

## UNEVEN DEVELOPMENT: REGIONAL INEQUALITY IN INDIA IN THE AGE OF GLOBALIZATION

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Keywords-GDP, Agriculture, Industrial sector Service sector, Growth, Infrastructure  
Regional inequalities, Globalisation, HDI

### Abstract

Globalization has transformed economies worldwide, fostering growth and connectivity, but its impacts are often uneven within nations. India, with its vast and diverse landscape, is a prime example of this phenomenon. As the country embraced globalization in the early 1990s, it experienced significant economic growth and modernization. However, this period also highlighted and, in some cases, exacerbated regional inequalities. While some regions surged ahead, becoming industrial and technological hubs, others lagged, trapped in cycles of poverty and underdevelopment. Understanding the dynamics of these regional disparities during globalization is crucial for policymakers aiming to promote balanced and inclusive growth across the country. This outline delves into the complexities of regional inequalities in India, examining how globalization has influenced economic, social, and infrastructural divides between different regions.

### 1.Introduction

Globalization, a defining force of the late 20th and early 21st centuries, has reshaped economies and societies worldwide. In India, this transformative era began in earnest with the economic liberalization policies of the early 1990s. The regional disparity in India has been a major challenge for policy makers and planners. Despite plethora of development programmes regional disparity has persisted over time. The introduction of the New Economic Policy (NEP) in India in 1991 marked a significant shift in the country's economic strategy, transitioning from a largely closed, centrally planned economy to one more integrated with the global market. This paradigm shift, characterized by liberalization, privatization, and globalization, aimed to spur economic growth, attract foreign investment, and enhance India's competitiveness on the global stage. While these reforms have undoubtedly led to impressive economic growth and increased opportunities, they have also accentuated regional inequalities across the country. These disparities manifest in various forms, including economic performance, infrastructure development, and social indicators. Regions with robust industrial bases, advanced service sectors, and favourable policies have surged ahead, attracting significant investments and enjoying higher standards of living. In contrast, other areas,

particularly those reliant on agriculture or with weaker governance, have struggled to keep pace. The study explores the complex landscape of regional disparities in India during the era of globalization, highlighting the uneven distribution of its benefits and the challenges it poses for achieving equitable development across the nation.

Regional inequalities, a common concept in social science research, refer to the uneven distribution of income, wealth, and economic opportunities across different geographical areas within a country. It is defined as the inequality or divergence of phenomena with specific territorial allocation occurring in multiple entities within a defined territorial structure (Kutscherauer et al. 2010).

### 1.1 Objective of the study

The primary aim of this paper is to explore macro-level disparities and economic inequality among Indian states, focusing on different regions. It seeks to understand the extent of regional imbalances in India by analysing six indicators of development such as Per capita Net State Domestic Product, share of agriculture to GSDP and total workforce, share of manufacturing sector to total GSDP, share of service sector to total GSDP, availability of health and educational infrastructure, and Human Development Index. The paper explores the theoretical framework on regional disparity and analyse disparities in macroeconomic aggregates in India since 1991.

### 1.2 Research Methodology

Secondary data of the said indicators have been used extensively. The first section examines the theoretical background relating to unbalanced development. The study also utilizes a mixed-methods approach to investigate the extent of regional disparities within the country. Quantitative data sourced from the National Sample Survey Office (NSSO), Census of India, Reserve Bank of India (RBI), and various state and central government reports are widely used for the analysis.

## 2.Theoretical background

Regional disparities with growth are generally agreed upon, with experts like Kuznets (1963), Hirschman (1958), and Mera (1965) arguing for an inverted U-shape curve. Urban primacy, socio-spatial, and individual inequalities increase during initial development but reduce over time. Myrdal (1957) and Hirschman(1958) proposed the backwash effect, a chain of cumulative expansion in favour of a region, and the spread effect, which favours the development of backward regions. To narrow the backwash effect, effective regional policies are needed. While theoretical work on regional disparity in India remains limited, empirical studies have shed light on various aspects of development disparities. Prof. Mathur (1987) highlighted regional growth as a key factor in explaining regional disparity. Studies on income and consumption trends have shown a growing gap between regions, with scholars like Das and Barua (1996) noting that economic growth in India has widened regional inequalities. Notable scholars like Dreze and Sen (1995) have emphasized the vast differences in regional

development within India, leading to internal diversities. Additionally, Dutt and Ravallion have observed varying progress in rural living standards across Indian states. The National Human Development Report 2001 further accentuated the substantial differences in human development levels among Indian states, with states like Bihar, UP, MP, Rajasthan, and Odisha lagging significantly behind states like Kerala. In light of these observations, a comprehensive examination of regional disparities in India is essential across macroeconomic aggregates, infrastructural development, agricultural and industrial sectors, as well as human development outcomes. Addressing these disparities will require targeted policies and interventions to promote more balanced and inclusive development across all regions of the country

### 3. Discussion

The disparity between active and vibrant regions and the hinterland has existed since the pre-independence period, leading to unequal levels of economic and human development across different regions. In essence, regional disparity indicates the lack of uniformity in indicators such as per capita income, consumption levels, food security, agricultural and industrial development, and infrastructural progress across different regions. While the issue of regional development is a universal concern, the degree of intensity varies among countries, whether developed or developing. It is a challenge that most countries encounter during their developmental journey, necessitating targeted policies and strategies to address and mitigate disparities for more balanced and inclusive growth.

#### 3.1 Regional Disparity in Output

The structural share of Gross Domestic Product (GDP) has shown significant variation over time across states. Some sub-sectors have experienced wide fluctuations in annual growth rates. Agriculture and allied activities have generally been subject to considerable fluctuations, similar to mining and quarrying. In contrast, manufacturing has been steadier, while the service sector has shown a continuous rise in growth. To understand the distribution of national product, it is useful to analyze trends in per capita net state domestic product (NSDP). Table 1 summarizes data on per capita NSDP from 1993-94 to 2018-19 at different base prices for both forward and backward states. Among the major states, Haryana recorded the highest per capita NSDP in 2018-19 (Rs. 169,409), followed by Uttarakhand (Rs. 155,151) and Gujarat (Rs. 153,495). Conversely, Bihar (Rs. 28,668) and Uttar Pradesh (Rs. 44,421) had the lowest per capita NSDP. The highest growth rate of per capita NSDP between 2011-12 and 2018-19 was observed in Gujarat (8.4 percent), followed by Karnataka (7.9 percent). States with the lowest growth rates during the same period were Jammu and Kashmir (3 percent), Madhya Pradesh (3.4 percent), and Arunachal Pradesh (3.5 percent).

**Table 1. Per-capita Net state Domestic Product and its growth rate**

| State /<br>Union<br>Territory | (Base: 1993-94) |       |        | (Base : 1999-2000) |       |        | (Base: 2004-05) |       |        | (Base: 2011-12) |       |        |
|-------------------------------|-----------------|-------|--------|--------------------|-------|--------|-----------------|-------|--------|-----------------|-------|--------|
|                               | 1993-           | 1999- | Growth | 1999-              | 2004- | Growth | 2004-           | 2011- | Growth | 2011-           | 2018- | Growth |

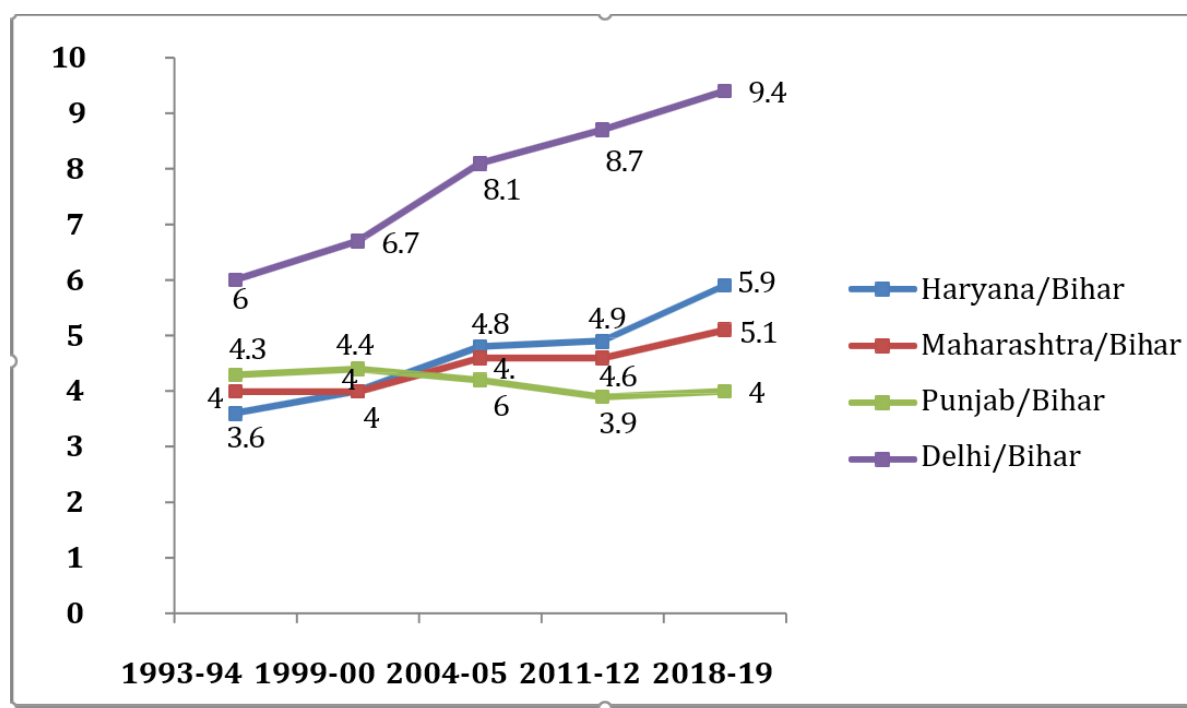
|                   | 94    | 00    | h   | 00        | 05        | wth  | 05    | 12    | wth | 12         | 19         | wth |
|-------------------|-------|-------|-----|-----------|-----------|------|-------|-------|-----|------------|------------|-----|
| Andhra Pradesh    | 7416  | 9445  | 4.1 | 1542<br>7 | 1996<br>3 | 5.3  | 25959 | 38556 | 5.8 | 69000      | 10724<br>1 | 6.5 |
| Arunachal Pradesh | 8733  | 8890  | 0.3 | 1399<br>0 | 1933<br>9 | 6.7  | 26721 | 35527 | 4.2 | 73068      | 93191      | 3.5 |
| Assam             | 5715  | 5785  | 0.2 | 1228<br>2 | 1394<br>6 | 2.6  | 16782 | 21741 | 3.8 | 41142      | 60695      | 5.7 |
| Bihar             | 3037  | 3282  | 1.3 | 5786      | 6772      | 3.2  | 7914  | 13149 | 7.5 | 21750      | 28668      | 4.0 |
| Jharkhand         | 5897  | 7238  | 3.5 | 1154<br>9 | 1286<br>9 | 2.2  | 18510 | 25265 | 4.5 | 41254      | 54982      | 4.2 |
| Gujarat           | 9796  | 13298 | 5.2 | 1886<br>4 | 2334<br>6 | 4.4  | 32021 | 56634 | 8.5 | 87481      | 15349<br>5 | 8.4 |
| Haryana           | 11079 | 13308 | 3.1 | 2322<br>2 | 3069<br>0 | 5.7  | 37972 | 61716 | 7.2 | 10608<br>5 | 16940<br>9 | 6.9 |
| Himachal Pradesh  | 7870  | 11051 | 5.8 | 2080<br>6 | 2624<br>4 | 4.8  | 33348 | 49203 | 5.7 | 87721      | 13946<br>9 | 6.8 |
| Jammu & Kashmir   | 6543  | 7384  | 2   | 1381<br>6 | 1541<br>4 | 2.2  | 21734 | 28790 | 4.1 | 53173      | 65178      | 3.0 |
| Karnataka         | 7838  | 10912 | 5.7 | 1750<br>2 | 1984<br>0 | 2.5  | 26882 | 41492 | 6.4 | 90263      | 15327<br>6 | 7.9 |
| Kerala            | 7983  | 10430 | 4.6 | 1946<br>1 | 2512<br>2 | 5.2  | 32351 | 52808 | 7.3 | 97912      | 14807<br>8 | 6.1 |
| Madhya Pradesh    | 6584  | 8248  | 3.8 | 1238<br>4 | 1203<br>2 | -0.6 | 15442 | 23272 | 6.0 | 38497      | 56498      | 5.6 |
| Chhattisgarh      | 6539  | 6692  | 0.4 | 1162<br>9 | 1407<br>0 | 3.9  | 18559 | 27163 | 5.6 | 55177      | 69500      | 3.4 |
| Maharashtra       | 12183 | 15257 | 3.8 | 2301<br>1 | 2660<br>3 | 2.9  | 36077 | 61276 | 7.9 | 99597      | 14745<br>0 | 5.8 |
| Odisha            | 4896  | 5742  | 2.7 | 1062<br>2 | 1331<br>1 | 4.6  | 17650 | 24542 | 4.8 | 48499      | 76417      | 6.7 |
| Punjab            | 12710 | 14809 | 2.6 | 2563<br>1 | 2790<br>5 | 1.7  | 33103 | 46325 | 4.9 | 85577      | 11588<br>2 | 4.4 |
| Rajasthan         | 6182  | 8555  | 5.6 | 1361<br>9 | 1490<br>8 | 1.8  | 18565 | 29612 | 6.9 | 57192      | 78570      | 4.6 |
| Tamil Nadu        | 8955  | 12167 | 5.2 | 1943      | 2297      | 3.4  | 30062 | 57093 | 9.6 | 93112      | 14294      | 6.3 |

|               |      |       |     |       |       |     |       |       |      |        |        |     |
|---------------|------|-------|-----|-------|-------|-----|-------|-------|------|--------|--------|-----|
|               |      |       |     | 2     | 5     |     |       |       |      |        | 1      |     |
| Uttar Pradesh | 5066 | 5675  | 1.9 | 9749  | 10421 | 1.3 | 12950 | 18014 | 4.8  | 32002  | 44421  | 4.8 |
| Uttarakhand   | 6896 | 7256  | 0.9 | 13516 | 19524 | 7.6 | 24726 | 52606 | 11.4 | 100305 | 155151 | 6.4 |
| West Bengal   | 6756 | 9320  | 5.5 | 15888 | 19367 | 4.0 | 22649 | 32164 | 5.1  | 51543  | 67300  | 3.9 |
| All-India     | 7690 | 10071 | 4.6 | 15881 | 19331 | 4.0 | 24143 | 38048 | 6.7  | 63462  | 92565  | 5.5 |

Source: <https://m.rbi.org.in/Scripts/AnnualPublications>.

Following figure illustrates the disparity in per capita net state domestic product (NSDP) between wealthier and poorer states. Bihar is used as a representative of poorer states, while Punjab, Maharashtra, and Haryana represent richer states. The analysis examines the ratio of the NSDP of the three developed states compared to Bihar. A higher ratio indicates greater disparity between the states, and vice versa.

**Figure 1. Ratio of Per capita Net State Domestic Product of Bihar with Delhi, Punjab, Maharashtra and Haryana**



Source: MOSPI

The graph clearly shows that the ratio of per capita NSDP between Delhi and Bihar is 9.4 in 2018-19, indicating that Bihar's per capita NSDP is one-ninth that of Delhi. A similar trend is observed in the other three states as well.

### 3.2 Regional Disparity in Agricultural Sector

The agricultural sector's contribution to the total GDP has gradually declined over time. From 1990-91 to 2019-20, agriculture's share dropped from 35% to 16.5%. Even over shorter periods, there has been a notable decrease in agriculture's share of the Gross State Domestic Product (GSDP)

**Table 2: Share of Agriculture to GSDP and Total Workforce in India and States**

| State            | Share of Agriculture in GSDP (% at 2011-12 price) |         | Share of Agriculture in Total Workforce (%) |         |
|------------------|---------------------------------------------------|---------|---------------------------------------------|---------|
|                  | 2011-12                                           | 2018-19 | 2011-12                                     | 2018-19 |
| Andhra Pradesh   | 13.7                                              | 11.2    | 52.4                                        | 43.9    |
| Assam            | 14.4                                              | 11.5    | 54.3                                        | 37.2    |
| Bihar            | 17.2                                              | 10.8    | 61.6                                        | 47.6    |
| Chhattisgarh     | 11.4                                              | 9.9     | 71.8                                        | 60.8    |
| Delhi            | 0.2                                               | 0.0     | 0.1                                         | 0.3     |
| Gujarat          | 12.9                                              | 6.4     | 46.9                                        | 39.4    |
| Haryana          | 13.7                                              | 8.1     | 40.9                                        | 24.3    |
| Himachal Pradesh | 9.3                                               | 5.8     | 58.4                                        | 56.3    |
| Jammu & Kashmir  | 10.2                                              | 7.1     | 40.3                                        | 35.2    |
| Jharkhand        | 8.9                                               | 5.9     | 49.4                                        | 40.3    |
| Karnataka        | 8.8                                               | 5.2     | 48.5                                        | 38.9    |
| Kerala           | 8.0                                               | 4.1     | 20.4                                        | 16.8    |
| Madhya Pradesh   | 23.2                                              | 21.5    | 57.7                                        | 55.7    |
| Maharashtra      | 8.0                                               | 5.1     | 49.1                                        | 41.8    |
| Odisha           | 11.1                                              | 7.0     | 54.8                                        | 42.8    |
| Punjab           | 18.8                                              | 13.3    | 35.8                                        | 24.0    |
| Rajasthan        | 16.9                                              | 11.5    | 49.9                                        | 51.9    |
| Tamil Nadu       | 7.2                                               | 3.9     | 33.5                                        | 25.3    |
| Telangana        | 9.0                                               | 4.9     | -                                           | 41.8    |
| Uttar Pradesh    | 17.1                                              | 13.3    | 51.9                                        | 49.7    |
| Uttarakhand      | 6.6                                               | 3.7     | 46.6                                        | 31.8    |
| West Bengal      | 13.9                                              | 12.1    | 36.8                                        | 32.6    |
| India            | 11.5                                              | 7.8     | 47.8                                        | 40.9    |

**Source:** Calculated from MOSPI and NSS PLFS, 2018-19

The contribution of the agricultural sector to the total GSDP decreased from 11.5% in 2011-12 to 7.8% in 2018-19. This declining trend is evident at the state level as well. In 2018-19, the agricultural sector's contribution to the state GSDP was highest in Madhya Pradesh (21.5%), followed by Punjab (13.3%). The period from 2011 to 2018 saw the largest reduction

in agriculture's GSDP contribution in Bihar and Gujarat (about 6 percentage points), while Delhi, Madhya Pradesh, and West Bengal experienced the smallest changes (see Table 2).

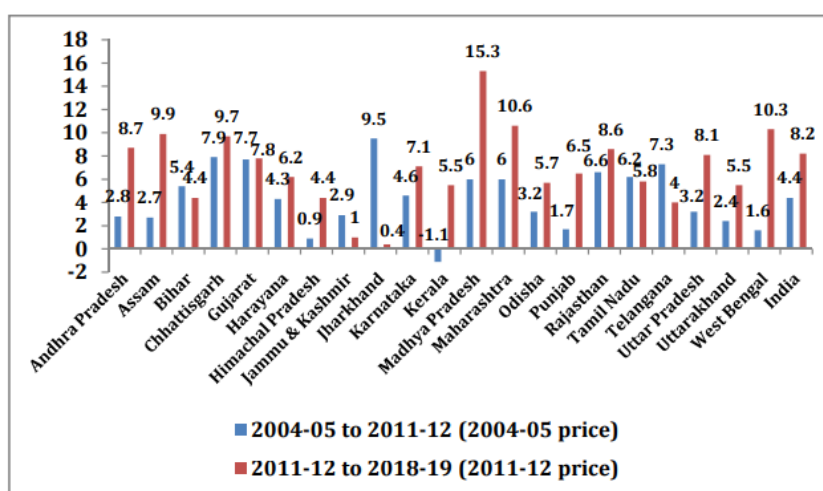
### 3.2.1 Regional Disparity in Share of Agriculture in Total Workforce (%)

The percentage of the total workforce employed in agriculture only decreased from 48% in 2011 to 41% in 2018. There is significant disparity among states in terms of the agricultural workforce's proportion of the total workforce. Chhattisgarh (71.8%), Bihar (61.6%), and Himachal Pradesh (58.4%) have the highest proportions, whereas Kerala (20.4%), Tamil Nadu (33.5%), and Punjab (35.8%) have the lowest. From 2011 to 2018, Assam (17.1 percentage points), Haryana (16.6 percentage points), and Uttarakhand (14.8 percentage points) saw the largest reductions in the agricultural workforce's share of the total workforce. In contrast, Uttar Pradesh (2 percentage points), Himachal Pradesh (2.1 percentage points), and Madhya Pradesh (2 percentage points) experienced the smallest reductions. Interestingly, Rajasthan showed an increase in the percentage of its workforce employed in agriculture during this period.

### 3.2.2 Disparity in the Growth rate of Agriculture

Figure 2 illustrates the growth rate of the domestic product from agriculture from 2004-05 to 2018-19. The agricultural growth rate in India increased from 4.4% during 2004-05 to 2011-12 to 8.2% during 2011-12 to 2018-19. Among the states, the highest growth rates from 2011-12 to 2018-19 were recorded by Madhya Pradesh (15.3%), Maharashtra (10.6%), and West Bengal (10.3%). From 2004-05 to 2011-12, Jharkhand registered the highest growth rate of 9.5%, followed by Chhattisgarh at 7.9%. In contrast, Kerala experienced a negative growth rate of -1.1% during 2004-2011.

**Fig.2 Growth Rate of Domestic Product from Agriculture, 2004-05 to 2018-19**



Source: MOSP

### 3.3 Regional Disparity in Industrial Sector

In India, industrial concentration is observed in specific regions, prompting the government to adopt various measures for balanced regional development, often through regulated industrial policies. Historically, many industries were reserved for the public sector, but following economic liberalization, there has been a shift towards reduced state involvement in industrial growth. This shift has led to the concentration of industries in economically advanced states, which have a comparative advantage in terms of social and economic infrastructure, as supported by several studies.

In 2018-19, the share of manufacturing in total GSDP in major states ranged from 5.1% in Delhi to 37.2% in Uttarakhand. Industrially developed states such as Gujarat and Maharashtra had a higher contribution of manufacturing to their total GSDP. Compared to 2011-12, the share of manufacturing declined in 10 states, while it increased in 12 states. Telangana and Andhra Pradesh saw the largest reductions in manufacturing share, with decreases of 5.0 and 3.1 percentage points, respectively. On the other hand, Gujarat and Himachal Pradesh experienced the highest increases, with gains of 7.1 and 5.2 percentage points. From 2011-12 to 2018-19, the industrial growth rate was 8.5%, with Gujarat recording the highest growth rate of 13.8%, followed by Assam at 12.9%. The lowest growth rates were observed in Rajasthan (2.6%) and Telangana (2.8%).

**Table - 3 Share of Manufacturing Sector to Total GSDP**

| State            | 2004-05              | 2011-12              | 2018-19 | Growth 2011-12 to 2018-19 |
|------------------|----------------------|----------------------|---------|---------------------------|
|                  | <b>2004-05 Price</b> | <b>2011-12 Price</b> |         |                           |
| Andhra Pradesh   | 11.5                 | 13.4                 | 10.3    | 3.3                       |
| Assam            | 10.5                 | 10.8                 | 15.3    | 12.9                      |
| Bihar            | 5.6                  | 5.9                  | 8.8     | 12.3                      |
| Chhattisgarh     | 21.9                 | 15.4                 | 14.5    | 4.7                       |
| Delhi            | 7.3                  | 5.5                  | 5.1     | 6.8                       |
| Gujarat          | 27.3                 | 25.5                 | 32.6    | 13.8                      |
| Haryana          | 21.4                 | 17.9                 | 21.0    | 11.1                      |
| Himachal Pradesh | 11.5                 | 24.8                 | 29.9    | 10.1                      |
| Jammu & Kashmir  | 6.1                  | 10.2                 | 8.8     | 3.2                       |
| Jharkhand        | 33.7                 | 20.0                 | 19.8    | 5.8                       |
| Karnataka        | 18.4                 | 16.0                 | 16.5    | 9.7                       |
| Kerala           | 8.6                  | 9.4                  | 11.8    | 9.8                       |

|                |      |      |      |      |
|----------------|------|------|------|------|
| Madhya Pradesh | 11.1 | 12.1 | 11.1 | 6.1  |
| Maharashtra    | 20.6 | 19.2 | 20.3 | 7.7  |
| Odisha         | 12.1 | 17.8 | 20.5 | 9.6  |
| Punjab         | 15.1 | 14.1 | 13.7 | 5.5  |
| Rajasthan      | 12.5 | 15.3 | 11.8 | 2.6  |
| Tamil Nadu     | 19.8 | 20.2 | 22.0 | 8.4  |
| Telangana      | 13.2 | 17.3 | 12.3 | 2.8  |
| Uttar Pradesh  | 13.5 | 12.1 | 16.3 | 11.3 |
| Uttarakhand    | 12.7 | 37.8 | 37.2 | 7.4  |
| West Bengal    | 11.1 | 13.4 | 14.4 | 6.3  |
| India          | 15.9 | 16.2 | 17.6 | 8.5  |

Source: [www.mospi.gov.in](http://www.mospi.gov.in)

### 3.4 Regional disparity in service sector

The contribution of the service sector to total GSDP increased by 2 percentage points, rising from 44.8% to 46.8% during 2011-12 and 2018-19. However, In 2018-19, Delhi (73.6%) and Bihar (57.7%) had the highest shares in the service sector, while Gujarat (30.8%), Chhattisgarh (34.5%), and Uttarakhand recorded the lowest shares. The largest percentage changes in the service sector share between 2011-12 and 2018-19 were seen in Telangana (7.9) and Jharkhand (4.1), while Himachal Pradesh, Arunachal Pradesh, and Jammu & Kashmir showed minimal changes of 1.0, 1.0, and 1.4 percentage points, respectively. Odisha, Delhi, and Madhya Pradesh experienced no change in the service sector's contribution to GSDP during this period.

**Table 4: share of service sector**

| State          | 2004-05 Price |         | 2011-12 Price |         | Growth Rate 2011-12 to 2018-19 |
|----------------|---------------|---------|---------------|---------|--------------------------------|
|                | 2004-05       | 2011-12 | 2011-12       | 2018-19 |                                |
| Andhra Pradesh | 48.5          | 53.7    | 37.7          | 38.8    | 7.7                            |
| ssam           | 46.9          | 55.4    | 44            | 38.7    | 5.3                            |
| Bihar          | 54.7          | 56.6    | 54.3          | 57.7    | 7.1                            |

|                  |      |      |      |      |      |
|------------------|------|------|------|------|------|
| Chhattisgarh     | 34.4 | 37.2 | 32.5 | 34.5 | 6.5  |
| Delhi            | 80.5 | 88.2 | 73.6 | 73.6 | 8    |
| Gujarat          | 43.9 | 46.7 | 32.9 | 30.8 | 8.8  |
| Haryana          | 44   | 54.5 | 41.3 | 44   | 9.6  |
| Himachal Pradesh | 36.1 | 42.6 | 37.2 | 38.3 | 7.5  |
| Jammu & Kashmir  | 43.7 | 54.1 | 52   | 53.4 | 5.8  |
| Jharkhand        | 32.9 | 43.1 | 35.5 | 39.6 | 7.5  |
| Karnataka        | 51   | 55.3 | 51.8 | 55.9 | 10.4 |
| Kerala           | 59.6 | 68   | 53.1 | 56   | 7.1  |
| Madhya Pradesh   | 45.2 | 47.1 | 37.6 | 37.6 | 7.4  |
| Maharashtra      | 59.6 | 62.3 | 45.7 | 49.4 | 8.1  |
| Odisha           | 42.4 | 48.6 | 36.7 | 36.8 | 7.5  |
| Punjab           | 42.6 | 47.6 | 41.7 | 45.6 | 7.2  |
| Rajasthan        | 43.8 | 45.9 | 37.2 | 40.7 | 7.9  |
| Tamil Nadu       | 57.2 | 61   | 46.6 | 46.3 | 7    |
| Telangana        | 53.8 | 58.5 | 49.4 | 57.3 | 10.2 |
| Uttar Pradesh    | 47   | 54   | 42.9 | 44.5 | 7.3  |
| Uttarakhand      | 49.5 | 52.1 | 31.8 | 35.4 | 9.3  |
| West Bengal      | 54.4 | 63.6 | 47.8 | 50.8 | 6.1  |
| India            | 51.4 | 56.7 | 44.8 | 46.8 | 7.9  |

Between 2011-12 and 2018-19, the service sector grew at a rate of 7.9%. Telangana and Karnataka recorded the highest growth rates, both at 10.0%, while Assam (5.3%) and Jammu & Kashmir (5.8%) had the lowest growth rates

### 3.5 Regional Disparity in Infrastructure

Infrastructure plays a crucial role in economic development, trade, employment generation, and reducing regional disparities. Adequate physical infrastructure is essential for sustainable economic and social progress, while its absence or inadequacy hinders growth. A closer look at the infrastructure situation across various states reveals significant variations that impact overall development.

#### 3.5.1 Physical Infrastructure

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

##### 3.5.1.1 The electricity

Per capita electricity consumption is a key indicator of development. In 2018, India's per capita electricity consumption was 1,181 kWh, significantly lower than countries like Canada (15,438 kWh), the USA (13,098 kWh), and Saudi Arabia (10,239 kWh). Within India, there is a stark disparity among states, with developed states like Gujarat (2,378 kWh), Haryana (2,082 kWh), and Punjab (2,046 kWh) having the highest consumption, while states like Bihar (311 kWh) and Assam (341 kWh) lag far behind. The electricity consumption in Gujarat was over seven times higher than in Bihar.

#### 3.5.2 Health Infrastructure

Health infrastructure reflects the status of a country's healthcare sector. In rural India, there were 179 sub-centers per million people. States like Kerala (458) and Jammu and Kashmir (325) had the highest number of sub-centers, while Bihar (95) and Jharkhand (138) had the lowest. India has 28 primary health centers (PHCs) per million population, with significant state-wise variations. Himachal Pradesh (89) and Kerala (72) had the highest number of PHCs, while Jharkhand (11) and Bihar (18) had the fewest. Doctor availability in PHCs was 34 per million population nationally, with Kerala (130) and Jammu and Kashmir (99) leading, and Jharkhand (12) and West Bengal (13) lagging. Auxiliary Nurse Midwives (ANMs), crucial for rural healthcare and awareness, numbered 266 per million population across India. Kerala (638) and Andhra Pradesh (343) had the highest ANM availability, while Uttar Pradesh (169) and Madhya Pradesh (201) had the lowest.

Table 5 Number of medical institutions per Million Population in Rural Areas

| State             | Sub Centre* | PHCs* | CHCs | Doctors in PHCs | ANM Sub center & PHCs |
|-------------------|-------------|-------|------|-----------------|-----------------------|
| Andhra Pradesh    | 216         | 33    | 4    | 50              | 343                   |
| Assam             | 159         | 32    | 6    | 66              | 395                   |
| Bihar             | 95          | 18    | 1    | 20              | 230                   |
| Chhattisgarh      | 244         | 37    | 8    | 15              | 320                   |
| Gujarat           | 253         | 41    | 10   | 60              | 253                   |
| Haryana           | 151         | 22    | 7    | 31              | 267                   |
| Himachal Pradesh  | 319         | 89    | 13   | 74              | 282                   |
| Jammu and Kashmir | 325         | 67    | 9    | 99              | 527                   |
| Jharkhand         | 138         | 11    | 6    | 12              | 227                   |
| Karnataka         | 258         | 56    | 5    | 56              | 224                   |
| Kerala            | 458         | 72    | 19   | 130             | 638                   |
| Madhya Pradesh    | 174         | 20    | 5    | 18              | 201                   |
| Maharashtra       | 166         | 28    | 6    | 46              | 339                   |
| Odisha            | 187         | 36    | 11   | 23              | 257                   |
| Punjab            | 166         | 23    | 5    | 32              | 254                   |
| Rajasthan         | 236         | 36    | 10   | 34              | 270                   |
| Tamil Nadu        | 239         | 39    | 11   | 49              | 274                   |
| Telangana         | 142         | 19    | 3    | 36              | 237                   |
| Uttarakhand       | 251         | 35    | 9    | 37              | 248                   |
| Uttar Pradesh     | 121         | 17    | 4    | 18              | 169                   |

|             |     |    |   |    |     |
|-------------|-----|----|---|----|-----|
| West Bengal | 165 | 14 | 6 | 13 | 302 |
| India/Total | 179 | 28 | 6 | 34 | 266 |

\*Including health and wellness Centres

**Source:** Rural Health Statistics 2018-19, Ministry of Health and Family Welfare

### 3.5.3 Education Infrastructure

Literacy is widely acknowledged as a key driver of overall development, empowering people to seize new opportunities and engage more actively in society. Census data reveals a significant rise in India's literacy rate, from 52% in 1991 to 74.04% in 2011. Education infrastructure plays a vital role in improving a region's literacy rate. Key supply-side factors, such as the availability of schools, well-maintained buildings, sufficient teachers, and essential facilities like toilets and drinking water, determine the quality of education. In 2016-17, India had 114 elementary schools (primary and secondary) per lakh population. States like Himachal Pradesh (254), Jammu and Kashmir (223), and Uttarakhand (220) had the highest numbers, while Delhi (31), Kerala (48), and Gujarat (68) reported the lowest.

Regional disparities in education are also evident in indicators like the percentage of single-classroom schools and single-teacher schools. In India, 4.3% of elementary schools operate with only one classroom. States such as Assam (18.5%) and Andhra Pradesh (13.0%) have a high proportion of single-classroom schools, while Kerala, Delhi (0.1%), Uttar Pradesh (0.7%), and Tamil Nadu (0%) report much lower proportions. Similarly, 7.2% of schools in India have only one teacher. Andhra Pradesh (14.1%), Jharkhand (17.1%), and Rajasthan (12%) lead in this category, whereas Delhi (0.1%) and Gujarat (2.0%) have the lowest proportions as of 2016-17.

Basic facilities in schools play a significant role in influencing educational development. These include essential amenities such as toilet facilities, drinking water, separate toilets for girls, and the overall condition of school buildings. In India, 96.5% of schools provide toilet facilities for girls. Drinking water facilities show minimal variation across states. Regarding electricity connectivity, about 60% of schools have access to electricity. States with a high percentage of schools with electricity include Delhi, Gujarat, and Haryana, where 94-99% of schools are connected. In contrast, states like Assam, Madhya Pradesh, Jammu and Kashmir, and Jharkhand have lower electricity connectivity, with only 20-35% of schools having access.

Another crucial indicator of educational quality is the Pupil-Teacher Ratio (PTR). A higher PTR often leads to lower quality education due to limited attention per student. On a national level, India's PTR stands at 23. States with the highest PTR include Bihar (45) and Jharkhand (32), while states with the lowest PTR are Himachal Pradesh, Jammu and Kashmir, and Punjab, where the ratio is below 16.

Table 6: Basic Infrastructural Facility in School, 2016-17

| State            | Single Class Room School (%) | Single Teacher School (%) | Girls Toilet (%) | Drinking Water (%) | School with Electricity (%) | Pupil-Teacher Ratio |
|------------------|------------------------------|---------------------------|------------------|--------------------|-----------------------------|---------------------|
| Andhra Pradesh   | 13                           | 14.1                      | 99.7             | 94.8               | 93.2                        | 19                  |
| Assam            | 18.5                         | 7.2                       | 79.8             | 87.7               | 20.2                        | 18                  |
| Bihar            | 1.8                          | 4.4                       | 87.3             | 94.8               | 41.4                        | 45                  |
| Chhattisgarh     | 2.2                          | 5.6                       | 99.5             | 99.3               | 69.5                        | 20                  |
| Delhi            | 0.1                          | 0.1                       | 100              | 100                | 99.9                        | 21                  |
| Gujarat          | 1.1                          | 2                         | 99.9             | 100                | 99.9                        | 27                  |
| Haryana          | 0.8                          | 3.9                       | 99.4             | 99.9               | 97.3                        | 18                  |
| Himachal Pradesh | 3.3                          | 6.7                       | 99.9             | 100                | 91.6                        | 10                  |
| Jammu & Kashmir  | 6.9                          | 6.3                       | 93.7             | 92.5               | 31.1                        | 10                  |
| Jharkhand        | 0.8                          | 17.1                      | 97.9             | 96.1               | 31.3                        | 32                  |
| Karnataka        | 3.3                          | 8.3                       | 96.1             | 98.5               | 95.6                        | 27                  |
| Kerala           | 1.9                          | 2.2                       | 97.9             | 99.7               | 96.4                        | 16                  |
| Madhya Pradesh   | 3.1                          | 13.3                      | 95               | 96.4               | 27.2                        | 23                  |
| Maharashtra      | 6.8                          | 3.1                       | 98.2             | 99.6               | 85.4                        | 22                  |
| Odisha           | 9.2                          | 2.4                       | 95.8             | 99.8               | 33.1                        | 19                  |
| Punjab           | 1.8                          | 3.2                       | 99.4             | 100                | 99.9                        | 15                  |
| Rajasthan        | 2.7                          | 12.4                      | 99               | 97.5               | 58.3                        | 18                  |
| Tamil Nadu       | 0                            | 1.9                       | 99.7             | 100                | 99.3                        | 16                  |
| Telangana        | 9.3                          | 12.6                      | 96.3             | 99.2               | 87.9                        | 21                  |
| Uttar Pradesh    | 0.7                          | 5.6                       | 99.6             | 98.7               | 41.5                        | 31                  |
| Uttarakhand      | 1.2                          | 8.2                       | 95.4             | 96.2               | 72.5                        | 15                  |
| West Bengal      | 5.1                          | 4.2                       | 97.6             | 98.4               | 79.1                        | 21                  |
| India            | 4.3                          | 7.2                       | 96.5             | 97.1               | 59.8                        | 23                  |

Source: DISE www.dise.in

The table highlights the availability of basic facilities in schools across various Indian states, showcasing disparities in infrastructure and resources. Nationally, 96.5% of schools have girls' toilets, and 97.1% have access to drinking water, indicating significant coverage in these critical areas. However, only 59.8% of schools have electricity, with states like Delhi, Gujarat, and Punjab performing exceptionally well (nearly 100%), while Bihar (41.4%) and Assam (20.2%) lag behind. The percentage of single-classroom schools is highest in Assam (18.5%) and lowest in Delhi (0.1%), reflecting differences in infrastructure. Similarly, single-teacher schools are most prevalent in Jharkhand (17.1%) and Telangana (12.6%), highlighting teacher shortages in these regions. States like Himachal Pradesh and Jammu & Kashmir show the best pupil-teacher ratios (10), while Bihar faces challenges with a ratio of 45, indicating a strain on educational quality. Overall, while progress is visible in some areas, disparities in electricity connectivity, infrastructure, and teacher availability underscore the need for targeted interventions to ensure equitable development

### 3.6 Regional Disparity in Human Development

The state-wise Human Development Index (HDI) and rankings for India in 1990, 2000, and 2018, highlights the trends in human development over time. Kerala consistently improved to secure the highest HDI value (0.779) in 2018, followed by Delhi (0.746) and Himachal Pradesh (0.725). States like Bihar, Uttar Pradesh, and Jharkhand remained at the bottom, indicating persistent developmental challenges. The data reflects significant progress in southern and northern states like Kerala, Delhi, and Himachal Pradesh, while eastern and central states such as Bihar, Madhya Pradesh, and Odisha lagged behind, underscoring ongoing regional disparities. Nationally, India's HDI improved from 0.431 in 1990 to 0.647 in 2018, reflecting overall progress, though unevenly distributed across states.

**Table 7: State-wise Value and Rank of Human Development Index, 1990-2018**

| State             | 1990  |      | 2000  |      | 2018  |      |
|-------------------|-------|------|-------|------|-------|------|
|                   | Value | Rank | Value | Rank | Value | Rank |
| Andhra Pradesh    | 0.424 | 17   | 0.478 | 18   | 0.650 | 14   |
| Arunachal Pradesh | 0.437 | 16   | 0.502 | 16   | 0.660 | 13   |
| Assam             | 0.411 | 18   | 0.488 | 17   | 0.614 | 17   |
| Bihar             | 0.378 | 23   | 0.436 | 23   | 0.576 | 23   |
| Chhattisgarh      | 0.562 | 4    | 0.564 | 7    | 0.613 | 18   |
| Gujarat           | 0.470 | 12   | 0.527 | 13   | 0.672 | 11   |
| Haryana           | 0.467 | 13   | 0.549 | 10   | 0.708 | 5    |
| Himachal Pradesh  | 0.479 | 10   | 0.589 | 5    | 0.725 | 3    |
| Jammu and Kashmir | 0.493 | 8    | 0.528 | 12   | 0.688 | 8    |
| Jharkhand         | 0.562 | 4    | 0.564 | 7    | 0.599 | 21   |
| Karnataka         | 0.444 | 14   | 0.518 | 14   | 0.682 | 10   |

|                |       |    |       |    |       |    |
|----------------|-------|----|-------|----|-------|----|
| Kerala         | 0.544 | 6  | 0.598 | 4  | 0.779 | 1  |
| Madhya Pradesh | 0.406 | 19 | 0.460 | 21 | 0.606 | 19 |
| Maharashtra    | 0.493 | 8  | 0.558 | 9  | 0.696 | 7  |
| New Delhi      | 0.577 | 3  | 0.664 | 1  | 0.746 | 2  |
| Odisha         | 0.400 | 21 | 0.458 | 22 | 0.606 | 19 |
| Punjab         | 0.496 | 7  | 0.578 | 6  | 0.723 | 4  |
| Rajasthan      | 0.403 | 20 | 0.469 | 19 | 0.629 | 16 |
| Tamil Nadu     | 0.471 | 11 | 0.542 | 11 | 0.708 | 5  |
| Telangana      | 0.622 | 2  | 0.627 | 3  | 0.669 | 12 |
| Uttar Pradesh  | 0.397 | 22 | 0.463 | 20 | 0.596 | 22 |
| Uttarakhand    | 0.629 | 1  | 0.630 | 2  | 0.684 | 9  |
| West Bengal    | 0.440 | 15 | 0.505 | 15 | 0.641 | 15 |
| India          | 0.431 |    | 0.498 |    | 0.647 |    |

**Source:** Different reports UNDP

#### 4.Conclusion

Regional disparities in India have persisted and even widened during the era of globalization. Economic liberalization and market-driven reforms have favoured already developed regions with better infrastructure, governance, and access to resources. Industrial and service sector growth has concentrated in states like Maharashtra, Gujarat, and Tamil Nadu, while lagging regions, particularly in the north and east, such as Bihar and Jharkhand, struggle to attract investment. Globalization has amplified disparities due to factors like uneven infrastructure development, limited financial resources in poorer states, and the privatization of services, which shifted growth to regions with established economic bases. Skilled labor demand has further marginalized underdeveloped regions, where education and training facilities are inadequate. Additionally, public sector investments, which previously focused on balanced growth, have declined in favour of private-sector initiatives that prioritize profitability over equity. To address these disparities, measures like infrastructure development, targeted investments in backward regions, and decentralized resource allocation are crucial for equitable growth.

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