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# Disparities in Human Development Across Different States of India

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**Abstract**

*This paper presents of India's human development indices (HDI) from 1990 to 2022, highlighting the substantial changes and persistent disparities within the country. The study aims to provide a nuanced understanding of the interplay between regional variations, and human development outcomes. By examining historical data and projecting future trends, this analysis offers critical insights into the socio-economic and human development landscape of India, informing evidence-based policymaking and resource allocation. The primary objectives of this paper are to provide a detailed analysis of human development indicators across Indian states and regions. Additionally, the paper will analyze trends in the Human Development Index (HDI) scores and rankings, examining regional disparities and the impact of human development shifts over three decades. The methodology for this paper entails a multi-step approach to rigorously evaluate human development indicators.*
**Keywords: Human Development, ANOVA**

## Introduction

People are the real wealth of a country. The basic objective of development is to create an enabling nature for people to enjoy long healthy and creative lives. Many studies have been undertaken with the purpose of investing the real meaning of development. Several studies have concluded that the economic indicators show the strength of an economy but may not be sufficient to indicate the quality of living of the people. Thus the need of social indicator to reveal real meaning of development has been raised.

Indeed, human well being has been considered an essential responsibility of the State and a synonym of human development since time immemorial. As far as 2300 years ago, Chanakya considered the welfare of people essential for good governance and specifically wrote in his world famous treatise, 'Artha Shastra': "The consecrated task of a king is to reach for the welfare of his people incessantly. The administration of the kingdom is his devout duty. His great gift would be to treat all as equals". Not only this, but throughout history, the philosophers and politicians have been busy defining what makes for a full life and this included Aristotle's "Ethics" wherein he tried to identify the conditions needed to achieve

eudemonia, commonly interpreted as the ultimate human good or the best life or best translated as human flourishing . Eudemonia goes beyond the trappings of wealth, power, and knowledge and focuses on the virtues that underpin a life premised on spiritual, emotional, and material well being. It highlights strength of character, courage, honesty and pride, together with mutually beneficial rationality.

In actual fact, the shift in the nature of human development is also clearly visible in the approaches applied by the United Nations towards developments during the four decades of 1960's, 1970's, 1980's and 1990's (declared as "development decades") which have been changing from absolutely economic to humanistic.

**Importance of Human Development**

The search for an alternative to GPN as measure of economic development led to computation of comprehensive indices of development by economists. D. Morris developed the concept of a Physical Quality of life Index (PQLI) while economists like Paul Streeten strongly advocated the adoption of a basic needs approach. These attempts have paved the way for the Human Development Index (HDI) introduced by the United Nations Development Programme (UNDP) in its first Human Development Report prepared under the able supervision of Mahbub Ul - Haq, and published in 1990. The Human Development Report launch in 1990 has defined human development as the process of enlarging people's choices. The most important ones are to lead a long and healthy life, to be educated and to enjoy a standard of living. Human Development is thus a process of expend people's choices as well as raising the level of well being.

**Human Development in India**

India's latest Human Development Index value of, 0.633 places the country in the medium human development category, lower than its value of 0.647 in the 2019 and ranked 132nd among 191 countries and territories on the 2021 Human Development Index, showed a report by the UNDP. In the 2019 report, India had ranked 129 among 189 countries and territories. The decline in the country's performance from its previous level was on account of a falling life expectancy from 69.4 years to 67.2 years during the survey period.

**Table 1.1 Trends in the India's HDI Values and Ranking a Comparison**

| Year | HDI Score | Rank | Total No of Countries |
|---|---|---|---|
| 1990 | 0.434 | 116 | 143 |
| 1991 | 0.437 | 116 | 143 |
| 1992 | 0.442 | 116 | 143 |
| 1993 | 0.446 | 115 | 143 |
| 1994 | 0.452 | 115 | 143 |
| 1995 | 0.458 | 120 | 154 |
| 1996 | 0.466 | 120 | 154 |
| 1997 | 0.471 | 118 | 154 |
| 1998 | 0.478 | 118 | 154 |
| 1999 | 0.486 | 117 | 159 |
| 2000 | 0.491 | 129 | 187 |
| 2001 | 0.496 | 130 | 187 |
| 2002 | 0.503 | 131 | 187 |

| 2003 | 0.516 | 130 | 187 |
|---|---|---|---|
| 2004 | 0.525 | 131 | 187 |
| 2005 | 0.534 | 137 | 187 |
| 2006 | 0.543 | 137 | 187 |
| 2007 | 0.553 | 137 | 187 |
| 2008 | 0.56 | 138 | 187 |
| 2009 | 0.565 | 138 | 187 |
| 2010 | 0.575 | 138 | 191 |
| 2011 | 0.588 | 137 | 192 |
| 2012 | 0.598 | 135 | 192 |
| 2013 | 0.607 | 133 | 192 |
| 2014 | 0.619 | 133 | 192 |
| 2015 | 0.629 | 130 | 192 |
| 2016 | 0.639 | 127 | 192 |
| 2017 | 0.644 | 128 | 192 |
| 2018 | 0.645 | 129 | 192 |
| 2019 | 0.645 | 129 | 192 |
| 2020 | 0.642 | 130 | 192 |
| 2021 | 0.633 | 132 | 192 |
| 2022 | 0.644 | 134 | 193 |

**Source:** Authors' calculation

Table 1.1 provides a historical overview of a country's Human Development Index (HDI) scores, rankings, and the total number of countries assessed over the years from 1990 to 2022. Let's break down the information in the table. This column indicates the year for which the data is reported.

**HDI Stands for Human Development Index, a Composite Statistic Used to Rank Countries based on their Levels of Human Development. It combines Three Major Dimensions**

Life Expectancy (health dimension) - indicating the ability to lead a long and healthy life. Education (knowledge dimension) - measured by the average number of years of schooling for adults aged 25 years or older and the expected years of schooling for children of school entering age. Gross National Income (GNI) per capita (standard of living dimension). The HDI score is expressed as a value between 0 and 1, where higher values indicate higher human development.

Total Number of Countries: indicates the total number of countries included in the HDI ranking for that year. Changes in this number reflect either the inclusion of new countries or changes in the data collection methodology.

The HDI score has steadily increased over the years, from 0.434 in 1990 to a peak of 0.645 in 2018 and 2019. This indicates a gradual improvement in the country's overall human development, considering health, education, and income.

Despite the improvement in the HDI score, the country's ranking does not consistently improve. For instance, in 1990, the country was ranked 116th out of 143 countries. By 2022, although the HDI score improved to 0.644, the ranking dropped to 134th out of 193 countries.

The changes in ranking reflect not just the country's performance but also how other countries have performed relative to it. As more countries improved their HDI scores, this particular country's rank did not improve as quickly. The total number of countries assessed increased from 143 in 1990 to 193 by 2022. This expansion reflects changes in the global landscape, such as the recognition of new countries and better data availability over time.

Notably, there is a slight decline in the HDI score between 2019 (0.645) and 2021 (0.633), possibly reflecting the impact of global events such as the COVID-19 pandemic on health, education, and economic indicators. By 2022, the score slightly rebounded to 0.644, but the ranking still reflected a downward trend.

The country has made substantial progress in human development since 1990, as evidenced by the increasing HDI score. However, its relative global ranking has been more volatile, reflecting both internal and external factors affecting development. The data also highlights the dynamic nature of global human development as more countries are assessed over time, impacting rankings even when a country's HDI improves.

**Table 1.2 Performance of Human Development in Indian States (2021)**

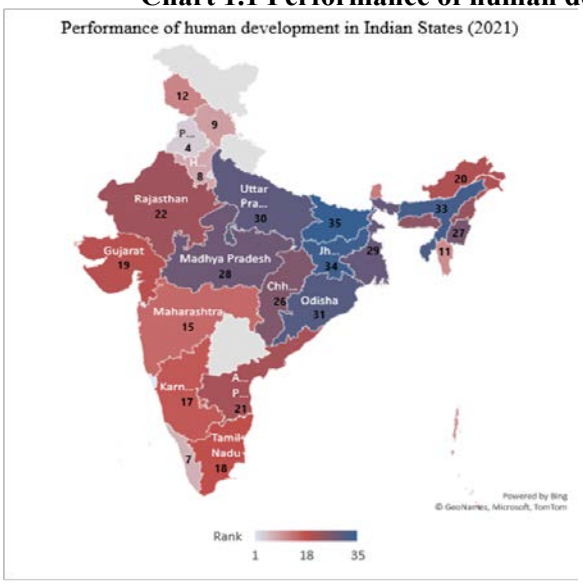
| Sl. No | State | HDI | Rank |
|---|---|---|---|
| 1 | Andaman and Nicobar Islands | 0.706 | 10 |
| 2 | Andhra Pradesh | 0.660 | 21 |
| 3 | Arunachal Pradesh | 0.665 | 20 |
| 4 | Assam | 0.564 | 33 |
| 5 | Bihar | 0.544 | 35 |
| 6 | Chandigarh | 0.751 | 2 |
| 7 | Chhattisgarh | 0.609 | 26 |
| 8 | Dadra and Nagar Haveli | 0.613 | 25 |
| 9 | Daman and Diu | 0.675 | 16 |
| 10 | Goa | 0.752 | 1 |
| 11 | Gujarat | 0.669 | 19 |
| 12 | Haryana | 0.713 | 8 |
| 13 | Himachal Pradesh | 0.709 | 9 |
| 14 | Jammu and Kashmir | 0.696 | 12 |
| 15 | Jharkhand | 0.557 | 34 |
| 16 | Karnataka | 0.673 | 17 |
| 17 | Kerala | 0.716 | 7 |
| 18 | Lakshadweep | 0.718 | 6 |
| 19 | Madhya Pradesh | 0.600 | 28 |
| 20 | Maharashtra | 0.676 | 15 |
| 21 | Manipur | 0.606 | 27 |
| 22 | Meghalaya | 0.616 | 24 |
| 23 | Mizoram | 0.705 | 11 |
| 24 | Nagaland | 0.639 | 23 |
| 25 | New Delhi | 0.733 | 3 |
| 26 | Orissa | 0.587 | 31 |
| 27 | Puducherry | 0.724 | 5 |
| 28 | Punjab | 0.729 | 4 |
| 29 | Rajasthan | 0.660 | 22 |
| 30 | Sikkim | 0.683 | 13 |
| 31 | Tamil Nadu | 0.671 | 18 |
| 32 | Tripura | 0.586 | 32 |

| | | | |
|---|---|---|---|
| 33 | Uttar Pradesh | 0.591 | 30 |
| 34 | Uttaranchal | 0.678 | 14 |
| 35 | West Bengal | 0.598 | 29 |

**Source:** Authors' calculation

The objective of this analysis is to examine the disparities in human development across Indian states and union territories, as reflected by their Human Development Index (HDI) scores and ranks.

**Chart 1.1 Performance of human development in Indian States (2021)**




The Human Development Index (HDI) data for 35 Indian states and union territories reveals significant disparities in human development outcomes across the country, reflecting the diverse socio-economic landscape of India. At the top of the HDI rankings, regions like Goa (HDI: 0.752, Rank: 1), Chandigarh (HDI: 0.751, Rank: 2), and New Delhi (HDI: 0.733, Rank: 3) demonstrate exceptional human development indicators, characterized by high literacy rates, robust healthcare infrastructure, and strong economic performance. These regions have benefitted from sustained investments in education and healthcare, leading to better life expectancy, higher standards of living, and improved quality of life.

Kerala (HDI: 0.716, Rank: 7), despite not being in the top three, continues to stand out due to its highly developed healthcare system and education sector, which have long been models for other states. Kerala's focus on social welfare, gender equality, and literacy has contributed to its consistently strong performance in human development, even though its economic growth may not be as rapid as some northern states.

In stark contrast, states like Bihar (HDI: 0.544, Rank: 35), Jharkhand (HDI: 0.557, Rank: 34), and Assam (HDI: 0.564, Rank: 33) languish at the bottom of the HDI rankings. These states face deep-rooted challenges, such as lower levels of educational attainment, inadequate healthcare systems, and higher levels of poverty and unemployment. The low HDI scores reflect the persistent socio-economic inequalities that plague these regions, where access to quality education, healthcare, and employment opportunities remains limited. These disparities underscore the need for targeted policy interventions to address the structural issues that hinder progress in these states.

Mid-ranking states, including Maharashtra (HDI: 0.676, Rank: 15), Karnataka (HDI: 0.673, Rank: 17), and Gujarat (HDI: 0.669, Rank: 19), show a mix of progress and challenges. While these states have well-developed infrastructure and relatively strong economies, they still struggle with income inequality and healthcare access, which prevent them from achieving higher HDI scores. Despite their economic powerhouses, these states must focus on equitable growth and improving social services to raise their human development outcomes.

Union territories like Puducherry (HDI: 0.724, Rank: 5) and Lakshadweep (HDI: 0.718, Rank: 6) also rank high in human development. Their smaller populations allow for more efficient resource allocation and focused governance, contributing to better education and healthcare outcomes.

A clear regional divide emerges in the HDI data, with southern and western states generally outperforming northern and eastern states. This divide mirrors broader socio-economic trends,

such as industrialization, literacy rates, and urbanization patterns. The analysis reveals a complex picture of human development in India, where regional disparities persist. Bridging these gaps is essential for achieving equitable, sustainable development, ensuring that all regions share in the country's progress.

## Objective

To examine the disparities in human development across Indian states and union territories, as reflected by their Human Development Index (HDI) scores and ranks.

## Data Sources

Initially, comprehensive data collection is conducted using diverse sources such as national census reports, health surveys, regional indices, and HDI reports from the United Nations Development Programme (UNDP). This data is then systematically analyzed to uncover trends, patterns, and regional disparities in HDI scores, and educational indices. Finally, the data is interpreted to derive insights into developmental progress, persistent challenges, and implications for public health policy, resource distribution, and educational strategies.

## Methodology

The present chapter utilizes secondary data obtained from the Global Data Lab, covering the period from 1991 to 2021. The details of the selected variables are listed in Table 1.3. The study compares the Human Development Index (HDI) among the Union Territories, Northeast States, Southern States, Western States, Eastern States and Northern States of India. To examine mean differences among these regions, the study employs the ANOVA test. For this analysis, 38 states and union territories have been selected.

**Table 1.3 Region wise Classification of Indian States**

| | |
|---|---|
| Sample Size (38states and union territories) | 1. Union Territories: Andaman & Nicobar Islands Chandigarh, Dadra & Nagar Haveli, Daman & Diu, Jammu & Kashmir, Lakshadweep, New Delhi and Puducherry |
| | 2. Northeast States: Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura |
| | 3. Southern States: Andhra Pradesh, Karnataka, Kerala, Tamil Nadu and Telangana |
| | 4. Western States: Goa, Gujarat, Madhya Pradesh and Maharashtra |
| | 5. Eastern States: Bihar, Chhattisgarh, Jharkhand, Odisha and West Bengal |
| | 6. Northern States: Haryana, Himachal Pradesh, Punjab, Rajasthan, Uttar Pradesh and Uttarakhand |

## ANOVA Technique

The ANOVA technique is important for comparing more than two populations simultaneously, allowing for the investigation of differences among their means. To obtain the mean square (MS) between samples, divide the sum of squares between samples by the degrees of freedom. Symbolically, this can be written as:

**MS between = SS between/K-1**

To calculate the mean square (MS) within samples, divide the sum of squares within samples by the corresponding degrees of freedom. This can be symbolically represented as:

**MS Within = SS within/n-K**

Finally, F-ratio may be worked out as under,

**F Ratio = MSbetween/MSwithin**

This ratio determines whether the differences among several sample means are statistically significant or merely due to sampling fluctuations.

**Table 1.4 Descriptions of the Variables Used**

| Sl. No. | Variables | Time Period | Source of Data | Measurement Unit |
|---|---|---|---|---|
| 1 | HDI | 1991 to 2021 | Global Data Lab (Sub national Human Development) | Index Value |

## Hypothesis Testing

The present study has been tested the following null hypotheses based on the data collected from Global Data Lab (Sub national Human Development).

## Hypothesis -1

H0: There is no significant difference in HDI values among classified regional groups in India.

H1: There is a significant difference in HDI values among classified regional groups in India.

A One-Way ANOVA was conducted to test the hypothesis, followed by an LSD Post Hoc test to identify which regions have significant mean differences in HDI. The ANOVA test was performed in two ways:

1. To determine the significant difference in HDI values among aggregated regional groups in India
2. To assess the significant difference in HDI values among the Union Territories, Northeast States, Southern States, Western States, Eastern States, and Northern States of India separately.

## Results and Discussion

In light of the objectives of this chapter, the following sections discuss the performance of human development and its current status across Indian states.

**Table 1.5 Test Results of ANOVA (HDI) Across India**

| Groups | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 2.472 | 5 | 0.494 | 82.679 | 0.000 |
| Within Groups | 6.848 | 1145 | 0.006 | | |
| Total | 9.320 | 1150 | | | |

The ANOVA results reveal significant differences in the Human Development Index (HDI) across the six groups analyzed, with an F-value of 82.679 ($p < 0.001$). The between-group sum of squares is 2.472 (mean square = 0.494, df = 5), and the within-group sum of squares is 6.848 (mean square = 0.006, df = 1145). The high F-value and low p-value indicate that the variability between the group means is much greater than the variability within the groups, leading to the rejection of the null hypothesis that the means of the HDI are equal across groups. This suggests that the defining factors of these groups, such as geographical regions or socioeconomic classes, significantly impact the HDI. Further post-hoc analyses are recommended to identify which specific groups differ from each other.

**Table 1.6 Least Square Difference Test (LSD) Multiple Comparisons**

| (I) Group | (J) Group | HDI | | |
|---|---|---|---|---|
| | | Mean Difference (I-J) | Std. Error | Sig. |
| Union Territories (0.67875) | Northeast States | .098937* | .006842 | .000 |
| | Southern States | .079583* | .007799 | .000 |
| | Western States | .092534* | .008377 | .000 |
| | Eastern States | .144926* | .007799 | .000 |
| | Northern States | .096776* | .007389 | .000 |
| Northeast States (0.57981) | Union Territories | -.098937* | .006842 | .000 |
| | Southern States | -.019354* | .007794 | .013 |
| | Western States | -.006402 | .008372 | .445 |
| | Eastern States | .045990* | .007794 | .000 |
| | Northern States | -.002160 | .007383 | .770 |
| Southern States (0.59916) | Union Territories | -.079583* | .007799 | .000 |
| | Northeast States | .019354* | .007794 | .013 |
| | Western States | .012952 | .009171 | .158 |
| | Eastern States | .065344* | .008646 | .000 |
| | Northern States | .017194* | .008278 | .038 |
| Western States (0.58621) | Union Territories | -.092534* | .008377 | .000 |
| | Northeast States | .006402 | .008372 | .445 |
| | Southern States | -.012952 | .009171 | .158 |
| | Eastern States | .052392* | .009171 | .000 |
| | Northern States | .004242 | .008824 | .631 |
| Eastern States (0.53382) | Union Territories | -.144926* | .007799 | .000 |
| | Northeast States | -.045990* | .007794 | .000 |
| | Southern States | -.065344* | .008646 | .000 |
| | Western States | -.052392* | .009171 | .000 |
| | Northern States | -.048150* | .008278 | .000 |
| Northern States (0.58197) | Union Territories | -.096776* | .007389 | .000 |
| | Northeast States | .002160 | .007383 | .770 |
| | Southern States | -.017194* | .008278 | .038 |
| | Western States | -.004242 | .008824 | .631 |
| | Eastern States | .048150* | .008278 | .000 |

**Source:** Authors' calculation

**Note:** *, ** and *** represent 1%, 5% and 10% level of significance respectively

The data in Table 1.6 presents the results of the Least Significant Difference (LSD) test, a post-hoc analysis conducted after the ANOVA to examine the pair wise comparisons of the Human Development Index (HDI) between different groups.

The Union Territories consistently exhibit the highest HDI compared to all other regions, with significant positive differences in all comparisons ($p < 0.001$). Conversely, the Eastern States have the lowest HDI, significantly lower than the Union Territories, Northeast States, Southern States, Western States, and Northern States ($p < 0.001$). The Southern States show a higher HDI than the Eastern States but lower than the Union Territories ($p < 0.001$) and are comparable to the Western

States. The Western States have a higher HDI than the Eastern States but do not significantly differ from the Northeast, Southern, or Northern States.

The Northeast States have a lower HDI than the Union Territories ($p < 0.001$) but higher than the Eastern States ($p < 0.001$). The Northern States also have a significantly lower HDI compared to the Union Territories ($p < 0.001$) but a higher HDI than the Eastern States ($p < 0.001$). No significant HDI differences are observed between the Northeast, Southern, Western, and Northern States. These findings underscore substantial regional disparities in HDI, highlighting the need for targeted policies to address the specific development challenges faced by each region.

**Table 1.7 ANOVA (HDI)**

| Comparison | Union Territories | | | | |
|---|---|---|---|---|---|
| | Sum of Squares | df | Mean Squares | F | Sig. |
| Between Groups | 0.383 | 7 | 0.055 | 34.817 | 0.000 |
| Within Groups | 0.383 | 247 | 0.388 | | |

| Comparison | Northeast States | | | | |
|---|---|---|---|---|---|
| | Sum of Squares | df | Mean Squares | F | Sig. |
| Between Groups | 0.272 | 7 | 0.039 | 7.048 | 0.000 |
| Within Groups | 1.359 | 247 | 0.006 | | |

**Source:** Authors' calculation

The data in Table 1.7 presents the results of ANOVA analyses comparing the Human Development Index (HDI) across different groups within the Union Territories and the Northeast States. The results reveal significant differences in HDI across both regions, with the Union Territories showing a higher F-value (34.817, $p < 0.001$) compared to the Northeast States (7.048, $p < 0.001$), indicating greater disparities in HDI among groups. The Union Territories also have a larger mean square between groups (0.055) compared to the Northeast States (0.039), suggesting more pronounced differences in development outcomes.

However, the Northeast States exhibit higher within-group variability, with a mean square within groups of 0.006 compared to 0.002 in the Union Territories, indicating greater heterogeneity in the factors affecting HDI within each group. Overall, these findings suggest that while both regions experience significant HDI disparities, the variation in development outcomes is more pronounced in the Union Territories, whereas the Northeast States show more variability within individual groups.

**Table 1.8 Least Square Difference Test (LSD) Multiple Comparisons**

| No | Union Territories | | | | |
|---|---|---|---|---|---|
| | (I) Group | No | (J) Group | Mean Difference (I-J) | Sig |
| 1 | Andaman & Nicobar Islands (0.70348) | 2 | Chandigarh | .034203* | .001 |
| | | 3 | Dadra & Nagar Haveli | .029453* | .003 |
| | | 4 | Daman & Diu | .034421* | .001 |
| | | 5 | Jammu & Kashmir | .109921* | .000 |
| | | 6 | Lakshadweep | -.008860 | .376 |
| | | 7 | New Delhi | .025890* | .010 |
| | | 8 | Puducherry | -.027891* | .006 |

| | | | | | |
|---|---|---|---|---|---|
| 2 | Chandigarh (0.66928) | 1 | Andaman & Nicobar Islands | -.034203* | .001 |
| | | 3 | Dadra & Nagar Haveli | -.004750 | .632 |
| | | 4 | Daman & Diu | .000219 | .982 |
| | | 5 | Jammu & Kashmir | .075719* | .000 |
| | | 6 | Lakshadweep | -.043063* | .000 |
| | | 7 | New Delhi | -.008313 | .402 |
| | | 8 | Puducherry | -.062094* | .000 |
| 3 | Dadra & Nagar Haveli (0.67403) | 1 | Andaman & Nicobar Islands | -.029453* | .003 |
| | | 2 | Chandigarh | .004750 | .632 |
| | | 4 | Daman & Diu | .004969 | .616 |
| | | 5 | Jammu & Kashmir | .080469* | .000 |
| | | 6 | Lakshadweep | -.038313* | .000 |
| | | 7 | New Delhi | -.003563 | .719 |
| | | 8 | Puducherry | -.057344* | .000 |
| 4 | Daman & Diu (0.66906) | 1 | Andaman & Nicobar Islands | -.034421* | .001 |
| | | 2 | Chandigarh | -.000219 | .982 |
| | | 3 | Dadra & Nagar Haveli | -.004969 | .616 |
| | | 5 | Jammu & Kashmir | .075500* | .000 |
| | | 6 | Lakshadweep | -.043281* | .000 |
| | | 7 | New Delhi | -.008531 | .390 |
| | | 8 | Puducherry | -.062313* | .000 |
| 5 | Jammu & Kashmir (59356) | 1 | Andaman & Nicobar Islands | -.109921* | .000 |
| | | 2 | Chandigarh | -.075719* | .000 |
| | | 3 | Dadra & Nagar Haveli | -.080469* | .000 |
| | | 4 | Daman & Diu | -.075500* | .000 |
| | | 6 | Lakshadweep | -.118781* | .000 |
| | | 7 | New Delhi | -.084031* | .000 |
| | | 8 | Puducherry | -.137813* | .000 |
| 6 | Lakshadweep (0.71234) | 1 | Andaman & Nicobar Islands | .008860 | .376 |
| | | 2 | Chandigarh | .043063* | .000 |
| | | 3 | Dadra & Nagar Haveli | .038313* | .000 |
| | | 4 | Daman & Diu | .043281* | .000 |
| | | 5 | Jammu & Kashmir | .118781* | .000 |
| | | 7 | New Delhi | .034750* | .001 |
| | | 8 | Puducherry | -.019031* | .056 |
| 7 | New Delhi (0.67759) | 1 | Andaman & Nicobar Islands | -.025890* | .010 |
| | | 2 | Chandigarh | .008313 | .402 |
| | | 3 | Dadra & Nagar Haveli | .003563 | .719 |
| | | 4 | Daman & Diu | .008531 | .390 |
| | | 5 | Jammu & Kashmir | .084031* | .000 |
| | | 6 | Lakshadweep | -.034750* | .001 |
| | | 8 | Puducherry | -.053781* | .000 |

| | | | | | |
|---|---|---|---|---|---|
| 8 | Puducherry (0.73138) | 1 | Andaman & Nicobar Islands | .027891* | .006 |
| | | 2 | Chandigarh | .062094* | .000 |
| | | 3 | Dadra & Nagar Haveli | .057344* | .000 |
| | | 4 | Daman & Diu | .062313* | .000 |
| | | 5 | Jammu & Kashmir | .137813* | .000 |
| | | 6 | Lakshadweep | .019031* | .056 |
| | | 7 | New Delhi | .053781* | .000 |

| **No** | **Northeast States** | | | | |
|---|---|---|---|---|---|
| | **(I) Group** | **No** | **(J) Group** | **Mean Differences (I-J)** | **Sig** |
| 1 | Arunachal Pradesh (0.56739) | 2 | Assam | .044918* | .017 |
| | | 3 | Manipur | -.041675* | .027 |
| | | 4 | Meghalaya | .015200 | .417 |
| | | 5 | Mizoram | -.057207* | .002 |
| | | 6 | Nagaland | -.028800 | .125 |
| | | 7 | Sikkim | -.041300* | .028 |
| | | 8 | Tripura | .005575 | .766 |
| 2 | Assam (0.52247) | 1 | Arunachal Pradesh | -.044918* | .017 |
| | | 3 | Manipur | -.086594* | .000 |
| | | 4 | Meghalaya | -.029719 | .110 |
| | | 5 | Mizoram | -.102125* | .000 |
| | | 6 | Nagaland | -.073719* | .000 |
| | | 7 | Sikkim | -.086219* | .000 |
| | | 8 | Tripura | -.039344* | .035 |
| 3 | Manipur (0.60906) | 1 | Arunachal Pradesh | .041675* | .027 |
| | | 2 | Assam | .086594* | .000 |
| | | 4 | Meghalaya | .056875* | .002 |
| | | 5 | Mizoram | -.015531 | .403 |
| | | 6 | Nagaland | .012875 | .488 |
| | | 7 | Sikkim | .000375 | .984 |
| | | 8 | Tripura | .047250* | .011 |
| 4 | Meghalaya (0.55219) | 1 | Arunachal Pradesh | -.015200 | .417 |
| | | 2 | Assam | .029719 | .110 |
| | | 3 | Manipur | -.056875* | .002 |
| | | 5 | Mizoram | -.072406* | .000 |
| | | 6 | Nagaland | -.044000* | .018 |
| | | 7 | Sikkim | -.056500* | .003 |
| | | 8 | Tripura | -.009625 | .604 |

| | | | | | |
|---|---|---|---|---|---|
| 5 | Mizoram (0.62459) | 1 | Arunachal Pradesh | .057207* | .002 |
| | | 2 | Assam | .102125* | .000 |
| | | 3 | Manipur | .015531 | .403 |
| | | 4 | Meghalaya | .072406* | .000 |
| | | 6 | Nagaland | .028406 | .127 |
| | | 7 | Sikkim | .015906 | .392 |
| | | 8 | Tripura | .062781* | .001 |
| 6 | Nagaland (0.59619) | 1 | Arunachal Pradesh | .028800 | .125 |
| | | 2 | Assam | .073719* | .000 |
| | | 3 | Manipur | -.012875 | .488 |
| | | 4 | Meghalaya | .044000* | .018 |
| | | 5 | Mizoram | -.028406 | .127 |
| | | 7 | Sikkim | -.012500 | .501 |
| | | 8 | Tripura | .034375* | .065 |
| 7 | Sikkim (0.60869) | 1 | Arunachal Pradesh | .041300* | .028 |
| | | 2 | Assam | .086219* | .000 |
| | | 3 | Manipur | -.000375 | .984 |
| | | 4 | Meghalaya | .056500* | .003 |
| | | 5 | Mizoram | -.015906 | .392 |
| | | 6 | Nagaland | .012500 | .501 |
| | | 8 | Tripura | .046875* | .012 |
| 8 | Tripura (0.56181) | 1 | Arunachal Pradesh | -.005575 | .766 |
| | | 2 | Assam | .039344* | .035 |
| | | 3 | Manipur | -.047250* | .011 |
| | | 4 | Meghalaya | .009625 | .604 |
| | | 5 | Mizoram | -.062781* | .001 |
| | | 6 | Nagaland | -.034375* | .065 |
| | | 7 | Sikkim | -.046875* | .012 |

**Source:** Authors' calculation

**Note:***, ** and *** represent 1%, 5% and 10% level of significance respectively.

The data presented in Table 1.8 outlines the results of a Least Square Difference (LSD) Test for multiple comparisons of the Human Development Index (HDI) across various Union Territories in India, as well as states in the Northeast region. The key research findings based on this analysis are as follows:

The analysis reveals significant disparities in HDI among the Union Territories of India. Andaman & Nicobar Islands, Lakshadweep, and Puducherry exhibit notably higher HDIs, with Puducherry showing the highest level of human development. Specifically, Andaman & Nicobar Islands has a significantly higher HDI than Chandigarh, Dadra & Nagar Haveli, Daman & Diu, New Delhi, and even Puducherry, but it is lower than Jammu & Kashmir. Similarly, Lakshadweep outperforms Chandigarh, Dadra & Nagar Haveli, Daman & Diu, and Jammu & Kashmir, while Puducherry leads in HDI compared to all other territories except Lakshadweep.

Conversely, Chandigarh, Dadra & Nagar Haveli, Daman & Diu, and Jammu & Kashmir face significant human development challenges. Chandigarh's HDI is lower than that of Andaman & Nicobar Islands, Jammu & Kashmir, Lakshadweep, and Puducherry. Dadra & Nagar Haveli and Daman & Diu also show lower HDIs compared to Andaman & Nicobar Islands, Jammu & Kashmir,

Lakshadweep, and Puducherry. Notably, Jammu & Kashmir has the lowest HDI among all Union Territories, indicating substantial developmental issues.

New Delhi presents a mixed picture, with a lower HDI than Andaman & Nicobar Islands and Lakshadweep but higher than Jammu & Kashmir and Puducherry. These findings underscore the need for targeted interventions to address the developmental disparities across these regions.

The analysis reveals significant disparities in HDI among the Northeast states of India. Arunachal Pradesh has a higher HDI than Assam but lags behind Manipur, Mizoram, and Sikkim. Assam, on the other hand, has the lowest human development outcomes in the region, with its HDI significantly lower than all other states except Meghalaya and Tripura. Manipur and Mizoram exhibit relatively high HDIs, outperforming many states in the region, while Sikkim's HDI is on par with Manipur, indicating high human development outcomes.

Meghalaya and Nagaland show medium to moderate levels of human development. Meghalaya's HDI is significantly lower than that of the top-performing states but not significantly different from Arunachal Pradesh, Assam, and Tripura. Nagaland's HDI is higher than that of Assam and Meghalaya but does not differ significantly from most other states. Tripura has a lower to moderate HDI, significantly lower than Manipur, Mizoram, and Sikkim, but not significantly different from Arunachal Pradesh, Assam, Meghalaya, or Nagaland. These findings highlight the varied levels of human development across the Northeast states, with some states requiring targeted interventions to improve their HDI.

The findings indicate significant variations in HDI among the Union Territories and Northeast states of India. Puducherry, Lakshadweep and Andaman & Nicobar Islands, along with Mizoram and Sikkim, exhibit higher human development outcomes. In contrast, Jammu & Kashmir and Assam consistently show lower HDI, pointing to substantial developmental challenges. The data underscore the need for targeted policy interventions to address these disparities and promote more balanced regional development, particularly in Jammu & Kashmir, Assam, Meghalaya, and Tripura.

**Table 1.9 ANOVA (HDI)**

| Comparison | Eastern States | | | | |
|---|---|---|---|---|---|
| | Sum of Squares | df | Mean Squares | F | Sig. |
| Between Groups | 0.229 | 4 | 0.057 | 19.741 | 0.000 |
| Within Groups | 0.446 | 154 | 0.003 | | |

| Comparison | Southern States | | | | |
|---|---|---|---|---|---|
| | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | 0.331 | 4 | 0.083 | 15.871 | 0.000 |
| Within Groups | 0.803 | 154 | 0.005 | | |

The data in Table 1.9 presents the results of an ANOVA analysis comparing the Human Development Index (HDI) across different states within the Eastern and Southern regions of India. Here are the key research findings based on the analysis:

The ANOVA results indicate significant differences in HDI among both Eastern and Southern states. For the Eastern states, a substantial variation in HDI is evident (F-value = 19.741, $p < 0.001$), with a between-group mean square of 0.057 and a within-group mean square of 0.003. This suggests that some states in the Eastern region significantly outperform others in human development, with less variation within individual states. Similarly, the Southern states show notable disparities in HDI (F-value = 15.871, $p < 0.001$), with a between-group mean square of 0.083 and a within-group mean square of 0.005, indicating more variation within states compared to the Eastern region.

The higher F-value for the Eastern states indicates more pronounced disparities in HDI within this region compared to the Southern states. This underscores the need for targeted interventions to uplift states with lower HDI in the Eastern region. In the Southern states, while the variation is slightly less, policies should still focus on addressing developmental inequities. Tailored policies are essential to promote more equitable human development across all states in both regions.

The ANOVA analysis reveals significant disparities in human development across both the Eastern and Southern regions of India, with the Eastern states showing more pronounced differences. These findings indicate that while the Southern states generally have higher HDI, there is still a need for continued focus on addressing within-region disparities, particularly in the Eastern region where the differences are more marked. This underscores the importance of tailored policy approaches to promote balanced development across these regions.

**Table 1.10 Least Square Difference Test (LSD) Multiple Comparisons**

| No | Eastern States | | | | | No | Southern States | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | (I) Group | No | (J) Group | Mean Difference (I-J) | Sig | | (I) Group | No | (J) Group | Mean Difference (I-J) | Sig |
| 1 | Bihar (0.48077) | 2 | Chhattisgarh | -.095257* | .000 | 1 | Andhra Pradesh (0.53794) | 2 | Karnataka | -.027596 | .131 |
| | | 3 | Jharkhand | -.092132* | .000 | | | 3 | Kerala | -.125971* | .000 |
| | | 4 | Odisha | -.020476 | .133 | | | 4 | Tamil Nadu | -.057627* | .002 |
| | | 5 | West Bengal | -.060538* | .000 | | | 5 | Telangana | -.098408* | .000 |
| 2 | Chhattisgarh (0.57603) | 1 | Bihar | .095257* | .000 | 2 | Karnataka (0.56553) | 1 | Andhra Pradesh | .027596 | .131 |
| | | 3 | Jharkhand | .003125 | .817 | | | 3 | Kerala | -.098375* | .000 |
| | | 4 | Odisha | .074781* | .000 | | | 4 | Tamil Nadu | -.030031* | .098 |
| | | 5 | West Bengal | .034719* | .011 | | | 5 | Telangana | -.070813* | .000 |
| 3 | Jharkhand (0.57291) | 1 | Bihar | .092132* | .000 | 3 | Kerala (0.66391) | 1 | Andhra Pradesh | .125971* | .000 |
| | | 2 | Chhattisgarh | -.003125 | .817 | | | 2 | Karnataka | .098375* | .000 |
| | | 4 | Jharkhand | .071656* | .000 | | | 4 | Tamil Nadu | .068344* | .000 |
| | | 5 | West Bengal | .031594* | .020 | | | 5 | Telangana | .027563 | .129 |
| 4 | Odisha (0.50125) | 1 | Bihar | .020476 | .133 | 4 | Tamil Nadu (0.59559) | 1 | Andhra Pradesh | .057627* | .002 |
| | | 2 | Chhattisgarh | -.074781* | .000 | | | 2 | Karnataka | .030031* | .098 |
| | | 3 | Jharkhand | -.071656* | .000 | | | 3 | Kerala | -.068344* | .000 |
| | | 5 | West Bengal | -.040063* | .003 | | | 5 | Telangana | -.040781* | .025 |
| 5 | West Bengal (0.54131) | 1 | Bihar | .060538* | .000 | 5 | Telangana (0.63634) | 1 | Andhra Pradesh | .098408* | .000 |
| | | 2 | Chhattisgarh | -.034719* | .011 | | | 2 | Karnataka | .070813* | .000 |
| | | 3 | Jharkhand | -.031594* | .020 | | | 3 | Kerala | -.027563 | .029 |
| | | | Odisha | .040063* | .003 | | | 4 | Tamil Nadu | .040781* | .025 |

**Source:** Authors' calculation

**Note:** *, ** and *** represent 1%, 5% and 10% level of significance respectively.

The data in Table 1.10 presents results from the Least Square Difference (LSD) Test, comparing the Human Development Index (HDI) across states in both the Eastern and Southern regions of India. The following research findings are derived from this analysis, highlighting the differences in HDI among the states in these two regions.

In the Eastern states, Bihar has the lowest HDI at 0.48077, significantly trailing behind Chhattisgarh, Jharkhand, and West Bengal, with mean differences of -0.095257, -0.092132, and -0.060538, respectively. Chhattisgarh's HDI of 0.57603 is notably higher than Bihar's, Odisha's, and West Bengal's, though it shows no significant difference from Jharkhand's HDI of 0.57291. Jharkhand's HDI is better than Bihar's and Odisha's but similar to Chhattisgarh's. Odisha, with

an HDI of 0.50125, performs lower than Chhattisgarh, Jharkhand, and West Bengal, yet not significantly different from Bihar. West Bengal's HDI of 0.54131 surpasses Bihar's and Odisha's but remains below Chhattisgarh's and Jharkhand's. This analysis highlights significant disparities across the Eastern states, with Bihar and Odisha needing targeted development interventions, while Chhattisgarh and Jharkhand show stronger human development outcomes.

In the Southern region, Kerala leads with an HDI of 0.66391, significantly outperforming Andhra Pradesh, Karnataka, Tamil Nadu, and Telangana. Andhra Pradesh's HDI of 0.53794 is notably lower than Kerala's, Tamil Nadu's, and Telangana's, indicating a need for focused development efforts. Karnataka's HDI of 0.56553 is higher than Andhra Pradesh's but lower than Kerala's and not significantly different from Tamil Nadu's and Telangana's. Tamil Nadu, with an HDI of 0.59559, is better than Andhra Pradesh but lags behind Kerala and Telangana. Telangana's HDI of 0.63634 is strong but not significantly different from Kerala's, placing it in close competition with the leading state. The disparities highlight Kerala's leading position, with other Southern states showing varying levels of human development and potential for improvement.

The analysis reveals significant disparities in human development across both the Eastern and Southern regions of India. In the East, Bihar and Odisha lag behind other states, highlighting the need for tailored development policies to uplift their HDI, while sustaining progress in states like Chhattisgarh, Jharkhand, and West Bengal. Similarly, the Southern region shows considerable variation, with Kerala leading in HDI, Andhra Pradesh trailing, and Telangana performing strongly. Karnataka and Tamil Nadu occupy a middle ground. These findings emphasize the need for region-specific policies to address the disparities in human development across both regions.

**Table 1.11 ANOVA (HDI)**

| Comparison | Northern States | | | | |
|---|---|---|---|---|---|
| | Sum of Squares | df | Mean Squares | F | Sig. |
| Between Groups | 0.564 | 5 | 0.113 | 23.364 | 0.000 |
| Within Groups | 0.892 | 185 | 0.005 | | |

The ANOVA results for HDI across Northern states reveal substantial variation, with an F-value of 23.364 ($p < 0.001$), indicating significant differences in human development levels among these states. The between-group sum of squares (SS) is 0.564 with a mean square (MS) of 0.113, while the within-group SS is 0.892 with an MS of 0.005. This suggests notable disparities in HDI, warranting further investigation into pair wise differences.

**Table 1.12 Least Square Difference Test (LSD) Multiple Comparisons**

| No | Northeast States | | | | |
|---|---|---|---|---|---|
| | (I) Group | No | (J) Group | Mean Differences (I-J) | Sig |
| 1 | Arunachal Pradesh (0.56739) | 2 | Assam | .044918* | .017 |
| | | 3 | Manipur | -.041675* | .027 |
| | | 4 | Meghalaya | .015200 | .417 |
| | | 5 | Mizoram | -.057207* | .002 |
| | | 6 | Nagaland | -.028800 | .125 |
| 2 | Assam (0.52247) | 1 | Arunachal Pradesh | -.044918* | .017 |
| | | 3 | Manipur | -.086594* | .000 |
| | | 4 | Meghalaya | -.029719 | .110 |
| | | 5 | Mizoram | -.102125* | .000 |
| | | 6 | Nagaland | -.073719* | .000 |

| | | | | | |
|---|---|---|---|---|---|
| 3 | Manipur (0.60906) | 1 | Arunachal Pradesh | .041675* | .027 |
| | | 2 | Assam | .086594* | .000 |
| | | 4 | Meghalaya | .056875* | .002 |
| | | 5 | Mizoram | -.015531 | .403 |
| | | 8 | Tripura | .047250* | .011 |
| 4 | Meghalaya (0.55219) | 1 | Arunachal Pradesh | -.015200 | .417 |
| | | 2 | Assam | .029719 | .110 |
| | | 3 | Manipur | -.056875* | .002 |
| | | 5 | Mizoram | -.072406* | .000 |
| | | 6 | Nagaland | -.044000* | .018 |
| 5 | Mizoram (0.62459) | 1 | Arunachal Pradesh | .057207* | .002 |
| | | 2 | Assam | .102125* | .000 |
| | | 3 | Manipur | .015531 | .403 |
| | | 4 | Meghalaya | .072406* | .000 |
| | | 6 | Nagaland | .028406 | .127 |
| 6 | Nagaland (0.59619) | 1 | Arunachal Pradesh | .028800 | .125 |
| | | 2 | Assam | .073719* | .000 |
| | | 3 | Manipur | -.012875 | .488 |
| | | 4 | Meghalaya | .044000* | .018 |
| | | 5 | Mizoram | -.028406 | .127 |

**Source:** Authors' calculation

**Note:** *, ** and *** represent 1%, 5% and 10% level of significance respectively.

The LSD test highlights specific differences: Haryana's HDI is significantly higher than Rajasthan's and Uttar Pradesh's but lower than Uttarakhand's. Himachal Pradesh outperforms Rajasthan and Uttar Pradesh, though it does not differ significantly from Haryana, Punjab, or Uttarakhand. Punjab also shows higher HDI than Rajasthan and Uttar Pradesh but is comparable to Haryana, Himachal Pradesh, and Uttarakhand. Rajasthan has the lowest HDI, significantly trailing Haryana, Himachal Pradesh, Punjab, and Uttarakhand. Uttar Pradesh has the lowest HDI, with significant differences compared to Haryana, Himachal Pradesh, Punjab, and Uttarakhand. Uttarakhand has the highest HDI, significantly exceeding Haryana, Rajasthan, and Uttar Pradesh.

The Northern states exhibit considerable variation in human development levels. Uttarakhand and Himachal Pradesh stand out with the highest HDI, significantly surpassing states like Rajasthan and Uttar Pradesh, which are on the lower end. The findings suggest disparities in development within the region, likely due to differences in economic opportunities, infrastructure, education, and healthcare services. These results emphasize the need for targeted development policies to address the disparities and enhance overall human development in the region.

**Table 1.13 ANOVA (HDI)**

| Comparison | Northern States | | | | |
|---|---|---|---|---|---|
| | Sum of Squares | df | Mean Squares | F | Sig. |
| Between Groups | 0.481 | 3 | 0.160 | 72.086 | 0.000 |
| Within Groups | 0.615 | 123 | 0.005 | | |

The ANOVA results for HDI across the Western states show highly significant differences, with an F-value of 72.086 ($p < 0.001$), indicating substantial variation in human development levels among these states. The between-group sum of squares (SS) is 0.481, with a mean square (MS) of 0.160, while the within-group SS is 0.615, with an MS of 0.005. This significant variation suggests that the differences in HDI are substantial and not due to random chance, highlighting the need for detailed pair wise comparisons to understand the specific contributions to this variability and to address development needs accordingly.

**Table 1.14 Least Square Difference Test (LSD) Multiple Comparisons**

| No | Western States | | | | |
|---|---|---|---|---|---|
| | (I) Group | No | (J) Group | Mean Difference (I-J) | Sig |
| 1 | Goa (0.67465) | 2 | Gujarat | .106020* | .000 |
| | | 3 | Madhya Pradesh | .171458* | .000 |
| | | 4 | Maharashtra | .072583* | .000 |
| 2 | Gujarat (0.56863) | 1 | Goa | -.106020* | .000 |
| | | 3 | Madhya Pradesh | .065438* | .000 |
| | | 4 | Maharashtra | -.033438* | .061 |
| 3 | Madhya Pradesh (0.50319) | 1 | Goa | -.171458* | .000 |
| | | 2 | Gujarat | -.065438* | .000 |
| | | 4 | Maharashtra | -.098875* | .000 |
| 4 | Maharashtra (0.60206) | 1 | Goa | -.072583* | .000 |
| | | 2 | Gujarat | .033438* | .061 |
| | | | Madhya Pradesh | .098875* | .000 |

**Source:** Authors' calculation

**Note:** *, ** and *** represent 1%, 5% and 10% level of significance respectively.

The Least Square Difference (LSD) test further clarifies these disparities. Goa has the highest HDI, significantly surpassing Gujarat (mean difference = 0.106020, $p < 0.001$), Madhya Pradesh (mean difference = 0.171458, $p < 0.001$), and Maharashtra (mean difference = 0.072583, $p < 0.001$). Gujarat has a higher HDI than Madhya Pradesh (mean difference = 0.065438, $p < 0.001$) but lags behind Maharashtra, though this difference is marginally significant (mean difference = -0.033438, $p = 0.061$). Madhya Pradesh shows the lowest HDI, significantly trailing Goa, Gujarat, and Maharashtra. Maharashtra, while better than Gujarat and significantly ahead of Madhya Pradesh, has a lower HDI compared to Goa, suggesting a clear hierarchy in HDI with Goa at the top and Madhya Pradesh at the bottom.

The LSD test results indicate significant disparities in HDI among the Western states, with Goa consistently outperforming the others, followed by Maharashtra. Madhya Pradesh exhibits the lowest HDI, significantly trailing behind Goa, Gujarat, and Maharashtra. The marginally significant difference between Gujarat and Maharashtra suggests a closer HDI level between these two states, yet Maharashtra slightly edges out Gujarat.

These findings underscore the need for focused development interventions, particularly in Madhya Pradesh, to bridge the HDI gap. The relatively higher HDI in Goa suggests it could serve as a benchmark for best practices in human development within the region. For Gujarat, strategic policies may help close the gap with Maharashtra, further enhancing the overall development in the Western region.

## Hypothesis Testing

H0: There is no significant difference among human development performance of Indian states

H1: There is significant difference among human development performance of Indian states

Based on the ANOVA results reveal significant differences in the Human Development Index (HDI) across the six groups analyzed, with an F-value of 82.679 ($p < 0.001$). The between-group sum of squares is 2.472 (mean square = 0.494, df = 5), and the within-group sum of squares is 6.848 (mean square = 0.006, df = 1145). The high F-value and low p-value indicate that the variability between the group means is much greater than the variability within the groups, leading to the rejection of the null hypothesis of that "There is no significant difference among human development performance of Indian states". Hence the study concludes, there is statistical evidence that shows human development across Indian states are unevenly developed. This shows the regional disparities in the performance of human development achievements in India.

## Conclusion

This paper encompasses a comprehensive analysis of human development trends from 1990 to 2022. Firstly, the study provides a historical overview of India's Human Development Index (HDI) scores and rankings, including a comparison with other countries to contextualize India's progress. Additionally, it analyzes regional disparities in HDI, emphasizing significant variations in human development outcomes across Indian states and union territories.

## References

1. David Bostock, (2000) "Aristotle's Ethics", Oxford University Press, p. 15.
2. Rahul Gupta and Nikhil Zaveri (2013) "Human Development Thought: Enhancing Relevance in the Present Era", Yojana.
3. UNDP, (1990), Human Development Report 1990 - Concept and Measurement of Human Development, New York, Oxford University Press. 239
4. UNDP, (1991), Human Development Report 1991 - Financing Human Development, New York, Oxford University Press.
5. UNDP, (1992), Human Development Report 1992 - Global Dimensions of Human Development, New York, Oxford University Press.
6. UNDP, (1993), Human Development Report 1993 - People's Participation, New York, Oxford University Press.
7. UNDP, (1994), Human Development Report 1994 - New Dimension of Human Security, New York, Oxford University Press.
8. UNDP, (1995), Human Development Report 1995 - Gender and Human Development, New York, Oxford University Press.
9. UNDP, (1996), Human Development Report 1996 - Economic Growth and Human Development, New York, Oxford University Press.
10. UNDP, (1997), Human Development Report 1997 - Human Development to Eradicate Poverty, New York, Oxford University Press.
11. UNDP, (1998), Human Development Report 1998 - Consumption for Human Development, New York, Oxford University Press.
12. UNDP, (1999), Human Development Report 1999 - Globalization with a Human Face, New York, Oxford University Press.
13. UNDP, (2000), Human Development Report 2000 - Human Rights and Human Development, New York, Oxford University Press.
14. UNDP, (2001), Human Development Report 2001 - Making New Technologies Work for Human Development, New York, Oxford University Press.

15. UNDP, (2002), Human Development Report 2002 - Deepening Democracy in a Fragmented World, New York, Oxford University Press.
16. UNDP, (2003), Human Development Report 2003 - Millennium Development Goals: A Compact Among Nations to End Human Poverty, New York, Oxford University Press.
17. UNDP, (2004), Human Development Report 2004 - Cultural Liberty in Today's Diverse World,, New York, Oxford University Press.
18. UNDP, (2005), Human Development Report 2005 - International cooperation at a crossroads: Aid, Trade and Security in an Unequal World, New York, Oxford University Press.
19. UNDP, (2006), Human Development Report 2006 - Beyond Scarcity: Power, Poverty and the Global Water Crisis, New York, Palgrave Macmillan. 240
20. UNDP, (2007-08), Human Development Report 2007/08 - Fighting Climate Change: Human Solidarity in a Divided, New York, Palgrave Macmillan.
21. UNDP, (2009), Human Development Report 2009 - Overcoming Barriers: Human Mobility and Development, New York, Palgrave Macmillan.
22. UNDP, (2010), Human Development Report 2010 - The Real Wealth of Nations: Pathways to Human Development, New York, Palgrave Macmillan.
23. UNDP, (2011), Human Development Report 2011 - Sustainability and Equity: A Better Future for All, New York, Palgrave Macmillan.
24. UNDP, (2013), Human Development Report 2013 - The Rise of the South: Human Progress in a Diverse World, New York, Palgrave Macmillan.
25. UNDP, (2014), Human Development Report 2014 - Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience,, New York, Palgrave Macmillan.
26. UNDP, (2015), Human Development Report 2015 - Rethinking Work for Human Development, New York, Palgrave Macmillan.
27. UNDP, (2016), Human Development Report 2016 - Human Development for Everyone, New York, Palgrave Macmillan.
28. UNDP, (2018), Human Development Report 2018 - Human Development Indices and Indicators: 2018 Statistical Update, New York, Palgrave Macmillan pp. 1-123.
29. UNDP, (2019), Human Development Report 2019 - Beyond Income, Beyond Averages, Beyond Today – Inequalities in Human Development in the 21st Century, New York, Palgrave Macmillan, pp. 1-366.
30. UNDP, (2019), Inequalities in Human Development in the 21st Century, pp. 1-10.
31. UNDP, (2020), Human Development Report 2020 – The Next Frontier: Human Development and the Anthropocene, New York, Palgrave Macmillan.
32. UNDP, (2021-2022), Human Development Report 2021-2022 - Uncertain Times, Unsettled Lives: Shaping our Future in a Transforming World, New York, Palgrave Macmillan.