknowledged. The Group is thankful to Sh. Sanjay Gupta, Research Assistant, Planning Commission for providing secretariat services.

CHAPTER-II

INTER-STATE AND INTRA-STATE DISPARITY

2.1 Introduction

2.1.1 In a vast country like ours where there are noticeable differences both geographically as well as socially, disparities are bound to exist. The disparities either economic or social across the states and intra-regional disparities among different segments of the society have been the major factors responsible for adopting planning process in India since independence. Apart from massive investments in backward regions, various public policies directed at encouraging private investments in such regions have been pursued during the various decades of planned development. While the efforts made to reduce regional disparities are not lacking, achievements are not often commensurate with these efforts.

2.1.2 Though it is true that large part of the disparities are probably due to historical and geographical reasons like differences in initial conditions and natural resource endowments etc. but the fact that such areas have remain aloof from the mainstream of development also cannot be ignored.

2.1.3 However, there is no clear pattern that seems to be applicable to all cases; the effort of the planning process has been to enable backward regions to substantially overcome the disadvantages faced by them and to suggest the measures that help in providing at least a certain minimum standard of services for their citizens. Now, the role of Centre has increased from not only promoting equity among States but also within states, which can only be achieved by taking effective steps as redressing interstate disparities is not only a goal in itself but is essential for maintaining the integrated social and economic structure of the country. It is because of all these facts that the Eleventh Plan was formulated with the objective of “faster and more inclusive growth”. The inclusive development of any country depends upon the fact that to what extent the disparities within the country are minimized. Herein we try to look at broad aggregates in order to understand the dimensions of interstate disparities that persist and to measure them to the extent possible.

2.1.4 The Eleventh Plan began in very favourable circumstances with the economy having grown at the rate of 7.6% per year in the Tenth Plan period. The Eleventh Plan addressed the issue of accelerating pace of growth while making it more inclusive. This has been best done by adopting monitorable targets which reflect the multi-dimensional economic and social objectives of inclusive growth. Furthermore, to ensure efficient and timely implementation of the accompanying projects and programmes, these targets have been disaggregated at the level of the States which implement many of the programmes. The Eleventh Plan has been formulated in a manner whereby

13 of the 27 monitorable national targets have been disaggregated into appropriate targets for individual States. These are:

- i. GSDP growth rate
- ii. Agricultural growth rate
- iii. New work opportunities
- iv. Poverty Ratio
- v. Dropout rate in elementary schools
- vi. Literacy rate
- vii. Gender gap in literacy rate
- viii. Infant Mortality rate (IMR)
- ix. Maternal Mortality ratio (MMR)
- x. Total Fertility Rate (TFR)
- xi. Child malnutrition
- xii. Anemia among women and girls
- xiii. Sex-Ratio

2.1.5 The analysis of data on per capita income (per capita Net State Domestic Product) shows that inter-state disparity has increased from 36% in 2004-05 to 41% in 2011-12. This indicates that income differential between more developed and relatively poorer states has widened during this period as may be seen from **Table 2.1**.

Table 2.1: Disparity in Per Capita Income (per capita NSDP) at 2004-05 prices

Year	State with lowest Per Capita Income	Per Capita Income (Rs.)	State with highest Per Capita Income	Per Capita Income (Rs.)	Ratio of Highest to Lowest Per Capita Income	Coefficient of variation in per capita income
2004-05	Bihar	7914	Haryana	37972	4.80	36%
2005-06	Bihar	7813	Maharashtra	43651	5.21	39%
2006-07	Bihar	9150	Maharashtra	45582	4.98	40%
2007-08	Bihar	9685	Maharashtra	50138	5.18	40%
2008-09	Bihar	10994	Maharashtra	50183	4.56	39%
2009-10	Bihar	12012	Maharashtra	54166	4.51	41%
2010-11	Bihar	13632	Maharashtra	59735	4.38	41%
2011-12	Bihar	15268	Maharashtra	64951	4.25	41%

Source: Directorate of Economics & Statistics of respective State Governments

2.1.6 The per capita income data for the years 1993-94, 1999-2000, 2004-05 and 2011-12 for 18 large states shows that there is less of widening of the divergence amongst the lower income states, while in the higher income groups there is more. For instance the distance between the first (lower)

quartile value and the mean has increased from 22 percent in 1993-94 to 27 percent in 2004-05 and to 38 percent in 2011-12. However, the distance between the third (higher) quartile value and the mean has increased from 22 percent in 1993-94 to 34 percent in 2004-05 and to 40 percent in 2011-12. The Standard Deviation; Coefficient of Variation; and First, Second and Third Quartile values for per capita incomes in major 18 states are given below:

	1993-94	1999-2000	2004-05	2010-11	2011-12
Standard Deviation	2571	5288	8519	14852	16008
Coefficient of Variation	34%	34%	36%	41%	41%
First Quartile (Q1)	5852	11609	17433	22220	23838
Mean	7529	15529	23725	36146	38598
Median	6826	14523	23687	35764	37887
Third Quartile (Q3)	9165	19439	31909	50387	54186

2.1.7 There is clear and marked improvement in the economic positions of the states, including those with relatively lower per capita incomes. The combined average growth in per capita income experienced by large 8 states (Andhra Pradesh, Bihar, Gujarat, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu and Uttar Pradesh) over the Eleventh Plan Period is 7.0 which is greater than the all-India average of 6.2. Of the 7 states in the North- Eastern Region per capita income of four states experienced an average growth rate higher than the national average in the Eleventh Plan.

2.1.8 During Eleventh Five Year Plan period (2007-2012) the rate of growth in the better off States i.e., States with per capita income above the national average had been generally higher than those of the States with a lower than average per capita income e.g., Odisha, Uttar Pradesh and Rajasthan have per capita income lower than the national average and have experienced lower growth rate in per capita as compared to national level growth rate. Exception is Bihar, which has per capita income almost one third of the national average but its growth in per capita income is higher than growth in national average per capita. The data (*Table 2.2*) on per capita income at constant (2004-05) prices during the first and the terminal year of the Eleventh Plan shows that Bihar has lowest per capita income. Although Chandigarh, Delhi, Goa and Puducherry are four highest ranking states/UTs on the basis of per capita income in all these years, they are not compared here with the lowest per capita income State i.e., Bihar as they are mostly urbanized and small areas. Maharashtra and Haryana emerged as the two highest per capita income states. Their per capita income is almost four to five times that of Bihar.

Table: 2.2 Per-Capita Net State Domestic Product at Constant (2004-05) Prices

States/Uts	Per Capita NSDP		Growth Rate in Per Capita NSDP over the previous year (%)		Average Growth Rate in Per Capita NSDP over the 11th Plan (%)
	2007-2008	2011-12	2007-2008	2011-12	2007-2012
India	30332	37851	8.1	5.2	6.2
Big States					
Andhra Pradesh	33239	42710	10.38	5.81	7.26
Bihar	9685	15268	5.84	12.0	10.82
Chhattisgarh	22929	29635	6.25	9.13	6.58
Gujarat	42498	56567	10.19	7.32	8.00
Haryana	47054	63045	5.92	6.46	7.26
Himachal Pradesh	40143	49817	5.10	5.76	5.47
Jammu & Kashmir	24470	28932	4.68	4.80	4.36
Jharkhand	20996	22902	20.48	5.37	5.93
Karnataka	35574	41545	11.28	5.71	5.43
Kerala	40288	53427	8.06	7.13	7.47
Madhya Pradesh	17572	24132	2.93	7.82	7.20
Maharashtra	50138	64951	9.47	8.73	8.41
Odisha	21640	26900	7.16	4.64	5.91
Punjab	39567	46688	6.69	4.33	4.72
Rajasthan	21922	27421	2.72	3.73	5.17
Tamil Nadu	41314	56461	5.48	8.73	7.62
Uttar Pradesh	14875	18103	4.45	4.35	4.92
Uttarakhand	35437	47831	15.36	6.95	9.31
West Bengal	27094	34229	6.67	6.21	6.16
North Eastern States					
Arunachal Pradesh	30187	38130	9.56	1.91	6.76
Assam	18089	22956	2.90	7.24	5.49
Manipur	20106	24327	3.48	4.42	4.60
Meghalaya	27764	38944	1.92	8.38	7.45
Mizoram	28467	36732*	8.21	6.61*	8.73^
Nagaland	37317	41522	6.40	1.38	3.45
Sikkim	31725	47655*	4.72	7.85*	12.25^
Tripura	29022	40411	5.31	8.59	7.97
Small States and Union Territories					
Chandigarh	86923	99487*	1.82	8.61*	3.94^
Delhi	83243	119032	9.18	9.33	9.32
Goa	87085	112372	0.96	9.26	5.47
Puducherry	64749	81469	5.90	2.69	5.92

*Figures are for the year 2010-11 because of non-availability of data for the year 2011-12.

^ Average is taken from 2007-08 to 2010-11 due to non-availability of data for 2011-12.

2.1.9 There is probably no easy answer to the question of what really drives the growth process in the States. While some level of intra- State and inter-State disparity is bound to exist even in the best possible situation, the effort of the planning process has been to enable backward regions to substantially overcome the disadvantages.

2.2 Measuring Interstate Disparities

2.2.1 There are many ways to measure such disparities. One such measure is the use of Gross State Domestic Product (GSDP) data for structural shifts and growth pattern across different sectors of the economy across different states. As Gross Domestic Product (GDP) is the primary indicator used to gauge the health of a country's economy, the GSDP measures the health of the state.

2.2.2 In order to have an in-depth analysis of the economy's performance; it is divided into three broad sectors which are as follows:

- The primary sector which consists of Agriculture, Forestry & logging, Fishing and Mining & quarrying.
- The secondary sector of the economy which includes manufacturing, Electricity, Gas and Water supply and Construction.
- The tertiary sector of the economy consists of Transport, storage & communication, Trade, hotels and restaurants, Banking & Insurance, Real estate, ownership of dwellings and business services, Public administration and other services.

2.2.3 To measure the extent of the changes that have taken place in the economy of a state, the share of Agriculture, Industry & Services in the total GSDP at current prices has been analysed for the years 2004-05 and 2011-12. However, for the states of Mizoram and Sikkim the data is available up to 2010-11. A brief comparison of the share of different sectors across different states is presented in the following Tables.

Table 2.3: Share of Agriculture & Allied Sector in GSDP at current prices

States	2004-05 (In % of GSDP)	2011-12 (In % of GSDP)
India	19.0%	17.2%
Big States		
Andhra Pradesh	25.1%	20.8%
Bihar	31.5%	20.9%
Chhattisgarh	21.2%	19.8%
Gujarat	16.1%	18.8%
Haryana	23.1%	20.7%
Himachal Pradesh	25.5%	19.4%
Jammu & Kashmir	28.1%	18.1%
Jharkhand	14.9%	14.8%
Karnataka	18.7%	15.9%
Kerala	17.5%	14.3%
Madhya Pradesh	27.7%	23.6%
Maharashtra	10.8%	12.1%
Odisha	23.5%	18.4%
Punjab	32.6%	30.3%
Rajasthan	25.6%	26.8%
Tamil Nadu	11.1%	11.1%
Uttar Pradesh	29.7%	27.6%
Uttarakhand	22.3%	14.1%
West Bengal	23.9%	23.3%
North Eastern States		
Arunachal Pradesh	35.1%	31.6%
Assam	25.6%	27.9%
Manipur	24.7%	24.7%
Meghalaya	23.3%	17.4%
Mizoram	23.5%	18.8%
Nagaland	34.8%	23.8%
Sikkim	18.6%	10.8%
Tripura	25.1%	18.1%
Small States and Union Territories		
Delhi	1.1%	0.9%
Goa	7.9%	4.9%
Puducherry	5.3%	3.2%

Source: Central Statistics Office, Ministry of Statistics & Programme Implementation

2.2.4 It may be seen from **Table 2.3** that the share of agriculture in GSDP has gone down almost across all the states between 2004-05 and 2010-11. The share has declined by more than 10 percentage points in Bihar and has increased in Gujarat, Assam and Rajasthan.

2.2.5 The change in share of Industry in state GSDP during 2004-05 and 2011-12, as can be seen from **Table 2.4**, has a mixed trend. During this period, the share of Industry has remained almost same at national level whereas states like Andhra Pradesh and Uttarakhand showed an increase of more than three percentage points. In Madhya Pradesh, Bihar, Odisha, Punjab and Goa there is an increase of about 2 percentage points in the share of industry in 2011-12 as compared to 2004-05. However for states of Jharkhand, Assam, Tamil Nadu, Delhi, Uttar Pradesh, West Bengal and Haryana, the share has declined during this period. In Jharkhand the share has declined by more than 12 percentage points in 2011-12 as compared to 2004-05.

Table 2.4: Share of Industry in GSDP at current prices

States	2004-05 (In % of GSDP)	2011-12 (In % of GSDP)
India	27.9%	26.4%
Big States		
Andhra Pradesh	24.3%	27.5%
Bihar	13.8%	15.9%
Chhattisgarh	44.3%	43.5%
Gujarat	40.0%	37.1%
Haryana	32.9%	28.2%
Himachal Pradesh	38.4%	39.5%
Jammu & Kashmir	28.2%	29.8%
Jharkhand	52.2%	39.9%
Karnataka	30.3%	27.7%
Kerala	22.9%	21.3%
Madhya Pradesh	27.2%	29.5%
Maharashtra	29.6%	30.7%
Odisha	34.1%	36.3%
Punjab	24.8%	26.8%
Rajasthan	30.6%	28.6%
Tamil Nadu	31.7%	25.9%
Uttar Pradesh	23.3%	21.8%
Uttarakhand	28.2%	33.1%
West Bengal	21.7%	17.9%
North Eastern States		

Arunachal Pradesh	31.9%	34.6%
Assam	27.5%	23.3%
Manipur	36.7%	29.7%
Meghalaya	26.1%	34.1%
Mizoram	16.6%	21.4%
Nagaland	12.9%	20.3%
Sikkim	28.8%	38.4%
Tripura	24.3%	30.1%
Small States and Union Territories		
Delhi	18.4%	17.4%
Goa	47.0%	49.4%
Puducherry	50.2%	41.7%

Source: Central Statistics Office, Ministry of Statistics & Programme Implementation

2.2.6 India experienced high growth in service sector during last decade as compared to other sectors of the economy and the same is reflected in its increasing share in total GDP. As can be seen from **Table 2.5**, the trend is same in majority of the states. Even for those states where the share of Services sector was more than 50% in 2004-05 like Andhra Pradesh, Bihar, Delhi, Kerala, Karnataka, Tamil Nadu and West Bengal, it has further increased in 2011-12. Jharkhand has experienced an increase of about 10 percentage points in the share of services during 2004-05 to 2011-12.

Table 2.5: Share of Services Sector in GSDP at current prices

States	2004-05 (In % of GSDP)	2011-12 (In % of GSDP)
India	53.1%	56.4%
Big States		
Andhra Pradesh	50.7%	51.7%
Bihar	54.7%	63.1%
Chhattisgarh	34.4%	36.7%
Gujarat	43.9%	44.2%
Haryana	44.0%	51.1%
Himachal Pradesh	36.2%	41.1%
Jammu & Kashmir	43.7%	52.2%
Jharkhand	32.9%	45.4%
Karnataka	51.0%	56.3%
Kerala	59.6%	64.5%
Madhya Pradesh	45.2%	46.9%

Maharashtra	59.6%	57.3%
Odisha	42.4%	45.3%
Punjab	42.6%	43.0%
Rajasthan	43.8%	44.6%
Tamil Nadu	57.2%	63.0%
Uttar Pradesh	47.0%	50.6%
Uttarakhand	49.5%	52.8%
West Bengal	54.4%	58.8%
North Eastern States		
Arunachal Pradesh	33.0%	33.8%
Assam	46.9%	48.8%
Manipur	38.6%	45.6%
Meghalaya	50.6%	48.6%
Mizoram	59.9%	59.8%
Nagaland	52.4%	56.0%
Sikkim	52.6%	50.7%
Tripura	50.7%	51.8%
Small States and Union Territories		
Delhi	80.5%	81.8%
Goa	45.2%	45.8%
Puducherry	44.5%	55.2%

Source: Central Statistics Office, Ministry of Statistics & Programme Implementation

2.2.7 In order to track the performance of each sector in various States, the Eleventh Plan disaggregated the GSDP growth targets into sectoral growth targets. The achievement in the growth of different sectors during the Eleventh Five Year Plan has been analysed against the growth expectations set for these sectors and is discussed in the subsequent sections.

2.3 Overall Growth Rate

2.3.1 The State wise growth rate expectations for the Eleventh Five Year Plan and growth rate achieved by different states during the Eleventh Five Year Plan is given in **Table 2.6**. The states of Andhra Pradesh, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Rajasthan and West Bengal have not been able to achieve growth rates in GSDP in Eleventh plan as compared to the growth expectations. Bihar achieved a growth rate of 12.1 % against an expected growth rate of 7.6%. Uttarakhand too remained a good performer, growing at about 11.6% which is above the set expectation of 9.7%. During the first four years of the Eleventh Plan, Mizoram grew at 11% and Sikkim grew at 16.2% which is much above the set expectation of 7.1% and 6.7% respectively for the states.

**Table 2.6 State-wise Growth Expectation for the Eleventh Five Year Plan
(Annual Average in %)**

States/UTs	GSDP Growth	
	Expected	Actual
India	9	7.9
Big States		
Andhra Pradesh	9.5	8.3
Bihar	7.6	12.1
Chhattisgarh	8.6	8.4
Gujarat	11.2	9.8
Haryana	11	9.1
Himachal Pradesh	9.5	8.1
Jammu & Kashmir	6.4	6.2
Jharkhand	9.8	7.3
Karnataka	11.2	8
Kerala	9.5	8
Madhya Pradesh	6.7	9.1
Maharashtra	9.1	8.6
Odisha	8.8	8.2
Punjab	5.9	6.9
Rajasthan	7.4	7.2
Tamil Nadu	8.5	8.3
Uttar Pradesh	6.1	6.9
Uttarakhand	9.7	11.6
West Bengal	9.1	7.3
North Eastern and Small States		
Arunachal Pradesh	6.4	9.4
Assam	6.5	6.9
Manipur	5.9	6.5
Meghalaya	7.3	9.1
Mizoram	7.1	11*
Nagaland	9.3	5.2
Sikkim	6.7	16.2*
Tripura	6.9	8.7
Goa	12.1	9

*actual growth rates are average of GSDP growth rates from 2007-08 to 2010-11

2.4 Growth in Agriculture & Allied Sector

2.4.1 Agriculture in the states is vulnerable to vagaries of the monsoon and is influenced by the annual variability in the rainfall pattern. Also the main problem afflicting agriculture is lack of assured irrigation facilities. It may be seen from **Table 2.7** that states like Andhra Pradesh, Jharkhand, Madhya Pradesh, Rajasthan, Chhattisgarh, Manipur and Assam emerged as top performers by achieving growth rates higher than their expected growth rates. Jharkhand recorded an annual growth rate of 7.9% in agriculture during 2007-08 to 2011-12, against the Eleventh Plan expectation of 6.3%, Andhra Pradesh achieved a growth rate of 5.4%, against growth expectation of 4.0% for the period and Rajasthan registered a growth rate of 6.64% during the Plan against the expected 3.5%. Manipur, Mizoram, Tripura and Assam also achieved higher average growth rate during the - period of Eleventh Five Year plan than the expected growth rates set for them. The approach paper to the Twelfth plan notes that the reason for this impressive performance of states which in the Tenth Plan had witnessed low productivity and farmer distress and suicides, is the 'renewed dynamism in the rainfed area'. It is also noted that many states such as Andhra Pradesh have taken new steps in pest management; others such as Chhattisgarh have undertaken steps to ensure water use and conservation.

2.4.2 Many states have lagged behind in their respective expectations during the first four years of the Eleventh Five Year Plan. States such as Gujarat, Goa, Tamil Nadu, Haryana, Bihar, and Jammu and Kashmir have performed badly in the Eleventh Plan as far as growth in Agriculture is concerned. Tamil Nadu, which had a growth expectation of 4.7% for agricultural sector for the Eleventh Plan, registered only 1.1% growth and Bihar could achieve only 1.2% growth in agriculture sector against the set expectation of 7.0%.

2.4.3 The relatively lackluster performance of eastern states, where ground water levels are high has prompted the government to introduce a scheme "Bringing Green Revolution in Eastern India (BGREI)" as a component of Rashtriya Krishi Vikas Yojana (RKVY) from 2010-11. One of the biggest hurdles faced by agriculture in India, particularly in smaller states has been the lack of land redistribution and the small size of average landholding, making it impossible for farmers to reap the benefits of economies of scale.

Table 2.7 State-wise Growth Expectation for the Eleventh Five Year Plan- Agriculture and Allied Sector (Annual Average in %)

States/UTs	State-wise Growth	
	Expected	Actual
India	4	3.3
Big States		
Andhra Pradesh	4	5.4
Bihar	7	1.2

Chhattisgarh	1.7	6.7
Gujarat	5.5	3.3
Haryana	5.3	3.4
Himachal Pradesh	3	1.1
Jammu & Kashmir	4.3	0.7
Jharkhand	6.3	7.9
Karnataka	5.4	5.7
Kerala	0.3	0
Madhya Pradesh	4.4	5.6
Maharashtra	4.4	1.9
Odisha	3	3.4
Punjab	2.4	1.7
Rajasthan	3.5	6.6
Tamil Nadu	4.7	1.1
Uttar Pradesh	3	3
Uttarakhand	3	2.5
West Bengal	4.1	2.8
North Eastern and Small States		
Arunachal Pradesh	2.8	5.6
Assam	2	4.8
Manipur	1.2	8.3
Meghalaya	4.7	3.3
Mizoram	1.6	9.4*
Nagaland	8.4	2.9
Sikkim	3.3	4.8*
Tripura	1.4	5.8
Goa	7.7	1

*actual growth rates are average of growth rates in agriculture and allied sector from 2007-08 to 2010-11

2.5 Growth in Industry

2.5.1 For Industry sector, States such as Bihar, Punjab, Maharashtra, Madhya Pradesh and Uttarakhand have registered growth rates higher than their respective expectations set for the Eleventh Plan period (2007-2012). Bihar has achieved 16% growth against an expectation of 8.0% (*Table 2.8*) backed by the policy of promoting small, medium and large enterprises in equal measure.

2.5.2 Growth in industry sector in states such as Andhra Pradesh, Gujarat, Haryana, Jharkhand, Karnataka, Tamil Nadu and West Bengal is much below the expected growth. Jharkhand, West Bengal and Karnataka could not even achieve half of their growth expectations. Their industrial growth rate achieved is merely 4.6%, 5.1%, and 5.3% respectively as against the expected 12.0%, 10.5% and 12.5% set for them for the Eleventh Plan period. One of the major shortfalls facing industrial development in Karnataka is the acute shortage of power. While the state has significant potential for power generation, it has been able to harness less than half of it. Manipur and Jammu & Kashmir recorded a 3.6% and 4.3% as compared to the expectation of 8% and 9.8% for the plan period (2007-12). Goa is among the worst performing state registering a growth rate of 7.1% against the plan expectation of 15.7%.

Table 2.8 State-wise Growth Expectation for the Eleventh Five Year Plan Industry Sector (Annual Average in %)

States/UTs	State-wise Growth	
	Expected	Actual
India	10-11	6.7
Big States		
Andhra Pradesh	12	8.2
Bihar	8	16
Chhattisgarh	12	7.3
Gujarat	14	8.3
Haryana	14	7
Himachal Pradesh	14.5	8.2
Jammu & Kashmir	9.8	4.3
Jharkhand	12	4.6
Karnataka	12.5	5.3
Kerala	9	5.9
Madhya Pradesh	8	9.4
Maharashtra	8	8.12
Odisha	12	8.3
Punjab	8	9.3
Rajasthan	8	5.22
Tamil Nadu	8	4.9
Uttar Pradesh	8	5.4
Uttarakhand	12	12.3
West Bengal	10.5	5.1
North Eastern and Small States		
Arunachal Pradesh	8	13.9

Assam	8	4.5
Manipur	8	3.6
Meghalaya	8	12.4
Mizoram	8	12.2*
Nagaland	8	9.7
Sikkim	8	25*
Tripura	8	9.3
Goa	15.7	7.1

*actual growth rates are average of growth rates in the industry sector from 2007-08 to 2010-11.

2.6 Growth in Services

2.6.1 The contribution of the Services sector in GDP at national level has increased a lot in the last few years. Most of the states except Andhra Pradesh and Karnataka have registered growth rates higher than the expectations. Andhra Pradesh has registered 9.6% growth compared to the expectation of 10.4%. Karnataka managed a growth rate of 10.3% which is far less than set expectation of 12% for the state.

2.6.2 Bihar has experienced a tremendous boom in services sector, registering average annual growth rate of 15.8% well beyond the plan period expectation of 8%. Chhattisgarh achieved 11.2% against 8% and Uttar Pradesh registered 9.6% against 7.1%. Tamil Nadu too recorded a growth rate of 11.1% during 2007-08 to 2011-12, against the expected 9.4% while Sikkim achieved an annual average growth of 14.0% during the four year period, against an expectation of 7.2% (**Table 2.9**). Even states like, Odisha, Jharkhand, Rajasthan and West Bengal have either achieved or are very close to their expected growth.

Table 2.9 State-wise Growth Expectation for the Eleventh Five Year Plan Services Sector (Annual Average in %)

States/UTs	State-wise Growth	
	Expected	Actual
India	9-11	9.9
Big States		
Andhra Pradesh	10.4	9.6
Bihar	8	15.8
Chhattisgarh	8	11.2
Gujarat	10.5	8.7
Haryana	12	12.6
Himachal Pradesh	7.5	11.8
Jammu & Kashmir	6.4	9.9

Jharkhand	8	10.2
Karnataka	12	10.3
Kerala	11	10.3
Madhya Pradesh	7	10.8
Maharashtra	10.2	9.9
Odisha	9.6	10.3
Punjab	7.4	8.4
Rajasthan	8.9	9.11
Tamil Nadu	9.4	11.1
Uttar Pradesh	7.1	9.6
Uttarakhand	11	13.8
West Bengal	9.9	9.7
North Eastern and Small States		
Arunachal Pradesh	7.2	10.2
Assam	8	8.9
Manipur	7	8
Meghalaya	7.9	9.3
Mizoram	8	11.1
Nagaland	10	5.2
Sikkim	7.2	14
Tripura	8	9.8
Goa	9	11.9

2.7 Intra-State Disparity

2.7.1 While inter-state disparities in growth and development have been widely documented, it is also extremely critical to study intra-state differentials in income. The most common way of measuring intra-state disparity is to use District Domestic Product (DDP). Earlier some states were computing district wise GDP, but this data was not strictly comparable across states. More recently, the Central Statistics Organization (CSO) devised a methodology for computation of DDP which has been used by the states to compute district level domestic product from 1999-2000 onwards. This data is available for 24 States. The data available for the years 1999-00 and 2004-05 as per 1999-2000 series of GSDP has been used to compare the relative performance of districts within state using Per Capita Income (Net Domestic Product at 1999-00 prices). All the states have not yet prepared the district income estimates for 2004-05 base series of GSDP. Therefore, the intra-state analysis is constrained by the availability of data for the recent years.

2.7.2 These 24 States cover 522 districts in 1999-00 and 531 districts in 2004-05. While there are bound to be differences between different regions within a state, it is important to measure the extent of these differences as well as the acuteness of the gap between the least developed and most developed region within State. Such information will help in better, more efficient and targeted allocations of funds as well as plans and policies, in order to enable more equitable development.

2.7.3 **Table 2.10** shows the distribution of districts on the basis of their per capita income relative to that of India as a whole. As can be seen the situation varies across the states. In 1999-00, the most poorly performing states Bihar, Odisha and Uttar Pradesh had less than 10% of districts with per capita income more than the all India average. On the other hand almost all the districts of Haryana, Punjab, Himachal Pradesh and Kerala reported a higher than national average per capita national income. In 2004-05, the position of most states remained stagnant, barring states like Rajasthan Jharkhand, Assam, Maharashtra and Madhya Pradesh, where it worsened.

Table 2.10: State-wise percentage of Districts Above National Per Capita Income

Sl No	State	%age of districts having Per capita income more than national average	
		1999-00	2004-05
Big States			
1	Andhra Pradesh	43.48	47.83
2	Bihar	2.63	2.63
3	Chhattisgarh	6.25	6.25
4	Haryana	94.74	90
5	Himachal Pradesh	83.33	83.33
6	Jharkhand	5.56	0
7	Karnataka	33.33	29.62
8	Kerala	92.86	92.86
9	Madhya Pradesh	11.11	4.44
10	Maharashtra	58.82	52.9
11	Odisha	6.67	6.67
12	Punjab	100	100
13	Rajasthan	21.88	6.25
14	Tamil Nadu	76.67	63.33
15	Uttar Pradesh	4.29	2.86
16	Uttarakhand	7.69	23.08
17	West Bengal	38.89	26.3

North Eastern States and Union Territories			
1	A & N Islands	100	100
2	Arunachal Pradesh	23.08	23.08
3	Assam	21.74	7.4
4	Manipur	11.11	11.11
5	Meghalaya	42.86	28.6
6	Mizoram	62.5	25
7	Sikkim	25	25

2.7.4 One way of measuring the intensity of intra-state disparity is to compare the best performing district with the worst performing district of the state. *Table 2.11* compares the ratio of the highest per-capita income district to the lowest per-capita income district for the 24 states. Interestingly, the worst performing states are also the ones with the highest ratio between the highest and lowest per-capita income district. In Bihar, this ratio is highest in both the years followed by Uttar Pradesh. In both these states this ratio has increased over the period, the highest per capita income district in both the states had an income 6-7 times more than the lowest per capita district in 1999-00 and this increased to more than 8 times in 2004-05. This indicates widening of the gap across districts within a state.

Table 2.11 State-wise Comparison of Best and Worst Performing Districts

Sl No	State	No. of Districts	1999-00 at constant Prices			2004-05 at constant Prices		
			Lowest per capita NDDP	Highest per capita NDDP	Ratio Highest/Lowest	Lowest per capita NDDP	Highest per capita NDDP	Ratio Highest/Lowest
Big States								
1	Andhra Pradesh	23	10007	21789	2.18	13374	30778	2.30
2	Bihar	38	3165	21482	6.79	3314	29759	8.98
3	Chhattisgarh	16	8028	35953	4.48	8105	42682	5.27
4	Haryana	20	13099	43285	3.3	17495	67912	3.88
5	Himachal Pradesh	12	15193	57202	3.76	18337	69787	3.81
6	Jharkhand	22	6587	17164	2.61	7340	19223	2.62
7	Karnataka	27	11314	29044	2.57	10904	44164	4.05
8	Kerala	14	14081	27605	1.96	17223	35744	2.08
9	Madhya Pradesh	45	6993	27571	3.94	7529	26491	3.52
10	Maharashtra	34	9988	40054	4.01	11690	46462	3.97
11	Odisha	30	6848	23471	3.43	8668	34291	3.96
12	Punjab	17	21663	32004	1.48	22529	33633	1.49
13	Rajasthan	32	8316	20752	2.5	9859	19751	2.00

14	Tamil Nadu	30	12137	27117	2.23	10427	31080	2.98
15	Uttar Pradesh	70	5123	32533	6.35	4403	35821	8.14
16	Uttarakhand	13	9295	17117	1.84	11653	26411	2.27
17	West Bengal	19	11206	25134	2.24	11832	33966	2.87
North Eastern and Small States								
1	A & N Islands	2	23958	24359	1.02	25829	38038	1.47
2	Arunachal Pradesh	13	10757	23588	2.19	15260	28850	1.89
3	Assam	27	7523	24585	3.27	7995	28285	3.54
4	Manipur	9	9054	22205	2.45	12000	26425	2.20
5	Meghalaya	7	8907	19031	2.14	9926	24793	2.50
6	Mizoram	8	12940	19162	1.48	14496	21950	1.51
7	Sikkim	4	12497	16682	1.33	15098	21811	1.44

2.7.5 To measure the income inequality between districts within states for the years 1999-00 and 2004-05, the Coefficients of variation have been computed. As is evident from this indicator, inequality across districts has increased over the period, primarily in the states of Bihar, Odisha, Uttar Pradesh, West Bengal, Karnataka, Maharashtra and Haryana . This is consistent with the findings above, where it was seen that the gap between the highest and the lowest income districts has widened alarmingly, particularly in Bihar and Uttar Pradesh.

Table 2.12: State wise per capita income and Intra-State Coefficient of Variation

Sl No	State	Per Capita NSDP (Rs.) 1999-2000	Coefficient of Variation 1999-2000	Per Capita NSDP (Rs.) 2004-05	Coefficient of Variation 2004-05
Big States					
1	Andhra Pradesh	15427	0.22	19963	0.22
2	Bihar	5766	0.49	6771	0.61
3	Chhatisgarh	11654	0.56	14175	0.55
4	Haryana	23121	0.27	30502	0.36
5	Himachal Pradesh	20806	0.58	26277	0.58
6	Jharkhand	11549	0.26	12869	0.24
7	Karnataka	16703	0.27	19692	0.38
8	Kerala	19461	0.15	25118	0.16
9	Madhya Pradesh	12384	0.31	12032	0.32
10	Maharashtra	23011	0.36	26359	0.40
11	Odisha	10567	0.34	13329	0.40
12	Punjab	25611	0.10	27851	0.12
13	Rajasthan	13619	0.23	14908	0.19
14	Tamil Nadu	19378	0.21	22835	0.22

15	Uttar Pradesh	9405	0.43	10224	0.47
16	Uttarakhand	13516	0.21	19524	0.22
17	West Bengal	15934	0.19	18929	0.26
North Eastern and Small States					
18	Arunachal Pradesh	13991	0.32	19338	0.24
19	Assam	12282	0.41	13952	0.32
20	Manipur	13260	0.28	16482	0.25
21	Meghalaya	14355	0.27	17595	0.31
22	Mizoram	16450	0.12	18867	0.14
23	Sikkim	14890	0.11	19332	0.15
24	A & N Islands	24005	0.01	27267	0.28

2.7.6 Once again, it may be seen from **Table 2.12** that inequality is higher in states where incomes are lower on an average, as compared to states which are relatively prosperous on the whole. For example, Punjab, the most prosperous state, also has the lowest coefficient of variation, in both the years. The reverse is true for states like Chhattisgarh and Bihar, where a majority of districts have per capita incomes lower than the national average.

2.7.7 The household consumer expenditure survey data of National Sample Survey Office (NSSO) for the period 2004-05 to 2009-10 shows that in Bihar the inequality has increased in rural areas whereas in Haryana, Karnataka, Maharashtra, Odisha, Uttar Pradesh and West Bengal the inequality has increased in urban areas (**Table 2.13**). In Himachal Pradesh, Jammu & Kashmir, Kerala and Punjab, the inequality has increased in both rural and urban areas.

Table 2.13: State wise inequality in 2004-05 and 2009-10

S. No.	States	Lorenz ratio			
		Rural_MRP		Urban_MRP	
		2004-05	2009-10	2004-05	2009-10
	<i>All India</i>	<i>0.2655</i>	<i>0.2758</i>	<i>0.3475</i>	<i>0.3706</i>
Big States					
1	Andhra Pradesh	0.2515	0.2694	0.3417	0.3531
2	Bihar	0.1851	0.2153	0.3116	0.3189
3	Chhattisgarh	0.2508	0.2339	0.354	0.3050
4	Gujarat	0.2514	0.2516	0.2953	0.3088
5	Haryana	0.2953	0.2775	0.3257	0.3565
6	Himachal Pradesh	0.2595	0.2825	0.2609	0.3509
7	Jammu & Kashmir	0.1969	0.2206	0.2413	0.3073
8	Jharkhand	0.1985	0.2120	0.3259	0.3429

9	Karnataka	0.2322	0.2313	0.3577	0.3747
10	Kerala	0.2941	0.3497	0.3527	0.3998
11	Madhya Pradesh	0.2365	0.2764	0.3505	0.3652
12	Maharashtra	0.2700	0.2438	0.3502	0.3795
13	Odisha	0.2535	0.2474	0.3297	0.3753
14	Punjab	0.2626	0.2851	0.3233	0.3575
15	Rajasthan	0.2041	0.2136	0.3033	0.3155
16	Tamil Nadu	0.2584	0.2566	0.3445	0.3274
17	Uttar Pradesh	0.2337	0.2307	0.3391	0.3951
18	Uttarakhand	0.2226	0.4375	0.3017	0.3208
19	West Bengal	0.2411	0.2197	0.3564	0.3844
North Eastern States					
1	Arunachal	0.2401	0.2933	0.2132	0.2991
2	Assam	0.182	0.2199	0.301	0.3275
3	Manipur	0.1362	0.1591	0.1488	0.1925
4	Meghalaya	0.1363	0.1703	0.2403	0.2428
5	Mizoram	0.1665	0.1941	0.2132	0.2063
6	Nagaland	0.1729	0.1814	0.2136	0.2221
7	Sikkim	0.2358	0.2593	0.2317	0.1861
8	Tripura	0.2034	0.1969	0.2996	0.2876
Union Territories and Small States					
1	Andaman & Nicobar	0.2532	0.2555	0.3048	0.3163
2	Chandigarh	0.244	0.3075	0.3411	0.3734
3	Dadra Nagar Haveli	0.324	0.22	0.2949	0.2235
4	Daman & Diu	0.209	0.2865	0.2419	0.2644
5	Delhi	0.2616	0.2333	0.3243	0.3523
6	Goa	0.2665	0.2194	0.3329	0.2514
7	Lakshadweep	0.1673	0.3139	0.2356	0.2787
8	Puduchery	0.2813	0.2543	0.3019	0.3775

Source: NSS Household Consumer Expenditure Reports of 61st and 66th round

2.7.8 While the Lorenz ratio gives a broad overview of the levels of inequality within states, it is also necessary to look at the distribution of consumption expenditure to examine the location of concentration of this inequality. The following tables look at the ratio between the top and bottom 10, 15, 20 and 30 percentile of persons to see whether inequality has risen across all levels of expenditure or if it has been concentrated in the topmost and bottommost deciles. At the all India level, the gap between the top 30 and the bottom 30 has narrowed down over the last 5 years. What remains a cause of concern, however, is the huge gap between the ultra-rich and the ultra-poor

which has risen substantially over the past 5 years. This happening in the background of high growth rates points to the fact that growth may not have been inclusive and broad based.

Table 2.14: Distribution of Consumption Expenditure- All India

Ratio of average Consumption Exp. Between:	India- Rural		India- Urban	
	61st Round	66 th Round	61st Round	66th Round
Top 5/Bottom 5	6.8	8.3	12.1	15.3
Top 10/Bottom 10	4.9	5.8	8.4	10.1
Top 15/Bottom 15	3.9	4.6	6.4	7.8
Top 20/Bottom 20	3.9	3.9	6.4	6.4
Top 30/Bottom 30	3.3	3.1	5.1	4.7

2.7.9 Assam has seen steadily rising inequality between the rural rich and poor, however, while inequality has risen over the past few years, it is among the lowest in the country. In urban areas on the other hand, the top ten percent of persons having average consumption expenditure 8 times that of the lowest ten percent.

Table 2.15: Distribution of Consumption Expenditure - Assam

Ratio of average Consumption Exp. Between:	Assam- Rural		Assam-Urban	
	61 st Round	66th Round	61st Round	66th Round
Top 10/Bottom 10	3.2	3.8	6.2	8.0
Top 15/Bottom 15	2.8	3.3	5.1	6.3
Top 20/Bottom 20	2.5	2.9	4.7	5.3
Top 30/Bottom 30	2.2	2.5	3.5	4.0

2.7.10 In Bihar, compared to urban areas, rural areas have seen a more pronounced widening of the gap between the rural rich and poor, however, Bihar too has among the lowest levels of rural income inequality.

Table 2.16: Distribution of Consumption Expenditure - Bihar

Ratio of average Consumption Exp. Between:	Bihar-Rural		Bihar-Urban	
	61st Round	66th Round	61st Round	66th Round
Top 10/Bottom 10	2.8	3.9	6.2	6.9
Top 15/Bottom 15	2.8	3.3	5.2	5.6
Top 20/Bottom 20	2.5	2.9	4.5	4.8
Top 30/Bottom 30	2.2	2.5	3.6	3.7

2.7.11 Gujarat which has seen flourishing industrial growth and activity, has unfortunately not managed to arrest the trend of rising inequality in urban areas. The gap between the top and the bottom 10 percentile of persons is in fact higher than in states such as Bihar. The inequality in rural areas is stagnant but still higher than relatively less-developed Bihar.

Table 2.17: Distribution of Consumption Expenditure -Gujarat

Ratio of average Consumption Exp. Between:	Gujarat-Rural		Gujarat-Urban	
	61st Round	66th Round	61st Round	66 th Round
Top 10/Bottom 10	4.8	4.9	6.2	7.1
Top 15/Bottom 15	4.1	4.0	5.1	5.7
Top 20/Bottom 20	3.6	3.4	4.4	4.8
Top 30/Bottom 30	2.9	2.8	3.4	3.7

2.7.12 Some of the most surprisingly levels of inequality are seen in Kerala and Himachal Pradesh, states which have otherwise made remarkable progress in other indicators of human development.

2.7.13 In Himachal Pradesh, where levels of inequality were already high in 2004-05, they increased even more in 2009-10. The ratio of consumption expenditure of the top 10 and bottom 10 increased from 5.2 times to 5.8 times in rural and from 4.8 to 9.3 in urban areas. In urban areas, this puts Himachal among the most unequal states in the country, next only to the state of Kerala and Tamil Nadu.

Table 2.18: Distribution of Consumption Expenditure – Himachal Pradesh

Ratio of average Consumption Exp. Between:	HP-Rural		HP-Urban	
	61st Round	66th Round	61st Round	66th Round
Top 10/Bottom 10	5.2	5.8	4.8	9.3
Top 15/Bottom 15	4.2	4.6	4.4	7.0
Top 20/Bottom 20	3.7	4.0	3.5	6.2
Top 30/Bottom 30	2.9	2.1	3.0	4.6

2.7.14 Kerala has very abysmal figures when it comes to income inequality, with gaps between the rich and the poor that have increased to critical levels in recent years. No other state has such pronounced levels of income inequality as Kerala does. The gap between the top 10 and bottom 10 per cent in urban areas increased from 8.3 times to 11.6 times respectively. The gap between the top and bottom 30 percentile is also significantly higher than all the other states.

Table 2.19: Distribution of Consumption Expenditure - Kerala

Ratio of average Consumption Exp. Between:	Kerala-Rural		Kerala-Urban	
	61st Round	66th Round	61st Round	66th Round
Top 10/Bottom 10	7.0	8.9	8.3	11.6
Top 15/Bottom 15	5.6	6.7	6.7	8.8
Top 20/Bottom 20	4.7	5.5	5.8	7.2
Top 30/Bottom 30	3.7	4.1	4.3	5.3

2.7.15 In Tamil Nadu, rural income inequality has remained absolutely stagnant over the last 5 years, and in fact the gap between the top and bottom 30 percentiles is among the lowest in the country. On the contrary however, the income inequality in urban areas has been persistently high, and is currently among the highest in the country.

Table 2.20: Distribution of Consumption Expenditure – Tamil Nadu

Ratio of average Consumption Exp. Between:	Tamil Nadu-Rural		Tamil Nadu-Urban	
	61st Round	66th Round	61st Round	66th Round
Top 10/Bottom 10	5.0	5.0	8.2	10.0
Top 15/Bottom 15	4.1	4.1	6.6	7.6
Top 20/Bottom 20	3.5	3.5	5.5	6.2
Top 30/Bottom 30	2.8	2.8	4.2	4.7

2.7.16 Odisha is counted among the least developed states in the country, and has one of the lowest per capita income levels in the country. In both rural and urban areas, levels of inequality have remained stagnant across all income levels.

Table 2.21: Distribution of Consumption Expenditure – Odisha

Ratio of average Consumption Exp. Between:	Odisha-Rural		Odisha-Urban	
	61st Round	66th Round	61st Round	66th Round
Top 10/Bottom 10	4.9	5.1	7.1	7.5
Top 15/Bottom 15	4.0	4.2	5.9	6.0
Top 20/Bottom 20	3.5	3.6	5.1	5.1
Top 30/Bottom 30	2.8	2.9	4.1	3.9

2.7.17 The case of Haryana and Maharashtra is different from the other states, because in this case while the urban poverty gap has widened, in rural areas, the gap has actually reduced. In Haryana,

the ratio of average income between the top and bottom 10 percentiles reduced from 6.7 to 5.8, while in urban areas it increased from 7.6 to 8.2.

Table 2.22: Distribution of Consumption Expenditure – Haryana

Ratio of average Consumption Exp. Between:	Haryana- Rural		Haryana-Urban	
	61st Round	66th Round	61st Round	66th Round
Top 10/Bottom 10	6.7	5.8	7.6	8.2
Top 15/Bottom 15	5.2	4.8	6.1	6.8
Top 20/Bottom 20	4.4	4.1	5.0	5.8
Top 30/Bottom 30	3.4	3.3	3.9	4.5

2.7.18 Maharashtra, which has relatively lower gap between the rural rich and poor, also witnessed a narrowing of the income divide, with the ratio between the top and bottom 10 percentile falling from 5.3 to 4.5. In urban areas however, Maharashtra has persistently higher and widening gaps, with the income ratio of the richest and poorest 10 percent increasing from 9 to almost 11 times, and this is among the highest in the country.

Table 2.23: Distribution of Consumption Expenditure – Maharashtra

Ratio of average Consumption Exp. Between:	Maharashtra- Rural		Maharashtra-Urban	
	61st Round	66th Round	61st Round	66th Round
Top 10/Bottom 10	5.3	4.5	8.9	10.9
Top 15/Bottom 15	4.4	4.2	7.1	8.3
Top 20/Bottom 20	3.8	3.4	5.9	7.2
Top 30/Bottom 30	3.0	2.7	4.4	4.9

CHAPTER-III

PERFORMANCE OF AGRICULTURE SECTOR

3.1 Introduction

3.1.1 India's economic security continues to be predicated upon the agriculture sector, and the situation is not likely to change in the foreseeable future. Even now, agriculture supports more than 50% of the population, as against about 75% at the time of independence. In the same period, the contribution of agriculture and allied sector to the Gross Domestic Product (GDP) has fallen from 61% to 18%. As of today, India supports 16.8% of world's population on 4.2% of world's water resources and 2.3% of global land. These resources will decrease further due to increasing demographic pressure and consequent diversion of the land for non-agricultural uses.

3.1.2 The country recorded impressive achievements in agriculture during three decades since the onset of green revolution in late sixties. This enabled the country to overcome widespread hunger and starvation; achieve self-sufficiency in food; reduce poverty and bring economic transformation in millions of rural families. The situation, however, started turning adverse for the sector around mid-nineties, with slowdown in growth rate of output, which resulted in stagnation or even decline in farmers' income leading to agrarian distress, which is spreading and turning more and more serious. The Eleventh Five Year Plan identified the following trends that have raised concern regarding food security, farmers' income, and poverty:

- Slowdown in growth.
- Widening economic disparities between irrigated and rain-fed areas.
- Increased vulnerability to world commodity price volatility following trade liberalization. This had an adverse effect on agricultural economies of regions growing crops such as cotton and oilseeds.
- Uneven and slow development of technology.
- Inefficient use of available technology and inputs.
- Lack of adequate incentives and appropriate institutions.
- Degradation of natural resource base.
- Rapid and widespread decline in groundwater table, with particularly adverse impact on small and marginal farmers.
- Increased non-agricultural demand for land and water as a result of the higher overall GDP growth and urbanization.
- Aggravation in social distress as a cumulative impact of the above, reflected in an upsurge in farmers' suicides.

3.1.3 Around 51% of India's geographical area is already under cultivation as compared to 11% of the world average. The present cropping intensity of 136% has registered an increase of only

25% since independence. The deceleration in the rate of growth of total factor productivity needs to be arrested and agricultural productivity has to be doubled to meet the growing demands of the population by 2050. Efficiency-mediated improvement in productivity is the most viable option to raise production.

3.1.4 Regardless of the fact that there has been a gradual slump in its contribution to the Gross Domestic Product of the country, agriculture is currently the biggest industry in India. On the whole, it has a key role in the socio-economic growth of the country. Agriculture sector enjoys both production and demand linkages with industrial and services sectors. Agriculture sector has demand linkage with the industrial sector as it depends on the latter for agricultural implements and other inputs such as fertilizers and pesticides. Thus, a good harvest (in turn giving a boost to agricultural income) results in increased demand for industrial products. Similarly, a good agricultural year is also likely to raise demand for services like trade, transport, banking and insurance services. On the supply side, agricultural inputs are used in the production of various chemical and pharmaceutical products; consumer items, especially non-durable food products, *etc.* Thus, a fall in aggregate supply in agriculture sector is likely to cause a serious constraint in production of the industrial sector. Increasing the productivity of agriculture, given the fixity of land, is necessary for both poverty reduction and the development of the non-agricultural sector. In fact, agricultural productivity gains, poverty reduction and the growth of the non-farm sector are complementary in nature. Achieving 4% growth in agriculture over the coming years has become critical not only to avert any crisis in agrarian sector but also to fulfill needs of growing economy. The higher growth can very well be realized through adoption of available technologies that minimize yield gaps between experimental farms and farmers' fields. The Government is keen on devising ways and means to facilitate states in adopting these technologies that promise tangible yield gains of 40–100%.

3.2 Disparities in Agriculture Production

3.2.1 Policies followed in the country and nature of technology that became available over time has reinforced some of the variations resulting from natural factors. As a consequence, production performance of agriculture sector has followed an uneven path and large gaps have developed in productivity between different geographic locations across the country. States which have contributed significantly in this sector in the past are the ones which have adopted the latest technologies and are continuing to lead the way. In terms of agricultural contribution as per their share in the total agricultural value of output, the following states in India are the most developed states:

- Punjab
- Uttar Pradesh
- Madhya Pradesh
- Haryana
- Bihar

- Andhra Pradesh
- Maharashtra
- West Bengal

3.2.2 These states play a key role in the agrarian development of India. However, these regional variations have remained a subject of concern for couple of reasons. Large variation in productivity leads to regional disparities and is generally considered as discriminatory. It is against the democratic polity to leave some regions behind others in making economic progress. Identification of various levels of productivity helps to analyse the reasons for variation in performance and in developing location specific strategies for future growth and development. Variation in productivity also indicates scope to raise production and attain growth.

3.2.3 The variations in agriculture performance and productivity in India have been studied mostly at the state level, although a few district-level studies also exist. Agriculture performance generally differs widely within state due to varying regional characteristics in terms of resource endowments and climate. However, states are the appropriate administrative unit to study regional variations in many aspects, availability of data being the key factor.

3.2.4 To examine the scenario of agriculture in the States, the state-wise data on Area, Production and Value of Output was analysed for the crops/crop groups- Paddy, Wheat, Coarse Cereals, Pulses, Oilseed, Sugar and Cotton for the years 1993-94 to 2008-09. The Directorates of Economics & Statistics of the States/UTs furnish information on area, production and prices for estimating the Value of Output and the Gross Value Added of the agriculture sector. This information was used for the purpose of this study. The production of the different crops/crop-groups has been valued as follows-

1. Paddy/Wheat – Value of paddy/wheat has been estimated separately for the produce procured by Government Agencies, and the remaining output. The produce procured has been evaluated at the prevailing Minimum Support Prices, while the rest has evaluated at primary market prices.
2. Coarse cereals - Value has been estimated separately for each of the coarse cereals, namely, bajra, barley, jowar, maize, ragi, small millets and other cereals.
3. Pulses - Value of pulses has been estimated separately for each of the oilseeds, namely, arhar, gram, horsegram, masoor, moong, urd and others.
4. Oil seed – Value of oilseeds has been estimated separately for each of the oilseeds, namely, castor, coconut, groundnut, linseed, nigerseed, rapeseed & mustard, safflower, sesamum, soyabean, sunflower, and others.
5. Sugar/Cotton – Value has been evaluated at primary market prices.

3.2.5 State-wise data on for the States, where the production of the crop is significant, for each of the crops is given in the Appendix (A.1 – A.7).

3.3 Value of Output of different crops

3.3.1 The States with the highest value of crops have not changed much over the years, i.e. from 1993-94 to 2008-09. The crop-wise list of such States is as under:

Paddy	West Bengal, Andhra Pradesh, Uttar Pradesh, Punjab, Odisha
Wheat	Uttar Pradesh, Punjab, Madhya Pradesh, Haryana, Bihar, Rajasthan
Coarse Cereals	Maharashtra, Karnataka, Uttar Pradesh, Madhya Pradesh, Rajasthan, Andhra Pradesh
Oilseeds	Madhya Pradesh, Andhra Pradesh, Tamil Nadu, Rajasthan, Maharashtra, Gujarat
Pulses	Maharashtra, Andhra Pradesh, Uttar Pradesh, Madhya Pradesh, Rajasthan
Sugar	Maharashtra, Karnataka, Uttar Pradesh, Andhra Pradesh, Gujarat, Tamil Nadu
Cotton	Maharashtra, Gujarat, Andhra Pradesh, Punjab, Haryana

3.3.2 Out of the above list, a notable increase has been observed in the value of output in some of the States in the last five years. These States are - Andhra Pradesh in Coarse Cereals and Sugar, Rajasthan in Wheat, Gujarat in the case of Pulses. The contribution of some of the major States to each of the crop groups in the different Plan Periods is given in the following tables.

Table 3.1: Paddy Production under Various Plans

STATES/UT	Share in the Total Value of Output		
	VIII Plan	IX Plan	X Plan
Andhra Pradesh	13.20	13.83	12.31
Assam	4.18	4.26	3.97
Bihar	8.34	6.06	4.86
Chhatisgarh	0.00	2.77	5.22
Karnataka	4.35	4.30	4.53
Odisha	6.82	5.71	6.19
Punjab	8.28	9.18	11.53
Tamil Nadu	7.27	7.83	4.91
Uttar Pradesh	11.96	12.39	12.71
West Bengal	15.3	15.93	15.33

Table 3.2: Wheat Production under Various Plans

STATES/UT	Share in the Total Value of Output		
	VIII Plan	IX Plan	X Plan
Bihar	6.95	6.22	5.04
Gujarat	2.65	2.09	3.25
Haryana	10.69	12.26	12.23
Madhya Pradesh	11.53	9.82	9.61
Maharashtra	2.15	1.80	1.90
Punjab	18.70	20.32	19.57
Rajasthan	9.07	9.75	8.64
Uttar Pradesh	34.44	33.20	34.81
Uttarakhand	0.00	0.65	1.11
West Bengal	1.21	1.29	1.21

Table 3.3: Coarse Cereal Production under Various Plans

STATES/UT	Share in the Total Value of Output		
	VIII Plan	IX Plan	X Plan
Andhra Pradesh	6.17	7.59	8.11
Bihar	4.72	4.48	3.71
Gujarat	5.91	6.71	5.58
Himachal Pradesh	2.17	3.06	2.19
Karnataka	13.93	14.79	12.57
Madhya Pradesh	7.02	6.81	6.37
Maharashtra	28.58	20.7	15.78
Rajasthan	10.01	11.82	14.02
Tamil Nadu	2.88	2.7	2.21
Uttar Pradesh	10.35	10.23	7.62

Table 3.4: Pulses Production under Various Plans

STATES/UT	Share in the Total Value of Output		
	VIII Plan	IX Plan	X Plan
Andhra Pradesh	6.53	6.70	8.65
Bihar	5.27	5.73	3.10
Chhatisgarh	0.00	1.35	2.73
Gujarat	4.79	3.49	3.46
Karnataka	4.47	5.12	5.52
Madhya Pradesh	22.30	18.95	19.60
Maharashtra	14.79	12.96	13.66

Rajasthan	11.51	10.81	8.68
Uttar Pradesh	18.76	21.70	20.38
West Bengal	1.27	2.18	2.44

Table 3.5: Oilseeds Production under Various Plans

STATES/UT	Share in the Total Value of Output		
	VIII Plan	IX Plan	X Plan
Andhra Pradesh	11.94	10.08	8.02
Gujarat	11.55	13.02	13.87
Karnataka	8.03	7.29	6.44
Kerala	7.16	7.10	7.25
Madhya Pradesh	15.27	16.83	17.00
Maharashtra	8.40	8.49	9.94
Rajasthan	11.45	12.92	15.87
Tamil Nadu	10.12	8.8	6.68
Uttar Pradesh	5.89	4.97	4.24
West Bengal	2.24	2.80	2.73

Table 3.6: Sugar Production under Various Plans

STATES/UT	Share in the Total Value of Output		
	VIII Plan	IX Plan	X Plan
Andhra Pradesh	5.14	5.9	5.42
Bihar	2.50	1.94	1.56
Gujarat	6.92	6.82	7.41
Haryana	3.11	3.57	3.43
Karnataka	8.20	8.49	7.95
Madhya Pradesh	0.86	0.75	0.71
Maharashtra	24.33	22.42	17.52
Punjab	3.43	3.04	2.53
Tamil Nadu	7.09	7.33	7.76
Uttar Pradesh	37.21	37.89	42.12

Table 3.7: Cotton Production under Various Plans

STATES/UT	Share in the Total Value of Output		
	VIII Plan	IX Plan	X Plan
Maharashtra	23.12	22.58	20.73
Andhra Pradesh	13.65	16.24	12.35
Gujarat	17.67	21.55	31.94
Haryana	9.27	9.61	9.92
Karnataka	6.94	6.82	2.87
Madhya Pradesh	3.39	3.77	4.44
Odisha	0.09	0.54	0.66
Punjab	13.89	9.15	11.92
Rajasthan	8.90	6.53	4.10
Tamil Nadu	2.69	2.82	0.82

3.3.3 There is a general notion that either there is a shift to high yielding variety of the crop, or the crop is substituted by another higher value crop. A crude test for this hypothesis would be to check concurrently the three parameters – area, production and value – available.

3.4 Area vs. Production

3.4.1 In many States, the decrease in area is not associated with a decline in the production, implying the use of high yielding varieties of the crop. The crop wise list of such States is as under:

Coarse Cereals	Assam, Himachal Pradesh, Odisha
Cotton	Mizoram, Tripura, Uttar Pradesh
Pulses	Maharashtra, Odisha, Tamil Nadu
Sugar	Haryana, Himachal Pradesh, Punjab, West Bengal

3.5 Value vis-à-vis area and production

3.5.1 To compare values vis-à-vis area and production, firstly the value has been deflated using the corresponding price deflator (WPI), so as to neutralize the effect of inflation. In certain States, it is observed that though the area and consequently the production has shown a steady decline, the deflated value shows an increase. In the case of Coarse Cereals and Pulses, this can be assumed to be either due to the substitution by another crop of the same group or better primary market prices. The crop wise list of such States is as under:

Coarse Cereals	Andhra Pradesh, Bihar, Gujarat, Karnataka, Punjab, Tamil Nadu
Cotton	Assam, Haryana, Karnataka, Punjab
Oil Seed	Assam, Gujarat, Haryana, Kerala, Himachal Pradesh, Tamil Nadu
Paddy	Assam, Odisha, Rajasthan
Pulses	Gujarat, Madhya Pradesh, Punjab, Uttar Pradesh, West Bengal

Sugar	Karnataka, Odisha
Wheat	Himachal Pradesh, Madhya Pradesh

3.6 Yield Rates

3.6.1 Along with measuring the value and quantity of production it is essential to measure the yield rates of different crops across states in order to quantify the productivity of agriculture in that state/region. This section measures the trends in the yield rate of different crops in the respective top ten producing states.

3.6.2 Uttar Pradesh, the highest pulses producing state, also has one of the highest productivity/ yield rate; however this has been declining over the years. Madhya Pradesh, the next highest state in terms of production share, has the highest productivity, and after a slump in the middle, has picked up substantially in recent years. Karnataka, which produced roughly 5% of India's total pulses output, has the lowest productivity, at only 377 kgs/hectare.

Table 3.8: Yield Rate of Pulses (Kg/Hectares)

STATES/UT	Years			
	1993-94	1997-98	2002-03	2006-07
Andhra Pradesh	434	330	506	679
Bihar	739	731	804	722
Gujarat	605	685	469	593
Karnataka	414	295	337	377
Madhya Pradesh	670	655	574	780
Maharashtra	642	364	577	602
Rajasthan	322	600	269	462
Uttar Pradesh	875	830	822	725
West Bengal	635	688	695	703
All India	598	567	543	612

3.6.3 Both MP and Rajasthan, the highest oilseed producing states, are also the one who have the highest and continuously rising yield rates. However, the most noteworthy is Tamil Nadu, which produces nearly 7% of India's oilseeds, but had a yield rate more than four times the least productive state of Karnataka.

Table 3.9: Yield Rate of Oilseeds (Kg/Hectares)

STATES/UT	Years			
	1993-94	1997-98	2002-03	2006-07
Andhra Pradesh	893	548	543	609
Gujarat	521	1312	603	908
Karnataka	604	551	535	478

Kerala	563	692	483	889
Madhya Pradesh	890	917	611	955
Maharashtra	825	531	947	963
Rajasthan	666	746	716	1146
Tamil Nadu	1446	1476	1283	1829
Uttar Pradesh	828	581	749	837
West Bengal	781	761	837	918
All India	799	816	691	916

3.6.4 India is a large producer of sugar, for which sugarcane is the most important input. Uttar Pradesh and Maharashtra alone accounted for 60% of India's sugar output. UP, with 42% share, had a below average sugarcane yield rate and Maharashtra was only slightly above the all-India level. Almost all the states have experienced a decline or stagnation in sugarcane yield rate.

Table 3.10: Yield Rate of Sugarcane (Kg/Hectares)

STATES/UT	Years			
	1993-94	1997-98	2002-03	2006-07
Andhra Pradesh	76732	72607	66182	82167
Bihar	36680	45925	42130	45953
Gujarat	79688	71735	69351	73037
Haryana	57630	53169	56349	68429
Karnataka	88499	91455	84885	87944
Madhya Pradesh	20376	38574	39872	43639
Maharashtra	81056	83042	74375	74898
Punjab	61169	56746	60325	60808
Tamil Nadu	104217	106731	92446	105123
Uttar Pradesh	59110	65115	56281	59626
All India	67120	71134	63576	69022

3.6.5 Like sugarcane, wheat production is also dominated by 2 states, namely UP and Punjab, with nearly 55% share. Here too, UP's yield rates are only average, whereas Punjab, which benefitted tremendously from the green revolution of the late 60's has a yield rate far exceeding the all-India average. Haryana, the third highest producing state also has very high yield rates and these have increased substantially since 1993-94.

Table 3.11: Yield Rate of Wheat (Kg/Hectares)

STATES/UT	Years			
	1993-94	1997-98	2002-03	2006-07
Bihar	2105	2337	1896	1908
Gujarat	1905	2373	1966	2498
Haryana	3619	3660	4053	4232
Madhya Pradesh	1631	1573	1456	1835
Maharashtra	1402	898	1295	1325
Punjab	4011	3853	4200	4210
Rajasthan	1719	2501	2709	2751
Uttar Pradesh	2306	2495	2596	2721
West Bengal	2060	2206	2189	2282
All India	2380	2485	2610	2708

3.6.6 Rice or paddy is one of the most important agricultural products in India, both for domestic consumption as well as exports. The state with the highest yield rate, Punjab is also the state with one of the highest shares in paddy production. On the other hand, UP which produced nearly 13% of the country's rice, once again had a yield rate much lower than the country average. While Tamil Nadu's productivity has been increasing over time, its share in production of rice has declined significantly.

Table 3.12: Yield Rate of Rice (Kg/Hectares)

STATES/UT	Years			
	1993-94	1997-98	2002-03	2006-07
Andhra Pradesh	2696	2431	2596	2984
Assam	1331	1359	1471	1332
Bihar	1295	1395	1419	1486
Karnataka	2317	2374	2070	2470
Odisha	1452	1380	767	1534
Punjab	3507	3465	3510	3868
Tamil Nadu	2927	3050	2359	3423
Uttar Pradesh	1902	2148	1841	1879
West Bengal	2061	2243	2463	2593
All India	1888	1900	1744	2131

3.6.7 After agriculture, the textiles sector is the largest employment generator in the country, thus the importance of cotton cannot be underscored. Gujarat and Maharashtra, the hub of textile production in India, are also the largest producers of cotton, together accounting for 52% of the share. However, while Gujarat has a high and increasing yield rate, Maharashtra's yield rate of

cotton is one of the lowest among the states, and is significantly lower than the India average of 421 kgs/hectare. Punjab, with 12% share in production, had the highest yield rate in 2006-07.

Table 3.13: Yield Rate of Cotton (Kg/Hectares)

STATES/UT	Years			
	1993-94	1997-98	2002-03	2006-07
Andhra Pradesh	315.0	247.7	229.8	381.5
Gujarat	245.0	355.9	175.2	625.0
Haryana	339.4	300.8	340.7	581.8
Karnataka	230.3	245.6	143.2	275.8
Madhya Pradesh	146.2	167.9	118.6	220.5
Maharashtra	180.1	94.9	157.6	252.7
Odisha	160.0	278.2	287.6	362.5
Punjab	446.1	220.0	410.0	750.0
Rajasthan	275.1	228.7	111.2	363.1
Tamil Nadu	316.3	267.2	187.8	374.4
All India	249.4	208	191.1	420.7

3.6.8 It is thus evident, that while yield rates are an important indicator of productivity, they alone do not determine the overall production. While some of states, like Punjab and Haryana, have high production as well as yield rates, states such as Uttar Pradesh, have high production owing merely to the large area under cultivation and not yield rates. This is particularly surprising since UP has a significantly large cultivated area under irrigation.

Table 3.14: Percentage of Gross Irrigated Area to Gross Cultivated Area

STATES/UT	Years				
	2004-05	2005-06	2006-07	2007-08	2008-09
Andhra Pradesh	39.80%	44.90%	47.40%	46.30%	48.70%
Assam	4.40%	3.60%	3.80%	3.70%	3.80%
Bihar	56.70%	58.50%	60.20%	60.80%	60.90%
Chhattisgarh	23.00%	23.90%	25.90%	26.50%	27.00%
Gujarat	22.00%	41.40%	44.70%	45.70%	45.60%
Haryana	84.60%	83.70%	85.40%	58.70%	85.30%
Himachal Pradesh	19.20%	19.70%	19.80%	19.70%	19.70%
Jammu and Kashmir	41.10%	41.60%	40.80%	40.80%	41.40%
Jharkhand	10.30%	10.10%	14.00%	9.40%	9.70%
Karnataka	26.00%	27.90%	29.00%	29.40%	31.90%
Kerala	15.20%	15.40%	16.80%	16.50%	17.00%
Maharashtra	18.10%	18.20%	19.10%	19.60%	19.00%
Madhya Pradesh	30.70%	30.00%	32.50%	32.20%	32.50%

Odisha	30.90%	33.60%	35.80%	36.70%	35.00%
Punjab	97.10%	97.60%	97.50%	97.70%	97.60%
Rajasthan	33.70%	36.00%	37.00%	36.40%	34.70%
Tamil Nadu	52.40%	56.30%	56.60%	55.90%	58.30%
Uttar Pradesh	74.20%	75.00%	75.60%	75.60%	76.40%
West Bengal	56.10%	56.20%	56.30%	56.90%	56.20%
INDIA	42.38%	43.59%	45.07%	45.05%	45.32%

3.6.9 On the other hand, states like Maharashtra which are high producers of crops such as sugarcane, cotton and oilseeds also have low yields as well as low proportion of irrigated area.

3.7 Scenario in the coming years

3.7.1 Even if it is assumed that the average growth as in the previous Plan period is continued, the production figures show that these are on track with the targeted growth rate of the Twelfth Five Year Plan, at the national level. However, due to the divergence between the States, more detailed analysis needs to be done by factoring the inputs, like irrigation, availability and use of latest technologies, etc. to give the true picture of the current and future at the State Level.

CHAPTER-IV

INTERSTATE DIFFERENTIALS IN PHYSICAL INFRASTRUCTURE

4.1 Introduction

4.1.1 There is no denying that infrastructure development is one the most critical aim of every nation's economic policy. The direct relationship between physical infrastructure and economic growth is also well documented. From the very beginning of the planning process in India, the importance of heavy industries and infrastructure has been realized, and its growth aggressively pursued. The Eleventh plan recognized the severe constraint that underdeveloped infrastructure poses on economic growth, and thus proposed massive expansion in infrastructure services through Public-Private Partnership (PPP). The plan stressed on building and strengthening rural and urban infrastructure with the objective of poverty reduction and inclusive growth, the central mandate of the Eleventh Plan. While most of the programs served to enhance existing initiatives, many new programs were introduced. It has been estimated that from 5.7 percent of the GDP at the start of the Eleventh Plan, total investment in infrastructure projects, including electricity, telecommunications, roads, ports, oil and gas and irrigation, increased to an impressive 8 percent at the end of the Eleventh Plan period. However, this growth too has not been uniform, with sectors such as railways, roads, ports and electricity falling short of targets.

4.1.2 The draft approach paper to the Twelfth Five Year Plan recognized that rapid urbanization across the country will begin to exercise increased burden on urban infrastructure services in the near future. With this in mind the approach paper stressed on the need to engage in long-term and sustainable urban planning. While private expenditure on infrastructure is forthcoming in urban areas as well as in resource rich rural areas, backward and remote areas are often left behind because of their inability to provide adequate returns on investments to private investors. The approach paper stressed on the fact, that a large part of the public services in these remote areas will have to be met through expansion of public expenditure. Infrastructure is an important and critical determinant of growth and development in rural areas, and for the promotion of the same, many programmes are already in operation. Primary among these in the Indira Awas Yojana (IAY), Pradhan Mantri Gramin Sadak Yojana (PMGSY), Integrated Watershed Development Programme (IWDP), rural electrification including the Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY), National Rural Health Mission (NRHM) and the all-encompassing Bharat Nirman.

4.1.3 It is envisaged that fixed capital formation by the public sector be increased from 8.3 percent of the GDP in the Eleventh Plan to an average of 9.1 percent in the Twelfth Plan, with the additional 0.8 percent directed to expansion of the infrastructure sector. For the sector itself, the Plan proposes an increase in infrastructure investment from 8 percent of GDP in base year (2011-12) to 10 percent of GDP in 2016-17. For this the total investment on the sector would have to be

to the tune of Rs. 4.5 lakh crores during the Twelfth Plan period. While private and PPP investment in infrastructure was only 30 percent of the total expenditure in the Eleventh Plan, to meet targets, the Twelfth Plan estimates an increase in share of private investment in infrastructure to 50 percent.

4.2 State Disparities in Infrastructure: A Review

4.2.1 While there is no disputing the central place that infrastructure development has occupied in Indian economic policy, despite these efforts there continue to be wide disparities across states and regions on various parameters of infrastructure development, which contribute to the growing disparity in state income and consequently poverty. However the absence of an official infrastructure index makes interstate comparison as well as policy making difficult. This section briefly highlights previous attempts at formulation of state-wise infrastructure index, both within and outside the government, as well as the scope for further work in the area.

4.2.2 The Eleventh Finance Commission undertook comparison of States' infrastructure development through the use of Index of Social and Economic Infrastructure. The index classifies physical infrastructure into five sectors- Agriculture, Communication, Banking, Electricity and Transport. Different variables are studied under each of the sectors, which are:

1. Agriculture
 - Proportion of net irrigated area to Gross cultivated area
2. Communications
 - Per capita availability of telephone
 - Per capita availability of post office
3. Banking
 - Commercial bank branches
 - Regional rural bank branches
 - Cooperative bank branches
4. Electricity
 - Per capita installed capacity
 - Per capita consumption of electricity
 - Percentage of villages electrified
 - Length of transmission and distribution lines per km²
5. Transport
 - Total road length per km²
 - Surfaced road length per km²
 - Registered motor vehicles per km²
 - Railroad length per km²

4.2.3 **Table 4.1** compares 19 major states on two parameters- the Index of Infrastructure and per capita income. It comes as no surprise that most states with a higher index of infrastructure also exhibit higher levels of per capita income. The only exception is the state of Himachal Pradesh which has a moderate index of infrastructure but relatively high per capita income levels.

Table 4.1 Finance Commission Index of Social & Economic Infrastructure (1999-2000)

State	Inter-state comparison on the basis of	
	Index of Infrastructure	Per capita Income of the state (Rank)
Andhra Pradesh	103.3	11
Arunachal Pradesh	69.71	13
Assam	77.72	16
Bihar	81.33	19
Goa	200.57	1
Gujarat	124.31	8
Haryana	137.54	4
Himachal Pradesh	95.03	5
Karnataka	104.88	9
Kerala	178.68	7
Madhya Pradesh	76.79	15
Maharashtra	112.80	3
Odisha	81.00	17
Punjab	187.57	2
Rajasthan	75.86	14
Sikkim	108.99	12
Tamil Nadu	149.1	6
Uttar Pradesh	101.23	18
West Bengal	111.25	10

Source: Infrastructure Index-Eleventh Finance Commission Report, Per capita income of States-CSO.

4.2.4 There also exists a direct negative relationship between infrastructure development and levels of poverty. **Table 4.2** shows that, in general, the states with higher value of Infrastructure Index have higher value of per capita income and lower level of poverty ratio. The rank correlation between Poverty Ratio and Per Capita Income of states is highest followed by the rank correlation between Infrastructure Index and Per Capita Income and rank correlation between Infrastructure Index and Poverty Ratio. The relative strengths of these correlations suggest that infrastructure

affects poverty mainly through its effect on the level of economic activity (i.e. per capita income) and perhaps not directly.

Table 4.2: Rank correlation between Finance Commission Infrastructure Index, Poverty Ratio and Per capita Income of States-1999-2000

Rank Correlation	Value
1. Between Infrastructure Index and Poverty Ratio	0.6386
2. Between Poverty Ratio and Per Capita Income	0.8193
3. Between Infrastructure Index and Per Capita Income	0.7895

4.2.5 One of the earliest non-governmental attempts at the formation of an infrastructure index was carried out by the Centre for Monitoring of Indian Economy's (CMIE) Relative Infrastructure Development Index (CMIE, 2000). The CMIE assessed 13 indicators for the formation of a composite development index, bunched on seven major infrastructure sectors:

1. Transport Facilities
 - Surfaced roads per 100 sq. km. area;
 - Unsurfaced roads per 100 sq. km. area;
 - Railway route length per 100 sq. km. area;
 - Handling capacity of major ports
2. Energy
 - Percentage of villages electrified;
 - Per capita electricity
3. Irrigation
 - Gross cropped
4. Banking Facilities
 - Bank branches per lakh population;
5. Communication Facilities
 - Post offices per lakh population;
 - Telephone lines per 100 persons;
6. Education Facilities
 - Primary schools per lakh population;
7. Health Facilities
 - Primary health centres per lakh population;
 - Hospital beds per lakh population.

4.2.6 Each of these seven major sectors was assigned weights in keeping with their importance and contribution towards economic development. The weights allotted were: transport facilities- 26%, energy- 24%, irrigation- 20%, banking facilities- 12%, communication facilities- 6%, education facilities- 6% and health facilities- 6%. Using the above indicators and weights a composite development index was prepared for 15 major states of India, the details of which are given in **Table 4.3**, below.

Table 4.3: CMIE Relative Infrastructure Development Index

State	1980-81	1991-92	1996-97
Andhra Pradesh	98.1	96.8	93.1
Bihar	83.5	81.7	77.8
Gujarat	123	122.9	121.8
Haryana	145	143	137.2
Karnataka	94.8	96.5	94.3
Kerala	158.1	158	155.4
Madhya Pradesh	62.1	71.5	74.1
Maharashtra	120.1	109.6	111.3
Odisha	81.5	95	98.9
Punjab	207.3	193.4	185.6
Rajasthan	74.4	82.6	83.9
Tamil Nadu	158.6	145.9	138.9
Uttar Pradesh	97.9	102.3	103.8
West Bengal	110.6	92.1	90.8
India	100	100	100
Coefficient of Variation	34.70%	30.49%	28.80%

Source: CMIE (2000) quoted in Ahluwalia (2000)¹

4.2.7 The disparities across states are clearly evident in the rankings. The index for Punjab, the best performing state, was more than two times the all-India average and nearly 3.4 times the index for the worst performing state, Madhya Pradesh. Over the years the disparity has reduced, albeit only slightly as is evident from the coefficient of variation which has reduced from 34% to 28.8%.

4.2.8 Since 2003, the **India Today** magazine has been conducting a yearly study titled '**State of States**' in order to comparatively evaluate the states on levels of governance. States are compared on various parameters such as budget and prosperity, agriculture, consumer markets, primary education, primary health, law & order, infrastructure and investment environment and marked out of ten. The latest such survey was conducted in 2010. The survey measured the states based on

¹ <http://www.planningcommission.gov.in/aboutus/speech/spemsa/msa007.pdf>

performance, with data collected from official data sources at the Central level. Moreover, to facilitate a fair comparison, the states are divided into two groups- big and small states. Weights are obtained using principal component analysis (PCA) and for overall performance index, equal weights aggregation is used. India Today uses the following parameters to compare the states:

1. Prosperity and Budget
 - a. Percentage of population above poverty line
 - b. Percentage of urban population
 - c. Per capita capital expenditure
 - d. Inflation
 - e. Per capita debt
 - f. Per capita GSDP
 - g. Per capita revenue of SEB

2. Law and Order
 - a. Number of policemen per lakh people
 - b. Ratio of cases filed to pending cases in district and lower courts
 - c. Share of murders, kidnappings, rapes and molestations to total cognizable crimes

3. Health
 - a. Infant mortality rate (IMR)
 - b. Ratio of male IMR to female IMR
 - c. Percentage of births assisted by trained personnel
 - d. Percentage of homes having tap water as principal source of water
 - e. Registered doctors per million population
 - f. Sex ratio
 - g. Per capita expenditure on health and family welfare by state government

4. Education
 - a. Literacy rate
 - b. Proportion of 10-plus children having completed primary school
 - c. Ratio of boys to girls in elementary school
 - d. Teacher-pupil ratio
 - e. Expenditure on elementary education per 6-14 year old

5. Consumer Market
 - a. Households owning TVs
 - b. Number of affluent households in rural and urban areas
 - c. Per capita deposits in banks
 - d. Per capita ownership of two-wheelers

6. Agriculture
 - a. Percentage of cultivates area under cash-crops
 - b. Agriculture GSDP per rural population
 - c. Foodgrain yield
 - d. Loans extended to farmers
 - e. Net irrigated area

7. Infrastructure
 - a. Percentage of homes with electricity
 - b. Percentage of villages connected with pucca roads
 - c. Per capita road length
 - d. Bank branches
 - e. LPG connections
 - f. Post-offices
 - g. Telephones

8. Investment
 - a. Per capita capital expenditure
 - b. Commercial bank credit and gross capital formation in manufacturing
 - c. Ratio of factories to number of disputes
 - d. Ratio of industrial workets to urban 15-59 population
 - e. Percentage of sick SSIs

4.2.9 **Table 4.4** ranks the states on their composite index for five consecutive years. Also available, is the 2010 index value for the 30 states. A closer analysis of the index values shows the wide disparities between the states. The composite index for top three performing states Himachal Pradesh, Punjab and Kerala far outstrips the same for the worst performers- Assam, Jharkhand and Assam.

Table 4.4: India Today Ranking Of States On The Basis Of Composite Index

Big States								
State	Value	Rank						
	2010	2010	2009	2008	2007	2006	2005	2004
Andhra Pradesh	3	10	10	9	10	10	11	11
Assam	1.7	18	15	13	14	16	16	15
Bihar	1.3	20	20	20	20	20	20	20
Chhattisgarh	1.7	17	16	16	16	15	15	16
Gujarat	3.5	5	5	5	5	7	7	7

Haryana	3.5	6	6	6	8	5	5	5
Himachal Pradesh	4.5	1	2	3	3	3	3	3
Jammu & Kashmir	3.4	8	9	11	11	11	10	10
Jharkhand	1.4	19	19	19	19	19	19	19
Karnataka	3.4	7	7	7	7	8	8	8
Kerala	3.9	4	4	4	2	2	2	2
Madhya Pradesh	2.1	14	13	14	13	14	14	12
Maharashtra	3.4	9	8	8	6	6	6	6
Odisha	1.9	15	17	17	18	18	18	18
Punjab	4.2	2	1	1	1	1	1	1
Rajasthan	2.3	12	12	12	12	12	12	13
Tamil Nadu	4	3	3	2	4	4	4	4
Uttar Pradesh	1.8	16	18	18	17	17	17	17
Uttarakhand	2.9	11	11	10	9	9	9	9
West Bengal	2.1	13	14	15	15	13	13	14

Small States								
State	Value	Rank						
	2010	2010	2009	2008	2007	2006	2005	2004
Delhi	6.4	1	1	2	3	3	2	2
Puducherry	6.3	2	2	3	1	1	3	1
Goa	5.1	3	3	4	2	2	1	4
Sikkim	4.9	4	5	5	4	4	5	5
Mizoram	4.7	5	4	1	5	5	4	3
Arunachal Pradesh	3.7	6	6	6	7	8	6	6
Manipur	2.9	7	8	8	9	7	7	8
Nagaland	2.9	8	7	7	6	6	8	7
Tripura	2.3	9	9	9	8	9	9	9
Meghalaya	2.1	10	10	10	10	10	10	10

4.2.10 The India Today index gives values and rankings for states on the basis of both the composite index value as well as for each of the eight separate components. *Table 4.5* gives the rankings for infrastructure until 2007, as well as the value of the index in 2007. Once again the wide disparity between states is clearly evident and with Punjab and Himachal Pradesh, the most prosperous states, with an index of infrastructure which is 3.6 times the value for the worst performing state Bihar. This disparity is also evident in a comparison of the smaller states, with a large gap in the index between the best performing states Delhi and Goa and the worst performer, Meghalaya. Not surprisingly, the states with lowest infrastructure are also the ones with high levels of poverty and the reverse is true of states with a high index of infrastructure. This corroborates with the analysis done using the Finance Commission Index of Infrastructure (see *Table 4.2*).

Table 4.5: India Today Ranking Of States On The Basis Of Infrastructure Index

Big States						
State	Value	Rank				
	2007	2007	2006	2005	2004	2003
Andhra Pradesh	2.58	10	10	11	11	10
Assam	1.71	17	17	15	15	16
Bihar	1.29	20	20	20	20	17
Chhattisgarh	1.79	14	14	17	16	NA
Gujarat	2.65	9	9	7	5	7
Haryana	2.76	4	6	4	6	5
Himachal Pradesh	3.4	2	2	2	2	1
Jammu & Kashmir	2.44	11	11	8	10	8
Jharkhand	1.52	19	19	19	19	NA
Karnataka	2.67	8	7	10	9	9
Kerala	3.14	3	3	6	7	3
Madhya Pradesh	2.08	12	12	13	13	12
Maharashtra	2.69	6	4	3	3	6
Odisha	1.77	16	16	18	18	15
Punjab	3.4	1	1	1	1	2
Rajasthan	2.06	13	13	12	12	11
Tamil Nadu	2.68	7	5	9	8	4
Uttar Pradesh	1.68	18	18	16	17	14
Uttarakhand	2.69	5	8	5	4	NA
West Bengal	1.77	15	15	14	14	13
Small States						
State	Value	Rank				
	2007	2007	2006	2005	2004	2003
Delhi	4.61	1	1	1	1	2
Goa	4.58	2	2	2	2	1
Puducherry	3.24	3	3	3	3	NA
Mizoram	2.94	4	4	4	4	NA
Sikkim	2.86	5	5	5	5	NA
Arunachal Pradesh	2.46	6	6	6	6	NA
Manipur	2.19	7	7	7	7	NA
Tripura	2.09	8	9	9	8	NA
Nagaland	2.07	9	8	8	9	NA
Meghalaya	1.92	10	10	10	10	NA

Table 4.6: Rank correlation between India Today Infrastructure Index (2007), Poverty Ratio (2009-10) and Per capita Income of States (2007-08)

Rank Correlation	Value
1. Between Infrastructure Index and Per Capita Income	0.8623
2. Between Infrastructure Index and Poverty Ratio	0.8727
3. Between Poverty Ratio and Per Capita Income	0.7390

4.2.11 The Plan Finance and Resources Division of Planning Department of Government of Karnataka also undertook an analysis of interstate economic indicators. Various indicators were used such as teledensity, airport traffic, post offices in rural and urban areas, small savings in post offices, performance of state road transport authorities, railway route length etc. Since the indicators are disparate, it is difficult to formulate a comprehensive index or ranking of the states on the basis of this data. The detailed tables are annexed.

4.2.12 The Ministry of Statistics and Programme Implementation (MOSPI) has recently given clear and comprehensive guidelines relating to infrastructure statistics, though concrete data or outcomes of these guidelines is yet to be seen. The guidelines on Infrastructure Statistics uses criterion such as natural monopoly; high-sunk costs or asset specificity; non-tradability of output; non-rival (up to congestion limits) in consumption; possibility of price exclusion; and bestowing externalities on society to classify the following areas as components of infrastructure:

‘Construction, Electricity generation, transmission and distribution, Gas generation and distribution through pipes, Water works and supply, Non-conventional energy generation and distribution, Railway tracks, signalling system and stations, Roads and bridges, runways and other airport facilities, Telephone lines and telecommunications network, Pipelines for water, crude oil, slurry, etc., Waterways, Port facilities, Canal networks for irrigation, Sanitation and sewerage’

4.2.13 A detailed methodology for the formulation of an official infrastructure index, with different weights to each sector and an index normalized to 100 in the base year is given in the guidelines. **Table 4.7** lays out the detailed methodology recommended by MOSPI for the preparation of the Infrastructure Index.

Table 4.7: MOSPI Guidelines for Infrastructure Index

<p><i>Infrastructure Index</i></p> <p>1. The proposed Infrastructure Index will be based on items, which will be expected to have strong correlation with productive activity. Bearing this in mind the following illustrative</p>

activities are proposed for inclusion in the Index:

- (i) Length of railway tracks (X_1)
- (ii) Length of roads of appropriate quality (X_2)
- (iii) Length of runaways (X_3)
- (iv) Number of berths at ports (X_4)
- (v) Number of telephone connections (X_5)
- (vi) Transmission of electricity: length of cables (X_6)
- (vii) Generation of electricity (X_7).

2. The ratio of the numerical value of an infrastructure facility (say in terms of kilometres of railway tracks) in year t to its numerical value in the base year (i.e. year 0) will be denoted by I_k ($k=1\dots7$). Thus,

$$I_k = \frac{X_k^t}{X_k^0}$$

(where X_k^t and X_k^0 denote values of X_k at time points 't' and '0' respectively).

3. The creation of an index based on the seven illustrative items listed above will require weights to be attached to each of the components. Once these weights have been determined the index may be computed by a simple weighted aggregation. A possible way of determining weights is to base them on the value of capital stock of each of the components. It may be noted that valuation of capital stock is an important data collection activity, which will have to be undertaken. Denoting the value of capital stock of each facility as ' k_i ', $i=1\dots7$, the weight, w_i , for each will be given by:

$$w_i = \frac{k_i}{\sum_{i=1}^7 k_i} \quad i = 1 \dots 7$$

4. The value of capital stock and the associated weight will have to be computed for a base year, which would need to be periodically revised, so as to reflect the changing pattern of infrastructure investment in the country. Once the weights have been computed, the aggregation will proceed as:

$$\text{Infrastructure Index} = w_1 I_1 + w_2 I_2 + w_3 I_3 + w_4 I_4 + w_5 I_5 + w_6 I_6 + w_7 I_7.$$

5. As is usual in the creation of an index, the Infrastructure Index will be normalised to equal 100 in the base year. For subsequent years, a change in any one or more of the ratios I_k will be reflected in a change in Infrastructure Index.

4.2.14 While admitting that in the beginning the index will have to be modest in coverage, the guidelines stress on the need for regular updating of the base years of the index as well gradually increasing the scope of the index to include more and more infrastructural facilities.

4.3 Index Attempted by the Working- Group

4.3.1 In the first meeting of the Working Group on Growth and Development at sub-national level it was decided that with regard to the TOR pertaining to infrastructure development at state level only physical infrastructure will be analyzed. Consequently some indicators were suggested that could possibly be included in the index. While data on some of the said indicators was available easily, it was felt that a comprehensive state-wise comparison was not possible with these data. It was recognized that while the need for a comprehensive infrastructure index was widely felt and recognized, especially to facilitate inter-state comparison, the absence of an officially endorsed Index was a big deterrent for policy formulation. Using the guidelines provided by MOSPI, the working group initiated the compilation of an Infrastructure Index. Wherever data was not freely available, relevant departments within MOSPI and Planning Commission were contacted.

4.3.2 In the second meeting of the working group, it was decided that six core indicators would be selected for preparation of the infrastructure index and the indicators would be weighted using the share of that sector in the state's GSDP at current prices. However, it was felt that using different weights for each state will not make the index comparable across states, hence it was decided that the share of the respective sectors in the all India GSDP at current prices would be considered. Finally, the group agreed on the following indicators:

4.3.3 *Scenario 1:*

The indicators are assigned a weight equal to the share of the respective sectors in the all-India GSDP at current prices.

- i. **Agriculture:** Percentage of Gross Irrigated Area to Gross Cultivated Area (weighted using share of 'agriculture' in Gross Domestic Product)
- ii. **Communication:** Tele-Density per 1000 population (weighted using share of 'telecommunication' in Gross Domestic Product)
- iii. **Banking:** Number of Scheduled Commercial Bank branches and Cooperative Bank branches per 1000 population (weighted using share of 'banking and insurance' in Gross Domestic Product)
- iv. **Electricity:** Electricity Consumption per 1000 population (weighted using share of 'electricity, gas and water supply' in Gross Domestic Product)

- v. **Roadways:** Total Surfaced Road Length per 1000 km² (weighted using share of ‘transport by other means’ in Gross Domestic Product)
- vi. **Railways:** Railway Route Length per 1000 km² (weighted using share of ‘railways’ in Gross Domestic Product)

4.3.4 The Working Group, in it’s another attempt to calculate the Infrastructure Index, added a set of indicators to the above mentioned 6 broad categories. The new Index thus takes into account the following 12 indicators grouped into 6 broad categories:

1. **Agriculture:**

- i. Percentage of Gross Irrigated Area to Gross Cultivated Area.

2. **Communication:**

- i. Telephone Density per 1000 population.
- ii. Number of Post Offices per 1000 population.

3. **Banking:**

- i. Number of Scheduled commercial Bank branches and Cooperative Bank branches per 1000 population.

4. **Electricity:**

- i. Electricity Consumption per 1000 population.
- ii. Percentage of Villages Electrified.
- iii. Installed Electricity Generation Capacity per 1000 population.
- iv. Length of Transmission and Distribution Line per 1000 km².

5. **Roadways:**

- i. Length of Surfaced Highways per 1000 km².
- ii. Length of Other Surfaced Roads per 1000 km².
- iii. Registered Motor Vehicles in 1000s per 1000 km².

6. **Railways:**

- i. Railway route length per 1000 km².

4.3.5 The computation of Infrastructure Index based on the above mentioned 12 indicators is done using three different sets of weights which is described in Scenario 2, Scenario 3 and Scenario 4 below:

4.3.6 **Scenario 2:**

It was decided that equal weights would be assigned to each of the 12 indicators irrespective of the broad category.

4.3.7 **Scenario 3:**

The broad category weights assigned in this scenario are same as the weights assigned by Finance Commission for the year 1999-2000. However the indicators within the broad category are assigned equal weights.

4.3.8 **Methodology**

- For each of the indicators the value is taken state wise (a), as well as the all-India value (b).
- To normalize the indicator, divide the state value, by the all India value to get the relative value of the indicator for the state [(a)/(b) → (c)]
- For Un-Weighted Index, simply take the average of the relative values (c) of the indicators.
- For Weighted Index, Multiply the relative value (c) by the share of that sector (d) to get weighted indicator value [(c)*(d) → (e)] and Finally sum up all the weighted indicator values (e) and divide by the sum of the weights (d) to get final index value [$I = \frac{\sum e}{\sum d}$] for that year.

4.3.9 **Scenario 4:**

Weights for each of the Broad indicators are computed using Principal Component Analysis (PCA).

4.3.10 **Methodology**

- The 12 indicators are grouped into 5 broad categories viz. Agriculture, Communication, Banking, Electricity and Transport. Railways and Roadways are clubbed together into Transport category.
- To calculate the weights for different categories of indicators Principal Component Analysis (PCA) is done. First the dataset was standardized, (by subtracting the mean value and dividing by the standard deviation for each variable).
- For broad category with more than one indicator such as communication, electricity and transport, weights for indicators are computed through PCA within the category to get a single index.
- Finally, PCA technique was applied across the 5 indices to get weights for the five broad categories.

4.3.11 Based on the two methodologies mentioned above, the detailed index values were computed for 21 Indian states. The value of the all-India index is 100 and the state index value represents the position of the state relative to the all-India index value of 100. The analysis has been carried out for all the 4 Scenarios described above and the calculations are based on the data for the year 2008-09. However it may be noted that data for three sub indicators namely, Number of Post Offices, Surfaced Road Length and Railway Route Length, is taken for the year 2007-08 due to non-availability of the data for the year 2008-09.

4.3.12 The Infrastructure Index values hence computed for Scenario 1, Scenario 2, Scenario 3 and Scenario 4 are given in **Table 4.8** below:

**Table 4.8: Index of Infrastructure compiled by the Working Group, 2008-09
(All 4 Scenarios)**

States	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Andhra Pradesh	112.56	111.14	110.23	112.84
Assam	38.15	60.57	60.32	62.02
Bihar	101.58	75.65	78.79	61.86
Chattisgarh	62.81	71.72	70.78	70.14
Goa	204.29	212.94	233.20	215.11
Gujarat	116.03	129.64	126.37	124.72
Himachal Pradesh	106.45	113.96	129.93	164.20
Haryana	160.24	151.90	152.73	136.43
Jharkhand	39.03	51.28	56.29	52.09
Jammu & Kashmir	82.30	64.12	74.51	81.40
Kerala	173.23	220.12	193.44	197.36
Karnataka	105.34	119.90	117.94	124.35
Maharashtra	88.27	108.88	108.47	115.56
Madhya Pradesh	72.72	75.63	77.84	78.91
Odisha	72.64	73.21	76.52	81.83
Punjab	194.31	189.68	192.58	175.81
Rajasthan	79.94	78.86	79.80	84.11
Tamil Nadu	145.77	167.99	155.20	152.24
Uttar Pradesh	130.89	108.52	106.67	86.99
Uttarakhand	107.03	101.10	110.78	118.38
West Bengal	106.93	117.14	112.25	97.01

4.3.13 Since Scenario 4 uses Principal Component Analysis to derive the weights for the indicators and hence compute the Infrastructure Index; it is comparable with the Finance Commission methodology. It also uses all the 12 indicators within the 5 broad categories unlike

Scenario 1, there by depicting more profound coverage in terms of development and enhancement of various aspects of physical infrastructure over – time. It is also observed in the computations that Scenario 4 not only results in an index value more representative of the degree of Infrastructural progress in India at Sub-National level but also lead to convergence of the so-derived State-Wise ranks with the Finance Commission Ranking of 1999-2000. **Table 4.9** given below lists the State-wise infrastructure index ranking for 2008-09 based on Scenario 1, 2, 3 and 4.

**Table 4.9: Working Group Index of Infrastructure – Ranking, 2008-09
(All 4 Scenarios)**

States	Scenario 1	Scenario 2	Scenario 3	Scenario 4	finance com. ranks 1999-2000
Andhra Pradesh	8	10	11	11	11
Assam	21	20	20	19	16
Bihar	13	15	15	20	19
Chattisgarh	19	18	19	18	
Goa	1	2	1	1	1
Gujarat	7	6	7	7	8
Himachal Pradesh	11	9	6	4	5
Haryana	4	5	5	6	4
Jharkhand	20	21	21	21	
Jammu & Kashmir	15	19	18	16	
Kerala	3	1	2	2	7
Karnataka	12	7	8	8	9
Maharashtra	14	11	12	10	3
Madhya Pradesh	17	16	16	17	15
Odisha	18	17	17	15	17
Punjab	2	3	3	3	2
Rajasthan	16	14	14	14	14
Tamil Nadu	5	4	4	5	6
Uttar Pradesh	6	12	13	13	18
Uttarakhand	9	13	10	9	
West Bengal	10	8	9	12	10

4.3.14 In comparison with the Finance Commission’s Infrastructure index for 1999-2000, while the bottom few states are relatively unchanged, there have been some new entrants among the top states. An important point to note is that the state of Kerala now occupies the second position in the state rankings as against a rank of 7 according to Finance Commission Index of 1999-2000. Buoyed by impressive indicators of road and rail density, Power, banking and teledensity, Kerala

now has an index value of over 193. Interestingly UP records massive improvement in ranking as per the index compiled by the Working Group. The fillip to UP has come from huge improvements in surfaced road length, railways route length, rural electrification and most importantly, irrigation. States of Gujarat, Himachal Pradesh, Karnataka, Odisha and Tamil Nadu have shown marginal improvement.

4.3.15 Among the states which experienced a deceleration in their ranking as compared to the Finance Commission index, is the state of Maharashtra which has been the flag bearer of India's development. It experienced a noticeable fall with its rank declining from 3 to 10, primarily because it fares poorly on indicators of road density, railway route length as well as irrigation. Haryana which was a fast developing state ranking at 4 according to the Finance Commission Index on 1999-2000, performed badly in the recent years particularly in road density and communication, witnessing a decline in its rank to 6 according to Working Group Computations. Even Assam experienced degradation in its rank from 16 to 19 due to the dismal performance of nearly all the sectors.

4.3.16 **Table 4.10** summarizes the Rank Correlation between the Infrastructure Indices (2008-09) for all the 4 scenarios, Per Capita Income (2008-09) and Poverty Ratio (2009-10). It is observed that the Rank Correlation between the 3 variables based on Scenario 4 Weights are highest.

Table 4.10 Working Group Rank Correlation between Infrastructure Index (2008-09), Constant Per Capita Income – PCI (2008-09) and Poverty Ratio (2009-10)

Rank Correlation	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Finance Commission (1999-2000)
Between Infrastructure Index and PCI	0.6494	0.7649	0.7870	0.8506	0.7895
Between Infrastructure Index and Poverty	0.6701	0.6532	0.7364	0.8208	0.6386
Between PCI and Poverty	0.7481	0.7481	0.7481	0.7481	0.8193

Chapter-V

Conclusion

1. To analyse the present status of regional indicators and data availability for better policy intervention during Twelfth Five Year Plan, Planning Commission constituted a steering committee on 'Estimation of Investment, its Composition and Trend and Issues relating to Growth and Development at Sub-national Level' on May 26, 2011. The mandate of this Steering committee was divided into two working groups namely 'Working Group on Estimation of Investment, its Composition and Trends' and 'Working Group on Issues relating to Growth and Development at Sub-national Level'. This report is in respect of the second working group.

2. As Gross State Domestic Product (GSDP) is one of the most important indicators of economic development of a State for which reasonably good quality data is available across all the States, it has been analysed to study structural shifts and growth pattern across different sectors of the economy across different states. For intra-state comparison the data on District Domestic Product (DDP) was analysed. For studying the growth scenario in agriculture, data on yield rates, seed quantity used, crop-wise irrigated area; and gross cultivated area was identified for analysis. For state level disparities in infrastructure, state-wise infrastructure indicators were studied and a basic infrastructure index was developed.

Assessment of State level growth

3. The data on per capita income measured in terms of per capita Net State Domestic Product at constant (2004-05) prices during the first and the terminal year of the Eleventh Plan shows that Bihar per capita income, which is the lowest among all the states, is one-third of the national per capita income. Maharashtra and Haryana emerged as the two highest per capita income states. Their per capita income is almost four to five times that of Bihar.

4. The Gross State Domestic Product (GSDP) data shows that the gains of rapid growth witnessed during the last ten years have not reached all parts of the country in an equitable manner. The coefficient of variation in GSDP has increased from 36% in 2004-05 to 41% in 2011-12 which indicates that income differential between more developed and relatively poorer states has widened during this period.

Inter and Intrastate disparity

5. The Eleventh Five Year Plan has disaggregated the monitorable targets at the national level into State level expectations so as to identify the extent to which progress has been achieved in various States.

6. Among the big states, Bihar, Maharashtra, Madhya Pradesh, Punjab, Uttar Pradesh and Uttarakhand achieved relatively strong growth with growth rates of GSDP in the Eleventh Plan exceeding the expectations set for them. However other bigger states like Andhra Pradesh, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Rajasthan and West Bengal lagged behind their set expectations. Most of the States of the North-East region outperformed their expected growth rate.

7. The states of Andhra Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Rajasthan, Chhattisgarh, Manipur and Assam emerged as top performers in Agriculture and achieved growth rates higher than their expected growth rates over the first 4 years of the Eleventh Plan, while many other states recorded lower than their expected growth such as Bihar, Haryana, Punjab, Gujarat, Goa, Jammu & Kashmir and Tamil Nadu. In the industrial sector only four big states, Bihar, Madhya Pradesh, Punjab and Uttarakhand, registered growth rates higher than their expected growth rate for the Eleventh Plan period. Once again, the North-Eastern states achieved high growth rates, compared to other bigger, and historically better performing states. For West Bengal and Assam, the industrial growth rate was merely 5.1% and 4.5% respectively as against the targets 10.5% and 8% set for the Eleventh Plan period. The services sector is where high growth was seen in almost all the states, with Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh and Uttar Pradesh far exceeding the set expectations. However, the performance of Andhra Pradesh, Karnataka and Kerala was marginally below their respective expectations.

8. To study intra-state differentials in income for better targeting of programmes and policies, data on District Domestic Product (DDP) has been analysed. The data on DDP is collected and computed by the Central Statistics Office (CSO), covering 522 districts in 1999-00 and 531 districts in 2004-05 and has been examined in this report. Limitation of this data is that it is not available for the latest years for all the states. Therefore, the impact of the steps that have been taken in the recent past for improving inequality among different regions within states could not be assessed.

9. The district income data shows that in 1999-00, Bihar, Odisha and Uttar Pradesh had less than 10% of districts with per capita income more than the all India average. In 2004-05, the position of many states remained unchanged. However, States like Rajasthan, Jharkhand, Assam, Maharashtra and Madhya Pradesh saw some worsening. The worst performing states are also the ones with the largest ratio between the highest and lowest per-capita income district. In Bihar, this ratio is highest in both the years followed by Uttar Pradesh. In both these states this ratio has increased over the period.

10. Using Coefficient of Variation, it is seen that inequality across districts has increased over the period 1999-00 to 2004-05, primarily in the states of Bihar, Odisha, Uttar Pradesh, West Bengal, Karnataka, Maharashtra and Haryana. Inequality is higher in states where incomes are lower on an

average, as compared to states which are relatively prosperous on the whole. It was also seen that in most of the major states, the inequality as observed in the household consumer expenditure has increased in both rural and urban areas during the period 2004-05 to 2009-10. At the all India level, the gap between the top 30 and the bottom 30 has narrowed slightly, predominantly over the last 5 years. What remains a cause of concern, however, is the huge gap between the ultra-rich and the ultra-poor in urban areas which has risen substantially over the past 15 years. This happening in the background of high growth rates points to the fact that growth may not have been inclusive and broad based.

Performance of Agriculture Sector

11. India's economic security continues to be predicted upon the farm sector even as its share in the country's GDP has declined. Even now, agriculture supports more than 50% of the population, as against about 75% at the time of independence. In the same period, the contribution of agriculture and allied sector to the Gross Domestic Product (GDP) at current prices has fallen from 61% to 18%. Around 51% of India's geographical area is already under cultivation as compared to 11% of the world average. The present cropping intensity of 136% registered an increase of only 25% since independence. Production performance of agriculture sector has followed an uneven path and large gaps have developed in productivity between different geographic locations across the country.

12. To examine the scenario of agriculture in the States, the state-wise data on Area, Production and Value of Output was analysed for the crops/crop groups- Paddy, Wheat, Coarse Cereals, Pulses, Oilseed, Sugar and Cotton for the years 1993-94 to 2008-09. It was seen that the States with the highest value of output of crops have not changed much over the years, i.e. from 1993-94 to 2008-09. A notable increase has been observed in the value of output in some of the States in the last five years- Andhra Pradesh in Coarse Cereals and Sugar, Rajasthan in Wheat, Gujarat in the case of Pulses.

13. Due to divergence between States, more detailed analysis needs to be done by factoring inputs, like irrigation, availability and use of latest technologies, etc. to give a more accurate picture of the current and future prospects for agriculture sector at the State Level.

Interstate Differentials in Physical Infrastructure

14. While infrastructure development occupies a central place in Indian economic policy, there continue to be wide disparities across states and regions on various parameters of infrastructure development. However the absence of an official and comprehensive infrastructure index makes interstate comparison as well as policy making difficult. There exists a direct negative relationship between infrastructure development and levels of poverty. The relative strengths of this correlation

suggest that infrastructure affects poverty mainly through its effect on the level of economic activity (i.e. per capita income).

15. The Eleventh Finance Commission undertook comparison of States' infrastructure development through the use of Index of Social and Economic Infrastructure. The index classifies physical infrastructure into five sectors- Agriculture, Communication, Banking, Electricity and Transport. More recently, the Ministry of Statistics and Programme Implementation (MOSPI) has recently given clear and comprehensive guidelines relating to infrastructure statistics and the preparation of an Infrastructure Index.

16. One of the earliest non-governmental attempts at the formation of an infrastructure index was carried out by the Centre for Monitoring of Indian Economy's (CMIE) Relative Infrastructure Development Index. Since 2003, the India Today magazine has been conducting a yearly study titled 'State of States' in order to comparatively evaluate the states on levels of governance. States are compared on various parameters such as budget and prosperity, agriculture, consumer markets, primary education, primary health, law & order, infrastructure and investment environment and marked out of ten.

17. The working group recognized that while the need for a comprehensive infrastructure index is widely felt and recognized, especially to facilitate inter-state comparison, the absence of an officially endorsed Index is a big deterrent for policy formulation. Using the guidelines provided by MOSPI, the working group initiated the compilation of an Infrastructure Index. It attempted the computations using 4 sets of weights for each of the States'. The first scenario uses 6 indicators and assigns them a weight equal to the share of that sector in the state's GSDP at current prices. The Working Group, in its another attempt to calculate the Infrastructure Index, added a set of indicators to the 6 broad categories mentioned in Scenario 1, thus making a total of 12 indicators. Scenario 2, 3 and 4 thus takes into account 12 indicators. For Scenario 2, it was decided that equal weights would be assigned to each of the 12 indicators irrespective of the broad category. For Scenario 3 the broad category weights assigned in this scenario are same as the weights assigned by Finance Commission for the year 1999-2000. However the indicators within the broad category are assigned equal weights. For Scenario 4, the Weights for each of the Broad indicators are computed using Principal Component Analysis (PCA).

18. The analysis has been carried out for all the 4 Scenarios described above and the calculations are based on the data for the year 2008-09. However it may be noted that data for three sub indicators namely, Number of Post Offices, Surfaced Road Length and Railway Route Length, is taken for the year 2007-08 due to non-availability of the data for the year 2008-09. The detailed index values were computed for 21 Indian states. The value of the all-India index is 100 and the state index value represents the position of the state relative to the all-India index value of 100.

19. Since Scenario 4 uses Principal Component Analysis to derive the weights for the indicators and hence compute the Infrastructure Index; it is more appropriate and logical to accept the results of this Scenario. It also uses all the 12 indicators within the 5 broad categories unlike Scenario 1, there by depicting more profound coverage in terms of development and enhancement of various aspects of physical infrastructure over – time.

20. In comparison with the Finance Commission’s Infrastructure index for 1999-2000, while the bottom few states are relatively unchanged, there have been some new entrants among the top states. An important point to note is that the state of Kerala now occupies the second position in the state rankings as against a rank of 7 according to Finance Commission Index of 1999-2000. Buoyed by impressive indicators of road and rail density, Power, banking and teledensity, Kerala now has an index value of over 193. Interestingly UP records massive improvement in ranking as per the index compiled by the Working Group. The fillip to UP has come from huge improvements in surfaced road length, railways route length, rural electrification and most importantly, irrigation. States of Gujarat, Himachal Pradesh, Karnataka, Odisha and Tamil Nadu have shown marginal improvement.

21. Among the states which experienced a deceleration in their ranking as compared to the Finance Commission index, is the state of Maharashtra which has been the flag bearer of India’s development. It experienced a noticeable fall with its rank declining from 3 to 10, primarily because it fares poorly on indicators of road density, railway route length as well as irrigation. Haryana which was a fast developing state ranking at 4 according to the Finance Commission Index on 1999-2000, performed badly in the recent years particularly in road density and communication, witnessing a decline in its rank to 6 according to Working Group Computations. Even Assam experienced degradation in its rank from 16 to 19 due to the dismal performance of nearly all the sectors. Other states which are marginally lagging behind are Bihar, Madhya Pradesh and West Bengal.

22. While analyzing the Rank Correlation between the Infrastructure Indices (2008-09) for all the 4 scenarios, Per Capita Income (2008-09) and Poverty Ratio (2009-10) it is observed that the Rank Correlation between the 3 variables based on Scenario 4 Weights is highest.

23. The sector wise and state wise targets for the 12th Five Year Plan have been computed by the other Working Group as these have to be consistent with the national sectoral targets.

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ANNEXURE-I

F.No. N12012/4/2011-PP
Planning Commission
(PP Division)

Yojana Bhavan, Sansad Marg,
New Delhi 110001, Dated: - 04.05.2011

ORDER

Subject: - Formulation of the Twelfth Five Year Plan (2012-17) -Constitution of Working Group on Issues relating to Growth and Development at Sub- national Level. - Regarding.

In the context of the formulation of the Twelfth Five Year Plan (2012-17), it has been decided to set up a Working Group on Issues relating to Growth and Development at Sub-national Level.

2. The Composition of the Working Group is as under:

1.	Sh. Ramesh Kolli, former ADG, National Accounts Division, Central Statistical Division, MOSPI	Chairperson
2.	Prof. N.R. Bhanumurthy, National Institute of Public Finance and Policy, New Delhi	Member
3.	Ms. P. Bhanumati, Director, Central Statistical Office, Ministry of Statistics and Programme Implementation	Member
4.	Mr. M. A. Basith, Sr. Director, Dept., of planning, Government of Karnataka	Member
5.	Secretary, Dept., of Planning, Government of Tamilnadu	Member
6.	Secretary, Dept., of Planning, Government of Himachal Pradesh.	Member
7.	Secretary, Dept., of Planning, Government of Assam.	Member
8.	Secretary, Dept., of Planning, Government of West Bengal.	Member
9.	Secretary, Dept., of Planning, Government of Gujarat.	Member
10.	Dr. Savita Sharma, Adviser (DPPD), Planning Commission	Member - Secretary

3. The Terms of Reference are as follows:-

- (e) Assessment of state level growth prospect.
- (f) Inter state and intra-state income inequality.
- (g) State specific growth scenario in agricultural sector.
- (h) Infrastructure development at state level.

4. The expenditure on TA/DA etc. of the official members in connection with the meetings of the Working Group will be borne by the parent Department/Ministry/Organization to which the official belongs, as per the rules of entitlement applicable to them. The non-official members of the Working Group will be entitled to avail TA/DA facilities as admissible to Grade I officers of the Government of India and this expenditure will be borne by the Convener Department.

5. The Chairperson of the Working Group, if deemed necessary, may constitute Sub-Groups / Taskforce and / or may co-opt additional members.

6. The Working Group may co-opt as members, officials/ non officials/ experts/ representatives of other agencies, if required.

7. The Working Group will submit its report in 3 months time from the date of its constitution.

(Sibani Swain) Director (PP)
Tel.No.23096634

Copy forwarded to:

- 1. Chairperson & Members of the Working Group
- 2. PS to Deputy Chairman, Planning Commission
- 3. PS to MOS (P&PI)
- 4. PS to All Members of Planning Commission
- 5. PS to Member Secretary, Planning Commission
- 6. PS to Secretary (Expenditure), Department of Expenditure
- 7. Ministry of Finance (Plan Finance Division)
- 8. PS to Secretary, Ministry of Home Affairs, New Delhi
- 9. Pr. Adviser/ Sr. Consultants/ Advisers/ JS(Admn.) /Heads of Division, Planning Commission.
- 10. I.F.Cell, PC Division, Planning Commission.
- 11. Admn.I/Accounts I/Genl I & II Sections, Planning Commission
- 12. Information Officer, Planning Commission
- 13. Library, Planning Commission

(Sibani Swain)
Director (PP)
Tel.No.23096634

APPENDIX

Table A1. Per Capita Net State Domestic Product (in Rs.)

Sl. No.	States/Year	1993-94	1999-2000	2004-05	2010-11	2011-12
1	Andhra Pradesh	7416	15427	25321	40366	42710
2	Assam	5715	12282	16782	21406	22956
3	Bihar	3037	5786	7914	13632	15268
4	Chattisgarh	6539	11629	18559	27156	29635
5	Gujarat	9796	18864	32021	52708	56567
6	Haryana	11079	23229	37972	59221	63045
7	Jharkhand	5897	11549	18510	21734	22902
8	Karnataka	7838	17502	26882	39301	41545
9	Kerala	7983	19461	31871	49873	53427
10	Madhya Pradesh	6584	12384	15442	22382	24132
11	Maharashtra	12183	23011	36077	59735	64951
12	Odisha	4896	10567	17650	25708	26900
13	Punjab	12710	25631	33103	44752	46688
14	Rajasthan	6182	13619	18565	26436	27421
15	Tamil Nadu	8955	19432	30062	51928	56461
16	Uttar Pradesh	5066	9749	12950	17349	18103
17	Uttarakhand	6896	13516	24726	44723	47831
18	West Bengal	6756	15888	22649	32228	34229

Source: Directorate of Economics & Statistics of respective State Governments, and for All-India -- Central Statistics Office

Table A1 (a). Per Capita Net State Domestic Product

	1993-94	1999-2000	2004-2005	2010-11	2011-12
Standard Deviation	2571	5288	8519	14852	16008
Coefficient of Variation	34%	34%	36%	41%	41%
First Quartile (Q1)	5852	11609	17433	22220	23838
Mean	7529	15529	23725	36146	38598
Median	6826	14523	23687	35764	37887
Third Quartile (Q3)	9165	19439	31909	50387	54186
Distance Q1 from mean	22	25	27	39	38
Distance Q3 from mean	22	25	34	39	40

Table A1 (b). Ratio of Per Capita Net State Domestic product

	1993-94	1999-2000	2004-2005	2010-11	2011-12
Maharashtra and Bihar	4.01	3.98	4.56	4.38	4.25
Punjab and Bihar	4.19	4.43	4.18	3.28	3.06
Punjab and MP	1.93	2.07	2.14	2.00	1.93
Maharashtra and MP	1.85	1.86	2.34	2.67	2.69
Maharashtra and Odisha	2.49	2.18	2.04	2.32	2.41

Table A2. State wise Production and Value of Paddy over the Plan Periods

<i>Crop/State</i>	<i>1993-94</i>		<i>1997-98</i>		<i>2002-03</i>		<i>2006-07</i>	
	<i>Production ('000 tonnes)</i>	<i>Value (Rs. Crore)</i>						
Paddy not procured								
West Bengal	18166	6168	20983	10469	21395	9604	21273	11440
Uttar Pradesh	15315	4877	17343	6861	12355	6795	13535	8393
Tamil Nadu	9258	3168	8503	3541	5205	2713	8315	4180
Bihar	9158	5400	10700	7137	7391	4607	6468	6769
Andhra Pradesh	14322	0	12765	0	7056	1130	10485	2402
Chhattisgarh	0	1703	0	2315	2016	2817	3782	2796
Odisha	9989	1618	9282	2315	3579	2354	7792	3218
Assam	5042	3350	5074	4917	5871	3917	4373	3931
Karnataka	4572	3471	4817	3880	3583	1540	5097	4262
Maharashtra	3702	1464	3592	1910	2553	1524	3663	2634
Paddy Procured								
Punjab	5530	1825	7060	2930	11909	6550	11754	7287
Andhra Pradesh	21	7	0	0	3935	2164	7323	4540
Uttar Pradesh	0	0	13	5	2040	1122	3152	1954
Madhya Pradesh	257	85	606	251	239	131	110	68
Tamil Nadu	866	48	1838	68	161	1153	1601	1729
Haryana	145	286	163	763	1988	88	2660	992
Odisha	37	12	25	10	1337	735	2445	1516
West Bengal	0	0	0	0	189	104	846	525
Maharashtra	25	8	0	0	228	125	191	118
Rajasthan	0	0	7	3	62	35	35	21

Source: DES, Ministry of Agriculture

Table A3. State-wise Production and Value of Wheat over the Plan Periods

<i>Crop/State</i>	<i>1993-94</i>		<i>1997-98</i>		<i>2002-03</i>		<i>2006-07</i>	
	<i>Production ('000 tonnes)</i>	<i>Value (Rs. Crore)</i>						
Wheat not procured								
Uttar Pradesh	19416	7059	20007	10136	22535	14330	24596	21932
Madhya Pradesh	6700	2737	6624	3365	4735	3253	7269	6465
Punjab	6092	1452	6569	3297	5237	3112	8030	5834
Rajasthan	3395	2138	6034	3353	4619	3266	6673	6845
Haryana	4185	1484	4396	2258	4066	2546	6719	4757
Bihar	4356	1793	4848	2546	4040	2505	3903	3189
Maharashtra	1056	509	671	445	984	758	1631	1608
Gujarat	928	471	1645	1009	934	744	3000	2908
West Bengal	632	259	811	445	887	550	800	642
Uttarakhand	0	0	0	0	695	466	799	757
Wheat Procured								
Punjab	7285	2550	6147	3135	8938	5631	6566	5581
Haryana	3046	1066	3158	1610	5122	3227	3336	2836
Uttar Pradesh	1406	492	2141	1092	1213	764	435	370
Rajasthan	65	23	667	340	259	163	383	326
Madhya Pradesh	66	23	530	270	188	118	57	48

Source: DES, Ministry of Agriculture

Table A4. State-wise Production and Value of Arhar and Gram over the Plan Periods

<i>Crop/State</i>	<i>1993-94</i>		<i>1997-98</i>		<i>2002-03</i>		<i>2006-07</i>	
	<i>Production ('000 tonnes)</i>	<i>Value (Rs. Crore)</i>						
Arhar								
Maharashtra	753	712	355	499	778	1244	815	1543
Uttar Pradesh	548	540	480	771	342	572	304	699
Gujarat	380	393	296	500	208	342	217	429
Karnataka	155	148	99	151	241	382	280	887
Madhya Pradesh	415	371	257	290	188	280	220	383
Andhra Pradesh	104	100	57	94	150	231	161	278
Odisha	127	107	86	121	74	142	107	269
Bihar	77	69	84	121	43	70	36	68
Chhattisgarh	0	0	0	0	24	38	23	51
Tamil Nadu	50	43	36	45	24	38	21	52
Gram								
Madhya Pradesh	1954	1968	2272	2498	1713	2464	2413	4780
Uttar Pradesh	931	937	745	833	765	1312	501	1069
Rajasthan	747	829	1925	1878	341	528	873	1819
Maharashtra	493	492	291	350	449	671	924	1900
Karnataka	132	136	115	157	252	378	308	651
Chhattisgarh	0	72	0	85	113	639	180	1265
Andhra Pradesh	65	0	59	0	382	187	653	462
Bihar	140	159	91	117	72	126	46	89
Haryana	403	456	310	304	41	65	91	175
Gujarat	55	60	99	110	31	49	214	452

Source: DES, Ministry of Agriculture

Table A5. State-wise Production and Value of Moong and Urd over the Plan Periods

<i>Crop/State</i>	<i>1993-94</i>		<i>1997-98</i>		<i>2002-03</i>		<i>2006-07</i>	
	<i>Production ('000 tonnes)</i>	<i>Value (Rs. Crore)</i>						
Moong								
Maharashtra	445	415	196	276	382	613	241	614
Andhra Pradesh	218	213	134	210	118	203	144	359
Karnataka	49	46	36	57	28	51	55	161
Bihar	106	121	96	158	119	212	94	164
Tamil Nadu	41	43	39	55	48	89	80	190
Uttar Pradesh	56	57	42	259	26	77	36	757
Rajasthan	52	56	164	56	32	50	270	103
Odisha	119	106	52	78	38	81	57	167
Gujarat	33	36	101	146	38	76	64	192
Madhya Pradesh	48	45	39	51	24	42	26	57
Urd								
Andhra Pradesh	241	238	216	295	376	616	350	950
Maharashtra	323	217	216	253	364	454	208	508
Uttar Pradesh	118	113	148	164	191	350	294	926
Madhya Pradesh	178	92	195	117	148	106	154	324
Tamil Nadu	91	120	102	186	80	208	123	417
West Bengal	69	59	54	84	40	63	40	94
Karnataka	70	49	35	36	23	39	24	81
Chhattisgarh		0	0	0	29	55	36	117
Gujarat	46	50	84	130	42	65	32	87
Rajasthan	55	90	97	58	47	44	32	115

Source: DES, Ministry of Agriculture

Table A6. State-wise Production and Value of Coconut and Groundnut over the Plan Periods

<i>Crop/State</i>	<i>1993-94</i>		<i>1997-98</i>		<i>2002-03</i>		<i>2006-07</i>	
	<i>Production ('000 tonnes)</i>	<i>Value (Rs. Crore)</i>						
Coconut								
Kerala	5192	1719	5911	2533	5709	2554	6054	3015
Tamil Nadu	3311	1096	4357	1193	2861	650	5430	1718
Karnataka	1308	380	1550	550	1525	604	1625	683
Andhra Pradesh	1104	233	780	270	1159	418	1326	506
West Bengal	310	142	306	163	324	207	359	222
Maharashtra	152	73	227	137	277	126	175	126
Odisha	226	60	413	81	205	110	276	127
Assam	117	59	127	172	306	133	153	204
Goa	116	40	121	56	122	63	127	72
Gujarat	10	28	94	35	105	38	138	36
Groundnut								
Tamil Nadu	1866	1556	1408	1446	717	1119	1007	2000
Andhra Pradesh	2546	2490	1156	1388	821	1339	743	1523
Karnataka	1199	767	714	3200	539	1817	379	2958
Gujarat	677	1111	2616	784	1086	776	1435	692
Maharashtra	769	817	566	736	450	719	399	740
Rajasthan	209	210	369	435	166	283	396	685
Madhya Pradesh	275	270	224	285	132	194	193	329
Uttar Pradesh	119	146	124	197	54	95	73	167
Odisha	114	85	90	106	49	80	88	171
West Bengal	21	12	39	28	47	44	98	103

Source: DES, Ministry of Agriculture

Table A7. State-wise Production and Value of Rapeseed/Mustard and Soyabean over the Plan Periods

<i>Crop/State</i>	<i>1993-94</i>		<i>1997-98</i>		<i>2002-03</i>		<i>2006-07</i>	
	<i>Production ('000 tonnes)</i>	<i>Value (Rs. Crore)</i>						
Rapeseed & Mustard								
Rajasthan	1652	1734	2041	2799	1178	1929	3767	6561
Uttar Pradesh	1124	1150	685	1002	726	1321	874	1613
Madhya Pradesh	599	582	394	473	240	328	693	1300
Haryana	798	849	370	507	697	1177	802	1320
West Bengal	293	289	251	338	329	512	339	594
Gujarat	337	359	350	439	223	391	504	875
Assam	132	110	155	196	130	182	116	227
Bihar	91	93	89	130	62	114	89	169
Punjab	72	71	59	69	60	95	46	77
Jammu & Kashmir	41	50	44	84	24	39	37	66
Soyabean								
Madhya Pradesh	3599	2777	4790	4493	2674	3426	4785	6798
Maharashtra	671	543	845	885	1576	1971	2892	3596
Rajasthan	370	223	631	609	236	323	771	942
Karnataka	33	25	49	42	48	68	94	185
Chhattisgarh		0	0	0	8	7	68	103
Nagaland	5	3	8	7	35	42	31	39
Andhra Pradesh	5	4	15	11	42	36	156	155
Gujarat	14	14	5	5	8	11	26	33

Source: DES, Ministry of Agriculture

Table A8. State-wise Production and Value of Sugarcane and Cotton over the Plan Periods

<i>Crop/State</i>	<i>1993-94</i>		<i>1997-98</i>		<i>2002-03</i>		<i>2006-07</i>	
	<i>Production ('000 tonnes)</i>	<i>Value (Rs. Crore)</i>						
Sugarcane								
Uttar Pradesh	52839	2807	69902	5194	86283	7765	118137	13009
Maharashtra	27892	2119	38174	2996	42617	2921	78568	8844
Tamil Nadu	15117	757	17917	825	16902	1880	30314	2502
Karnataka	10995	520	12357	914	20525	1271	25346	3209
Gujarat	9457	770	10691	919	15389	1343	15630	1547
Andhra Pradesh	7939	392	9727	735	13902	1093	19603	1815
Haryana	3923	224	4984	404	7439	733	7087	877
Punjab	3646	219	4093	327	6600	713	5455	720
Bihar	3015	170	3751	270	4521	348	3816	423
Madhya Pradesh	1084	59	1522	107	1508	109	2806	225
Cotton								
Maharashtra	1339	1991	835	1602	1324	2682	2355	4629
Andhra Pradesh	690	1119	680	1378	563	1192	1112	2309
Gujarat	828	1356	1622	3344	961	2022	4481	9550
Haryana	573	706	576	1014	529	1053	925	1778
Rajasthan	428	618	443	885	129	254	381	914
Punjab	772	1046	478	922	552	1172	1366	2686
Karnataka	395	653	368	776	169	334	311	643
Madhya Pradesh	213	296	258	553	199	409	423	933
Tamil Nadu	218	315	183	324	43	75	113	172
Odisha	2	2	18	37	25	57	55	115

Source: DES, Ministry of Agriculture

Table A9. State-wise percentage of Gross Irrigated Area to Gross Cultivated Area

Sl. No.	States/Year	2004-05	2005-06	2006-07	2007-08	2008-09
1	Andhra Pradesh	39.84	44.87	47.38	46.33	48.74
2	Assam	4.39	3.6	3.77	3.7	3.77
3	Bihar	56.72	58.48	60.19	60.85	60.95
4	Chattisgarh	22.95	23.93	25.92	26.48	27.05
5	Goa	23.67	22.35	22.09	20.59	21.69
6	Gujarat	38.02	41.44	44.71	45.71	45.61
7	Himachal Pradesh	19.2	19.7	19.81	19.73	19.66
8	Haryana	84.58	83.72	85.41	85.99	85.26
9	Jharkhand	10.27	10.06	13.97	9.37	9.71
10	Jammu & Kashmir	41.11	41.6	40.76	40.83	41.42
11	Kerala	15.19	15.41	16.79	16.48	16.99
12	Karnataka	25.99	27.88	28.97	29.39	31.87
13	Maharashtra	18.09	18.19	19.06	19.57	19.01
14	Madhya Pradesh	30.65	29.98	32.53	32.17	32.5
15	Odisha	30.87	33.56	35.77	36.69	35.02
16	Punjab	97.11	97.61	97.52	97.7	97.62
17	Rajasthan	33.68	36.03	36.96	36.42	34.74
18	Tamil Nadu	52.42	56.31	56.63	55.92	58.26
19	Uttar Pradesh	74.2	74.96	75.62	75.6	76.44
20	Uttarakhand	44.45	45.3	45.79	46.67	47.98
21	West Bengal	56.06	56.15	56.35	56.89	56.2
	All India	42.38	43.59	45.07	45.05	45.32

Source: DES, Ministry of Agriculture

Table A10. State-wise Gross Irrigated Area (thousand hectares)

Sl. No.	States/Year	2004-05	2005-06	2006-07	2007-08	2008-09
1	Andhra Pradesh	4987	5996	6070	6285	6741
2	Assam	171	142	142	142	150
3	Bihar	4197	4325	4646	4725	4752
4	Chattisgarh	1312	1375	1486	1522	1537
5	Goa	40	38	38	35	36
6	Gujarat	4280	4764	5279	5535	5278
7	Himachal Pradesh	183	186	187	191	184
8	Haryana	5434	5446	5461	5553	5528
9	Jharkhand	212	212	242	157	164
10	Jammu & Kashmir	453	458	459	463	471
11	Kerala	455	460	490	455	458
12	Karnataka	3328	3632	3603	3789	3942
13	Maharashtra	4046	4104	4301	4433	4202
14	Madhya Pradesh	6193	5878	6543	6567	6714
15	Odisha	2691	2996	3205	3308	3177
16	Punjab	7702	7680	7666	7689	7724
17	Rajasthan	7093	7818	7958	8088	7910
18	Tamil Nadu	3087	3397	3309	3252	3393
19	Uttar Pradesh	18939	18970	19218	19142	19522
20	Uttarakhand	549	549	554	554	570
21	West Bengal	5339	5353	5429	5548	5509
	All India	81181	84257	86765	87920	88419

Source: DES, Ministry of Agriculture

Table A11. State-wise Gross Cultivated Area (thousand hectares)

Sl. No.	States/Year	2004-05	2005-06	2006-07	2007-08	2008-09
1	Andhra Pradesh	12519	13362	12811	13567	13830
2	Assam	3896	3949	3763	3839	3984
3	Bihar	7399	7396	7719	7765	7797
4	Chattisgarh	5716	5746	5732	5748	5683
5	Goa	169	170	172	170	166
6	Gujarat	11257	11495	11807	12110	11571
7	Himachal Pradesh	953	944	944	968	936
8	Haryana	6425	6505	6394	6458	6484
9	Jharkhand	2065	2108	1732	1675	1689
10	Jammu & Kashmir	1102	1101	1126	1134	1137
11	Kerala	2996	2986	2918	2761	2695
12	Karnataka	12807	13027	12438	12893	12368
13	Maharashtra	22368	22556	22571	22655	22108
14	Madhya Pradesh	20203	19608	20113	20416	20657
15	Odisha	8718	8928	8960	9016	9071
16	Punjab	7931	7868	7861	7870	7912
17	Rajasthan	21062	21699	21534	22208	22771
18	Tamil Nadu	5889	6033	5843	5815	5824
19	Uttar Pradesh	25524	25307	25415	25320	25540
20	Uttarakhand	1235	1212	1210	1187	1188
21	West Bengal	9523	9533	9635	9752	9802
	All India	191546	193316	192491	195156	195104

Source: DES, Ministry of Agriculture

Table A12. State-wise Number of telephones (wireline + wireless)

Sl. No.	States/Year	2006-07	2007-08	2008-09
1	Andhra Pradesh	16016072	23288508	32952403
2	Assam	2834286	4343409	6161988
3	Bihar	6760134	11847799	21102313
4	Chattisgarh	743178	1019940	1217845
5	Goa	NA	NA	NA
6	Gujarat	13609557	19244956	26224524
7	Himachal Pradesh	1865945	2716613	3700542
8	Haryana	5495803	7355723	10777566
9	Jharkhand	1020487	1086690	1260723
10	Jammu & Kashmir	1786775	2461397	3743780
11	Kerala	11280494	15370914	19976503
12	Karnataka	14270528	19887339	26326539
13	Maharashtra	28913871	41038746	56730414
14	Madhya Pradesh	8271327	13964581	21057043
15	Odisha	3737186	5953313	9334750
16	Punjab	10221359	13399833	16530246
17	Rajasthan	9838405	15343775	24422555
18	Tamil Nadu	19243926	29222956	40672020
19	Uttar Pradesh	20143831	30854606	48334187
20	Uttarakhand	890727	1010049	1120078
21	West Bengal	12725709	19834184	29793522
	All India	205866771	300492429	429725181

Source: Department of Telecommunications, Annual Report

Table A13. State-wise Number of Post Offices

Sl. No.	States/Year	2006-07	2007-08
1	Andhra Pradesh	16159	16149
2	Assam	4006	4007
3	Bihar	9054	9057
4	Chattisgarh	3124	3123
5	Goa	NA	NA
6	Gujarat	8974	8970
7	Himachal Pradesh	2779	2777
8	Haryana	2653	2653
9	Jharkhand	3091	3091
10	Jammu & Kashmir	1691	1691
11	Kerala	5070	5070
12	Karnataka	9837	9826
13	Maharashtra	12837	12853
14	Madhya Pradesh	8329	8323
15	Odisha	8161	8162
16	Punjab	3952	3911
17	Rajasthan	10364	10318
18	Tamil Nadu	12179	12115
19	Uttar Pradesh	17666	17662
20	Uttarakhand	2716	2714
21	West Bengal	9060	9058
	All India	155204	155035

Source: Annual Report Department of Posts

Table A14. State-wise Number of Bank Branches (2008-09)

Sl. No.	States/ Banks	Scheduled Commercial Banks	Cooperative Banks	Scheduled Commercial Banks + Cooperative Banks
1	Andhra Pradesh	6520	598	7118
2	Assam	1377	68	1445
3	Bihar	3825	293	4118
4	Chattisgarh	1217	203	1420
5	Goa	407	65	472
6	Gujarat	4339	1166	5505
7	Himachal Pradesh	950	338	1288
8	Haryana	2149	607	2756
9	Jharkhand	1705	114	1819
10	Jammu & Kashmir	973	153	1126
11	Kerala	4053	663	4716
12	Karnataka	5759	629	6388
13	Maharashtra	7551	3716	11267
14	Madhya Pradesh	3958	777	4735
15	Odisha	2689	352	3041
16	Punjab	3240	825	4065
17	Rajasthan	3900	413	4313
18	Tamil Nadu	5890	775	6665
19	Uttar Pradesh	9658	1335	10993
20	Uttarakhand	1083	203	1286
21	West Bengal	5023	324	5347
	All India	79735	13882	93617

Source: National bank for Agriculture and Rural Development, RBI –Statistical Handbook

Table A15. State-wise Percentage of Villages Electrified

Sl. No.	States/Year	2004-05	2005-06	2006-07	2007-08	2008-09
1	Andhra Pradesh	99.8	99.8	100	100	100
2	Assam	77	78.3	78.6	78.6	80.8
3	Bihar	51.3	52.8	52.9	52.9	61.3
4	Chattisgarh	76.6	83.3	95.4	95.6	96.9
5	Goa	100	100	100	100	100
6	Gujarat	98.7	99.1	99.6	99.6	99.7
7	Himachal Pradesh	68.3	96.7	98.1	98.2	98.2
8	Haryana	100	100	100	100	100
9	Jharkhand	31.5	30.4	31.1	31.1	31.1
10	Jammu & Kashmir	98.2	98.2	98.2	98.2	98.2
11	Kerala	100	100	100	100	100
12	Karnataka	98.1	98.7	98.7	98.7	99.9
13	Maharashtra	86.5	86.5	87.7	88.3	88.3
14	Madhya Pradesh	96.3	96.3	96.4	96.4	96.4
15	Odisha	55.2	55.2	55.8	55.8	62.6
16	Punjab	100	100	100	100	100
17	Rajasthan	63.9	65	67.1	68.3	69.2
18	Tamil Nadu	94.9	100	100	100	100
19	Uttar Pradesh	58.2	68.3	85.3	88.1	88.3
20	Uttarakhand	92.2	93.5	95.5	96.52	96.9
21	West Bengal	84.8	86.6	91.1	95.9	97.3
	All India	74.1	77.4	81.3	82.3	83.7

Source: Central Electricity Authority (General Review 2010)

Table A16. State-wise Power indicators (2008-09)

Sl. No.	States/Indicator	Gross Generation of Utilities + Net Import	Installed Electricity Generation Capacity	% of villages electrified	length of transmission and distribution lines
1	Andhra Pradesh	70117.56	9224.28	100	846267
2	Assam	4747.59	471.3	80.8	79355
3	Bihar	9932.88	590.4	61.3	135514
4	Chattisgarh	20445.84	3074.15	96.9	180690
5	Goa	3581.55	78.05	100	14782
6	Gujarat	62511.78	9273.2	99.7	631022
7	Himachal Pradesh	6642.98	964.84	98.2	78869
8	Haryana	30087.2	3099.35	100	199940
9	Jharkhand	16970.97	1754.05	31.1	49309
10	Jammu & Kashmir	10148.13	1075.77	98.2	93456
11	Kerala	14575.06	2305.98	100	291708
12	Karnataka	44768.98	8095.76	99.9	642200
13	Maharashtra	100943.66	15284.06	88.3	800375
14	Madhya Pradesh	36666.21	4773.88	96.4	605745
15	Odisha	19439.11	2520.23	62.6	171156
16	Punjab	40932.05	5111.3	100	334196
17	Rajasthan	42116.42	4702.94	69.2	583655
18	Tamil Nadu	68070.04	11131.55	100	708595
19	Uttar Pradesh	61860.14	5046.48	88.3	502929
20	Uttarakhand	8937.57	1762.12	96.9	85513
21	West Bengal	36553.73	6890.13	97.3	200701
	All India	747005.7	147965.41	83.7	7472873

Source: Central Electricity Authority (General Review 2010)

**Table A17. State-wise Number of Registered Motorised Vehicles, as on 31st March
(in 1000's)**

Sl. No.	State/Year	2005	2006	2007	2008	2009 (P)
1	Andhra Pradesh	6458	7218	6367	7208	8059
2	Assam	815	914	1021	1116	1235
3	Bihar	1352	1432	1577	1739	1960
4	Chattisgarh	1375	1541	1734	1935	2115
5	Goa	482	529	579	624	674
6	Gujarat	7817	8622	9497	10289	10999
7	Himachal Pradesh	301	334	342	371	494
8	Haryana	2854	3087	3528	3973	4425
9	Jharkhand	1357	1505	1686	1850	2038
10	Jammu & Kashmir	478	524	570	620	668
11	Kerala	3122	3559	3957	4430	4860
12	Karnataka	5436	6220	5486	6217	6953
13	Maharashtra	9936	10966	12171	13335	14451
14	Madhya Pradesh	4188	4609	5047	5523	6011
15	Odisha	1715	1932	2148	2370	2607
16	Punjab	3876	4035	4294	4573	4832
17	Rajasthan	4261	4754	5336	5902	6490
18	Tamil Nadu	9257	10054	10981	11930	12891
19	Uttar Pradesh	7344	7989	9086	9826	10779
20	Uttarakhand	573	643	643	731	787
21	West Bengal	2681	2872	3198	2762	3044
	All India	81502	89618	96707	105353	114951

Source: Road Transport Year Book

Table A18. State-wise Total Surfaced Roads, as on 31st March**(in km)**

Sl. No.	State/Year	2005	2006	2007	2008
1	Andhra Pradesh	181450	183798	185308	189316
2	Assam	24366	24959	25931	26612
3	Bihar	57807	58136	58136	58136
4	Chattisgarh	40676	42110	41984	43528
5	Goa	7436	7462	7602	7664
6	Gujarat	129715	131123	131672	132321
7	Himachal Pradesh	19480	19504	20318	21197
8	Haryana	26770	27016	27502	27703
9	Jharkhand	10053	10052	10050	10037
10	Jammu & Kashmir	9626	9862	9876	10141
11	Kerala	91363	105862	112236	116446
12	Karnataka	132008	134927	149491	153143
13	Maharashtra	175341	175007	177556	178045
14	Madhya Pradesh	79210	81625	82422	82426
15	Odisha	30331	30143	30504	30645
16	Punjab	38859	37474	37441	37487
17	Rajasthan	100718	104140	112216	123594
18	Tamil Nadu	138736	143646	146869	147346
19	Uttar Pradesh	168901	175151	185823	202492
20	Uttarakhand	16237	17318	18441	20192
21	West Bengal	39222	41247	42973	49111
	All India	1596450	1637722	1693500	1745270

Source: Infrastructure Statistics 2010, Ministry of Statistics and Programme Implementation

**Table A19. State-wise Road Indicators as on 31st March, 2008
(in km)**

Sl. No.	States/Indicators	Total Surfaced Highways	Other Surfaced Roads
1	Andhra Pradesh	174086	15230
2	Assam	22180	4432
3	Bihar	52925	5211
4	Chattisgarh	36004	7524
5	Goa	6529	1135
6	Gujarat	113285	19036
7	Himachal Pradesh	19267	1930
8	Haryana	23870	3833
9	Jharkhand	8685	1352
10	Jammu & Kashmir	8187	1954
11	Kerala	99653	16793
12	Karnataka	126057	27086
13	Maharashtra	154507	23538
14	Madhya Pradesh	68029	14397
15	Odisha	17707	12938
16	Punjab	30116	7371
17	Rajasthan	111379	12215
18	Tamil Nadu	127795	19551
19	Uttar Pradesh	162209	40283
20	Uttarakhand	16223	3969
21	West Bengal	25696	23415
	All India	1458341	286929

Source: Infrastructure Statistics 2010,

**Table A20. State-wise Railway Route Length, as on 31st March
(in km)**

Sl. No.	State/Year	2005	2006	2007	2008
1	Andhra Pradesh	5205.1	5185.1	5171.6	5170.4
2	Assam	2505.8	2284.3	2283.7	2283.7
3	Bihar	3379.7	3330.4	3411	3406.5
4	Chattisgarh	1159	1186.1	1185.5	1185.8
5	Goa	69	69	69	69
6	Gujarat	5284.4	5282.9	5308.6	5328.2
7	Himachal Pradesh	285	285	285	285
8	Haryana	1596.9	1595	1540.4	1467.1
9	Jharkhand	1941.3	1954.8	1941.3	1965.2
10	Jammu & Kashmir	137.8	137.8	137.8	162.8
11	Kerala	1050.2	1050.2	1050.2	1050.2
12	Karnataka	2982	3002.3	3005.8	3005.4
13	Maharashtra	5527	5528	5519.3	5535.8
14	Madhya Pradesh	4905.2	4903.2	4883.9	4884.2
15	Odisha	2279.7	2281.5	2246.9	2386.8
16	Punjab	2097.7	2133.4	2133.4	2133.4
17	Rajasthan	5837.7	5838	5911.1	5683
18	Tamil Nadu	4170.9	4170.9	4121.1	4130.7
19	Uttar Pradesh	8545.5	8546.4	8574.8	8553.5
20	Uttarakhand	344.9	344.9	344.9	344.9
21	West Bengal	3856.1	3910.7	3910.7	3950.8
	All India	63465.3	63332.1	63326.7	63273.1

Source: Indian Railways Annual Statistical Statements, Ministry Of Railways

Table A21. State-wise Population Figures

Sl. No.	States/Year	2004-05	2005-06	2006-07	2007-08	2008-09
1	Andhra Pradesh	79485857	80326589	81176213	82034824	82902517
2	Assam	28376775	28824181	29278641	29740266	30209169
3	Bihar	90767187	92820419	94920096	97067270	99263015
4	Chattisgarh	22602206	23067280	23541924	24026335	24520713
5	Goa	1390656	1401616	1412662	1423795	1435015
6	Gujarat	54352992	55314554	56293127	57289011	58302515
7	Himachal Pradesh	6378130	6455476	6533761	6612995	6693190
8	Haryana	22736915	23153398	23577510	24009391	24449182
9	Jharkhand	29209403	29804406	30411529	31031019	31663128
10	Jammu & Kashmir	11044866	11282400	11525041	11772901	12026092
11	Kerala	32451110	32605360	32760343	32916063	33072523
12	Karnataka	56018764	56840057	57673390	58518941	59376889
13	Maharashtra	102801992	104338580	105898135	107481000	109087525
14	Madhya Pradesh	64978046	66190026	67424611	68682224	69963295
15	Odisha	38781404	39291962	39809240	40333329	40864318
16	Punjab	25645675	25977826	26314279	26655090	27000315
17	Rajasthan	61072411	62270221	63491524	64736780	66006459
18	Tamil Nadu	66130592	67096055	68075614	69069473	70077841
19	Uttar Pradesh	178823028	182126403	185490800	188917347	192407193
20	Uttarakhand	9106282	9267397	9431362	9598229	9768047
21	West Bengal	84470757	85579870	86703545	87841974	88995351
	All India	1097803578	1115782810	1134056496	1152629458	1171506599

Source: RGI – Census of India

Table A22. State-wise Area (in Square Kilometers)

Sl. No.	States	Area
1	Andhra Pradesh	275,045
2	Assam	78,438
3	Bihar	94,163
4	Chattisgarh	135,191
5	Goa	3,702
6	Gujarat	196,024
7	Himachal Pradesh	55,673
8	Haryana	44,212
9	Jharkhand	79,714
10	Jammu & Kashmir	222,236
11	Kerala	38,863
12	Karnataka	191,791
13	Maharashtra	307,713
14	Madhya Pradesh	308,245
15	Odisha	155,707
16	Punjab	50,362
17	Rajasthan	342,239
18	Tamil Nadu	130,058
19	Uttar Pradesh	240,928
20	Uttarakhand	53,484
21	West Bengal	88,752
	All India	3,287,240

Source: RGI – Census of India

Table A23. State-wise Poverty Ratio (2009-10)
(%)

Sl. No.	States	2009-10
1	Andhra Pradesh	21.1
2	Assam	37.9
3	Bihar	53.5
4	Chattisgarh	48.7
5	Goa	8.7
6	Gujarat	23
7	Himachal Pradesh	9.5
8	Haryana	20.1
9	Jharkhand	39.1
10	Jammu & Kashmir	9.4
11	Kerala	12
12	Karnataka	23.6
13	Maharashtra	24.5
14	Madhya Pradesh	36.7
15	Odisha	37
16	Punjab	15.9
17	Rajasthan	24.8
18	Tamil Nadu	17.1
19	Uttar Pradesh	37.7
20	Uttarakhand	18
21	West Bengal	26.7

Source: Planning Commission

Table A24. State-wise Per Capita Income (2008-09)
(in Rs.)

Sl. No.	States	2008-09
1	Andhra Pradesh	35272
2	Assam	18922
3	Bihar	10994
4	Chattisgarh	23926
5	Goa	90386
6	Gujarat	43685
7	Himachal Pradesh	41666
8	Haryana	49806
9	Jharkhand	19867
10	Jammu & Kashmir	25641
11	Kerala	42433
12	Karnataka	37687
13	Maharashtra	51053
14	Madhya Pradesh	19442
15	Odisha	22963
16	Punjab	41003
17	Rajasthan	23356
18	Tamil Nadu	42939
19	Uttar Pradesh	15713
20	Uttarakhand	38625
21	West Bengal	27914

Source: Directorate of Economics & Statistics of respective State Governments, and for All-India -- Central Statistics Office