GENDERING HUMAN DEVELOPMENT

A Working Paper for Computing HDI, GDI and GII for States of India

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Data for Development

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Abbreviations

ABR	:	Adolescent Birth Rate
CWS	:	Current Weekly Status
EI	:	Empowerment Index
EUS	:	Employment and Unemployment Survey
EYS	:	Expected Years of Schooling
GDI	:	Gender Development Index
GII	:	Gender Inequality Index
GNI	:	Gross National Income
GSDP	:	Gross State Domestic Product
HDI	:	Human Development Index
HDRO	:	Human Development Report Office
ILO	:	International Labour Organization
LEB	:	Life Expectancy at Birth
LMI	:	Labour Market Index
MMR	:	Maternal Mortality Ratio
MYS	:	Mean Years of Schooling
NSS	:	National Sample Survey
PLFS	:	Periodic Labour Force Survey
PPP	:	Purchasing Power Parity
ORGI	:	Office of Registrar General of India
RHI	:	Reproductive Health Index
UNDP	:	The United Nations Development Programme
UNESCO	:	United Nations Educational, Scientific and Cultural Organization
UIS	:	UNESCO Institute for Statistics

Glossary

- **Adolescent Birth Rate**: As per Sample Registration System Report, Office of Registrar General of India, Adolescent Birth Rate is defined as the number of live births in the age group of 15-19 years of women per thousand female mid-year population of the same age group.

- **Age specific fertility rates (ASFR):** As per Sample Registration System Report, Office of Registrar General of India, Age-specific fertility rate is defined as the number of live births in a specific age group of women per thousand female mid-year populations of that age group.

- **Expected Years of Schooling:** As per Human Development Report, UNDP, Expected Years of Schooling is defined as number of years of schooling that a child of school entrance age can expect to receive if prevailing patterns of age-specific enrolment rates persist throughout the child's life.

- **Labour Force Participation Rate (%):** As per, Periodic Labour Force Survey, Ministry of Statistics & Programme Implementation, Labour Force Participation Rate (LFPR) is defined as the percentage of persons in that labour force in the population (PLFS).

$$\text{LFPR} = \frac{No.of\ Employed\ Persons\ +\ No.\ of\ Unemployed\ Persons}{Total\ Population} * 100$$

- **Life Expectancy/ Expectation of Life at Birth:** The expectation of life at birth is the average number of years a person is expected to live under prevailing mortality conditions.

- **Maternal Mortality Ratio:** As per Special Bulleting on Maternal Mortality in India 2016-18, Sample Registration System, O/o Registrar General of India, Maternal Mortality Ratio refers to the number of maternal deaths during a given time period per 100000 live births during the same period.

- **Mean Years of Schooling:** As per Human Development Report, UNDP, Average number of years of education received by people ages 25 and older, converted from educational attainment levels using official durations of each level.

- **GNI Per-capita (PPP$):** As per World Bank, IMF and UNSD, GNI Per-capita (PPP$) is defined as Aggregate income of an economy generated by its production and its ownership of factors of production, less the incomes paid for the use of factors of production owned by the rest of the world, converted to international dollars using PPP rates, divided by midyear population.

- **Per-capita Gross State Domestic Product (GSDP):** Per Capita Net State Domestic Product is the total value of goods and services produced during any financial year within the geographical boundaries of a state divided by midyear projected population of the state.

- **Purchasing Power Parity (PPP) US$:** Purchasing power parity is a measurement of prices in different countries that uses the prices of specific goods to compare the absolute purchasing power of the countries' currencies.

CHAPTER I
Introduction

Introduction

1.1   The concept of human development, which emerged in the late 1980s, puts people at the centre of the development agenda and in this concept, economic growth and wealth are considered as means to development, not an end by itself.

1.2   The Human Development Reports[1] (HDR), brought out by United Nations Development Programme (UNDP), define human development as a process of enlarging people's choices. To lead a long and healthy life, to be educated and to enjoy a decent standard of living are the three most critical choices identified in the first HDR. Additional choices include political freedom, guaranteed human rights and self-respect. The human development paradigm, which puts people at the centre of its concerns, must be fully engendered. The paradigm pre-supposes the following:

  i. Equality of rights between women and men must be enshrined as a fundamental principle. Legal, economic, political or cultural barriers that prevent the exercise of equal rights should be identified and removed through comprehensive policy reforms and strong affirmative action;

 ii. Women must be regarded as agents and beneficiaries of change. Investing in women's capabilities and empowering them to exercise their choices is not only valuable in itself but is also the surest way to contribute to economic growth and overall development; and

iii. The engendered development model, though aiming to widen choices for both women and men, should not predetermine how different cultures and different societies exercise these choices. It is important that equal opportunities to make a choice exist for both women and men.

1.3   The first Global Human Development Report was launched in 1990 by the UNDP and has been prepared annually since then. Human Development Index (HDI) as introduced by UNDP in 1990 was defined as a simple average of three Dimension Indices that measure average achievements in a country with regard to 'Long and healthy life', as measured by life expectancy at birth; 'Knowledge', as measured by the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio; and 'A decent standard of living', as measured by estimated earned income in Purchasing Power Parity (PPP) US$.

1.4   In 1995, two composite measures Gender-related Development Index (GDI) and Gender Empowerment Measure (GEM) were added in the Human Development

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[1] Human Development Report, 1990 (http://www.hdr.undp.org/en/reports/global/hdr1990)

Report[2] to capture gender disparities and their adverse effects on social progress. The GDI considers the same variables as the HDI but focuses on inequality between women and men as well as on the average achievement of all people taken together. The GEM focuses on three additional variables- women's participation in political decision-making, their access to professional opportunities and their earning power. The GEM gives some indication of how much women are empowered in these spheres in different countries. The GDI and the GEM can capture only what is measurable and therefore do not cover other important dimensions of gender inequality, such as participation in community life and decision-making, consumption of resources within the family, dignity and personal security. These dimensions can nonetheless be powerful determinants of the relative status of women and the quality of their lives.

1.5 Following the UNDP's human development framework, the erstwhile Planning Commission released the first National Human Development Report, 2001[3] in 2002 in order to compare the situation of States of India with the help of about 70 development indicators for each State. Report of the National Statistical Commission (NSC), 2001, advocated, among other things, to develop appropriate methodology for computing HDI and GDI at State level and recommended that studies be conducted using gender related data to highlight existing gender disparities.

1.6 In 2007, Ministry of Women and Child Development (MoWCD) undertook the exercise recasting of HDI, GDI and GEM for India with the support of UNDP and calculated the indices for the States/UTs adapted to the Indian datasets. A Technical Advisory Committee (TAC) was constituted for this purpose and a report titled "Gendering Human Development Indices[4]: Recasting the Gender Development Index and Gender Empowerment Measures for India" was released by MoWCD in 2009.

1.7 Human Development is a constantly evolving concept. The methods for assessing human development also need to undergo refinements in sync with the changing requirements. Indicators used in the 'Knowledge' and 'Standard of Living' dimensions were modified in 2010[5]. One of the dimensions that remained the same was that of 'long and healthy life' which still uses life expectancy at birth as its indicator. 'Knowledge' was previously measured by a combination of adult literacy rate and school enrolment rates, but has now been modified to be measured by the expected years of schooling (the years of schooling that a child can expect to receive given the

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[2] Human Development Report, 1995 (http://hdr.undp.org/en/content/human-development-report-1995)

[3] National Human Development Report, 2001(http://www.igidr.ac.in/conf/ysp/nhd2001.pdf)

[4]http://www.undp.org/content/dam/india/docs/gendering_human_development_indices.pdf

[5] Human Development Report, 2010 (http://hdr.undp.org/en/content/human-development-report-2010)

current enrolment rates) combined with the mean years of schooling for adults aged 25 years and older. Finally, the dimension 'A decent Standard of living' which was earlier measured by GDP per capita adjusted for PPP US$, has now been modified as Gross National Income (GNI) per capita adjusted for PPP.

1.8   Inequalities in human development are profound and affect societies, weakening social cohesion and people's trust in government, institutions and each other. Inequalities hurt economies, wastefully preventing people from reaching their full potential at work and in life. Gender inequality is one of the greatest barriers to human development. Gender inequality is complex and refers to various facets related to gender differences and consequential differential attainments. In order to measure gender disparity, Gender Inequality Index (GII) was introduced in the 2010 Human Development Report by the UNDP. The index, introduced as an experimental measure to remedy the shortcomings of the previous indicators, the Gender Development Index (GDI) and the Gender Empowerment Measure (GEM), is a composite measure of gender inequality. It uses three dimensions to measure opportunity cost: reproductive health, empowerment, and labour market participation.

1.9   Presently, Government of India has identified 29 Global Indices for observing and monitoring India's position and using these as a tool for self-improvement on various important social, economic and other dimensions. It is envisaged that these indices can help in bringing about reforms in the policies and processes of government agencies and financial institutions while creating conducive ecosystem for foreign and domestic investment flow. These Global Indices have been assigned to 18 Nodal Ministries/Departments and more than 800 parameters/indicators, as relevant to these Global Indices, have been assigned across to the 47 Ministries/Departments. MoSPI has been assigned the role of assisting the Ministries/ Departments in identifying existing and alternate data sources for these indicators of the global indices.

1.10   Nodal Ministries/Departments have constituted Coordination Committee to review the progress on Global Indices on monthly basis. Cabinet Secretariat is also reviewing the performance and activity on each index at least every quarter and for selected indices on a monthly basis. Development Monitoring and Evaluation Office (DMEO), NITI Aayog has been assigned the task to facilitate the Cabinet Secretariat in monitoring the performance of these global indices at all India level as well as State level through a Dashboard. NITI Aayog has already circulated the guidelines to all nodal Ministries to identify the areas of reform and actions for each parameter/indicators required to monitor the progress on Global Indices and also applicability of setting of targets for indices at state level.

1.11   Human Development Report Office (HDRO) of the UNDP calculates the indices related to human development at a national level for all countries and publishes the

"Human Development Report (HDR)" on an annual basis since 1990. These indices - Human Development Index (HDI) and Gender Inequality Index (GII) - are included in 29 Global Indices that the Government of India has identified for monitoring India's performance in the global ranking. In this context, the computation of these indices at State/UT levels assumes significance. The state-wise analysis of HDI and GII would also prove to be an important tool to the nodal Ministries/Departments/States for measuring and monitoring the performance at sub-national level on the key social, economic and other parameters which can further enable improving India's position in the global indices. This would also provide a tool for initiating systemic reforms in the policies and processes for human development to ensure that "**No One is Left Behind**".

1.12   In view of importance of regular reporting of the state-wise values of HDI, GDI and GII, an attempt has been made to compute HDI, GDI and GII using the HDRO methodology and available data sets for the States/UTs as well as for the country as a whole for the years 2011-12 and 2017-18. This exercise also highlights the data gaps that constrain the computation of indices. Rankings of the States on the indices as well as sub-indices of HDI, GDI and GII have been analyzed to enable the stake-holders for taking up corrective policies, programmes and schemes.

CHAPTER II
Indicators, Data Source and Methodology for HDI, GDI and GII

Human Development Index (HDI), Gender Development Index (GDI) and Gender Inequality Index (GII)

2.1. The Human Development Report Office (HDRO) of United Nations Development Programme (UNDP) publishes Human Development Index (HDI), Gender Development Index (GDI) and Gender Inequality Index (GII) on an annual basis in the Human Development Report to evaluate the countries progress on human development across the world. The dimensions and indicators used in the HDR for computing HDI, GDI and GII are given in the **Table-2.1**.

Table-2.1: Dimensions and Indicators of HDI, GDI and GII - Global

Dimension	Indicator
HDI and GDI	
Long and Healthy Life	Life Expectancy (years)
Knowledge	Expected Years of Schooling (years)
	Mean Years of Schooling (years)
A Decent Standard of Living	Gross National Income Per Capita (2011 PPP $)
GII	
Health	Maternal Mortality Ratio (Maternal Death per 100000 live birth)
	Adolescent Birth Rate (Birth per 1000 women ages 15-19 years)
Empowerment	Women's share of seats in Parliament (%)
	Population with at least some secondary education age 25+ years (%)
Labour Market	Labour Force Participation Rate (%)

2.2 For calculating these indices for States/UTs in India, the indicators have been redefined based on the available data sources as relevant for the different components of HDI, GDI and GII for the years 2011-12 and 2017-18. The Dimensions and Indicators used for computing HDI, GDI and GII for the States/UTs of India are given in the **Table 2.2.**

Table-2.2: Dimensions and Indicators of HDI, GDI and GII - India

Dimension	Indicator
HDI	
Long and Healthy Life	Life Expectancy (years)
Knowledge	Expected Years of Schooling (years)
	Mean Years of Schooling (years)

A Decent Standard of Living	Per Capita Gross State Domestic Product(GSDP) (Rs.)
GDI	
Long and Healthy Life	Life Expectancy (years)
Knowledge	Expected Years of Schooling (years)
	Mean Years of Schooling (years)
A Decent Standard of Living	Estimated Earned Income (Male and Female) Per Capita Per Annum(Rs.) (See the Note below)
GII	
Health	Maternal Mortality Ratio (Maternal Death per 100000 live birth)
	Adolescent Birth Rate (Birth per 1000 women ages 15-19 years)
Empowerment	Women's share of seats in Parliament (%)
	Population with at least some secondary education age 25+ years (%)
Labour Market	Labour Force Participation Rate (%)

Note: Estimated earned income separately for males and females was worked out from Per capita GSDP and Share of wage bill derived from 68th round 2011-12 (Employment and unemployment Survey) and Periodic labour Force Survey 2017-18

Data Sources and Rationale for Choice of Indicators Used for Computing HDI and GDI for the State/UTs for the States/UTs in India

Dimension-1: 'Long and Healthy Life'

2.3 The UNDP Human Development Report (HDR) uses 'Life Expectancy at Birth (LEB)' to measure the Dimension-1: "Long and Healthy Life". The same indicator and criteria, as adopted by UNDP has been used for calculating the Dimension-1 of HDI and GDI in the Indian context. Registrar General of India (RGI) brings out life tables annually on a five yearly moving average basis so as to form a continuous series. Life Expectancy at Birth (LEB) for 2011-12 and 2017-18 have been taken from RGI abridged life tables for the period 2010-14 and 2013-17.

Dimension-2: 'Knowledge'

2.4 The UNDP HDR uses 'Mean Years of Schooling (MYS)'and 'Expected Years of Schooling (EYS')to measure the Dimension-2: "Knowledge". The same indicators and criteria have been used for calculating the Dimension-2 of HDI and GDI in Indian context. Both the indicators were estimated by using the methodology prescribed by

UNESCO (UIS methodology)[6] which is also nodal agency for maintaining the database on the above indicators.

- **Mean Years of Schooling (MYS):** MYS for India as well as State/UT level was estimated from data on 'general education level **(Column-7 of Block-4: Demographic Particulars of Household Members)**' of NSS 68th Round Employment and Unemployment Survey - 2011-12 and NSS 75th Round Survey on Social Consumption on Education, 2017-18. This method for estimating MYS was developed in discussion with UNESCO.

- **Expected Years of Schooling (EYS):** The methodology, as prescribed by UNESCO, requires age-wise enrolments in education along with estimated population in order to estimate the EYS. State/UT-wise EYS was estimated for years 2011-12 and 2017-18 based on the official age-wise enrolment data (Pre-primary/Anganwadi, Primary, Upper Middle, Secondary, Higher Secondary and Higher Education) and the corresponding estimated official age population as available in U-DISE+[7], All India Survey of Higher Education[8] and MoWCD Annual Report[9] [Integrated Child Development Scheme(ICDS)]. This method for estimating EYS was developed in discussion with HDRO.

Dimension-3: 'A Decent Standard of Living'

2.5   For HDI, the UNDP HDR uses "Gross National Income Per Capita" in Purchasing Power Parity (PPP) US$ to measure Dimension-3: 'A Decent Standard of Living'. However, for preparing this index for sub-national units viz., States/UTs, the common national currency has been deemed to be suitable. Per-capita Gross State Domestic Product (GSDP) has been used as a measure of 'Dimension 3: A Decent Standard of Living'. Per-capita GSDP was finalized in discussion with HDRO.

2.6   For GDI, UNDPHDR uses per capita GNI (2011 PPP$) and share of wage bill of male/female, as published by ILO, to estimate the earned income by males and females. ILO considered casual and regular wage employee while estimating the share of wage by male and female (ILO India Wage Report 2018)[10]. The same approach has been adopted for compilation of Income Index and estimation of Female/Male Earned Income Share. The estimation is based on GSDP at constant prices 2011-12 and female

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[6] http://uis.unesco.org/sites/default/files/documents/uis-methodology-for-estimation-of-mean-years-of-schooling-2013-en_0.pdf
[7]https://udiseplus.gov.in/udise-home/#/home
[8]http://aishe.nic.in/aishe/reports
[9]https://wcd.nic.in/annual-report
[10]https://www.ilo.org/newdelhi/whatwedo/publications/WCMS_638305/lang--en/index.htm

and male wage bill rates. For the compilation of female and male wage bill rates, wages earned from regular wage and casual employment based on Current Weekly Status(CWS)have been taken under the assumption that wage earned by casual labour will be same for the whole month. The Work Force Participation Rates and wage rate per day from regular and casual wage employment required for computing female and male share of the wage bill were estimated from the data of NSS 68th Round Employment and Unemployment Survey (EUS), 2011-12 and Periodic Labour Force Survey (PLFS) for 2017-18. The female/male shares of the wages were juxtaposed on the GSDP to estimate State specific values of earned income by males and females. This method of estimation was developed in discussion with HDRO.

Data Sources and Rationale for Choice of Indicators Used for Computing GII

Dimension-1: 'Health'

2.7 The UNDP HDR uses Maternal Mortality Ratio (MMR) and Adolescent Birth Rate (ABR) to measure the Dimension-1: "Health". The same indicators and criteria have been adopted for calculating GII in the Indian context. Office of Registrar General, India (ORGI) brings out annual SRS Statistical Report and provides estimates of Fertility Indicators. Based on the SRS Statistical Report for the period 2011 and 2017, the Age specific fertility rates (ASFR) in the younger age group 15-19 years of 2011 and 2017 were considered for the year 2011-12 and 2017-18 respectively. Also, Maternal Mortality Ratio for 2011-12 and 2017-18 has been taken from RGI publication on Maternal Mortality 2011-13 and 2016-18.

Dimension-2: 'Empowerment'

2.8 The UNDP HDR uses 'Women's share of seats in Parliament (%)' and 'Population with at least some secondary education age 25+ years (%)' to measure the Dimension-2: "Empowerment". The same indicators and criteria have been used for calculating GII in the Indian context. The indicator 'Women's share of seats in Parliament (%)' includes the representation of women in the Parliament (Lok Sabha and Rajya Sabha) and data for the indicators have been taken from the Lok Sabha Secretariat and Rajya Sabha Secretariat respectively. The indicator 'Population with at least some secondary education age 25+ years (%)' was estimated for India as well as State/UT level using the data on 'general education level' (**Column-7 of Block-4: Demographic Particulars of Household Members)** of NSS 68th Round Employment and Unemployment Survey ,2011-12 and NSS 75th Round Survey on Social Consumption on Education, 2017-18.

Dimension 3: 'Labour Market'

2.9 The UNDP HDR uses 'Labour Force Participation Rate' to measure Dimension-3: 'Labour Market'. The same indicator and criteria has been used for calculating GII in the Indian context. The indicator 'Labour Force Participation Rate' is available in NSS 68th Round Employment and Unemployment Survey, 2011-12 and Periodic Labour Force Survey (PLFS) 2017-18.

2.10 The complete methodology, as adopted from the HDRO methodology for the Indian context, for calculating state-wise HDI, GDI and GII, including the criteria for each dimension is given in the **Annexure-I**. The details of data used in HDI, GDI and GII are given in the **Annexure-II, Annexure-III and Annexure-IV**.

2.11 The calculated indices and analysis of HDI, GDI and GII for India and the States/UTs are presented in **Chapter-3** and **Chapter-4**.

Data Gaps and Assumptions

2.12 The data gaps pertaining to each of the indicators used in the calculation of HDI, GDI and GII and the specific adjustments made to address the data gaps are listed below.

Data Gaps in Indicators and Assumptions made in Estimating HDI and GDI for States/UTs

Life Expectancy at Birth (LEB)

- Life Expectancy at Birth (LEB) is available for only 21 major States for the period 2010-14 and 2013-17. LEB is not available for both 2011-12 and 2017-18 for Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Telangana, Chandigarh, Puducherry, Goa, Andaman & Nicobar Islands, Dadra & Nagar Haveli, Daman & Diu and Lakshadweep. Additionally, LEB is also not available for Telangana for 2011-12. The following adjustments were made:
  - ➢ The value for Assam was applied to all the North Eastern States, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura.
  - ➢ The value of Andhra Pradesh was applied to Telangana for 2011-12.
  - ➢ The average of the values for the neighbouring states of Punjab and Haryana was applied to Chandigarh.
  - ➢ The value for Tamil Nadu was applied to Puducherry due to its proximity to the State.
  - ➢ The average of the values for the neighbouring states of Karnataka and

Maharashtra were applied to Goa.

> All India average value was applied for the island Union Territories-Andaman & Nicobar Island, Dadra & Nagar Haveli, Daman & Diu and Lakshadweep.

Mean Years of Schooling (Population Age 25 years and above)

- Since, Telangana was a part of the State of Andhra Pradesh in 2011-12, MYS was not available for Telangana. Hence, the value of Andhra Pradesh was used for Telangana.

Per Capita GSDP at Constant Prices 2011-12

- Per Capita Gross State Domestic Product was available for 33 States/UTs for period of 2011-12 and 2017-18. Per Capita GSDP was not available for Dadra & Nagar Haveli, Daman & Diu and Lakshadweep for both the periods 2011-12 and 2017-18. Hence, Per Capita All India Gross Domestic Product (GDP) was applied to UTs without Legislature of Dadra& Nagar Haveli, Daman & Diu and Lakshadweep.

Data Gaps in Indicators and Assumptions made in Estimating GII for States/UTs

Maternal Mortality Ratio (MMR)

- Maternal Mortality Ratio (MMR) is available for only 18 major States for the period 2010-12 and 19 major States for the period 2016-18. MMR is not available for both 2011-12 and 2017-18 for Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Chandigarh, Himachal Pradesh, Delhi, Puducherry, Goa, Andaman & Nicobar Islands, Dadra & Nagar Haveli, Daman & Diu and Lakshadweep. Additionally, MMR is also not available for Telangana for 2011-12. The following adjustments were made:

> The value for Assam was applied to all the North Eastern States, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura.

> The average of the values for the neighbouring states of Punjab and Haryana was applied to Chandigarh and Himachal Pradesh.

> The average of the values for the neighbouring states of Uttar Pradesh and Haryana was applied to Delhi.

> The value for Tamil Nadu was applied to Puducherry due to its proximity to the State.

> The average of the values for the neighbouring states of Karnataka and Maharashtra were applied to Goa.

- ➢ All India average value was applied for the island Union Territories- Andaman & Nicobar Island, Dadra & Nagar Haveli, Daman & Diu and Lakshadweep.
- ➢ The value of Andhra Pradesh was applied to Telangana for 2011.

Adolescent Birth Rate (ABR)

- Adolescent Birth Rate (ABR) is available for only 20 major States for the period 2011 and 12 major States for the period 2017. AFR is not available for both 2011 and 2017 for Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Chandigarh, Puducherry, Goa, Andaman & Nicobar Islands, Dadra & Nagar Haveli, Daman & Diu and Lakshadweep. Additionally, AFR is also not available for Telangana and Uttarakhand for the period 2011. The following adjustments were made:
  - ➢ The value for Assam was applied to all the North Eastern States, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura.
  - ➢ The average of the values for the neighbouring states of Punjab and Haryana was applied to Chandigarh.
  - ➢ The value for Tamil Nadu was applied to Puducherry due to its proximity to the State.
  - ➢ The average of the values for the neighbouring states of Karnataka and Maharashtra were applied to Goa.
  - ➢ All India average value was applied to the island Union Territories- Andaman & Nicobar Island, Dadra & Nagar Haveli, Daman & Diu and Lakshadweep.
  - ➢ The value of Andhra Pradesh was applied to Telangana for 2011.
  - ➢ The value of Uttar Pradesh was applied to Uttarakhand for 2011.

Population with at least Some Secondary Education aged 25+ years

- Since Telangana was part of the State of Andhra Pradesh in 2011-12. The data for the above indicator was not available for Telangana. Hence, the figure of Andhra Pradesh was used for Telangana.

Labour Force Participation Rate

- Since Telangana was part of the State of Andhra Pradesh in 2011-12. The data for the above indicator was not available for Telangana. Hence, the figure of Andhra Pradesh was used for Telangana.

CHAPTER III

Human Development Index (HDI) and Gender Development Index (GDI) Estimates for India and the States/UTs: Results and Analysis

HDI and GDI Score at All India Level

3.1   The Human Development Index (HDI) is a summary measure of average achievement in a country with regard to 'Long and healthy life', 'Knowledge' and 'A decent standard of living'. The HDI is the geometric mean of normalized indices for each of the three dimensions. Gender Development Index (GDI) adjusts the average achievements in the same three dimensions that are captured in the HDI to account for the inequalities between men and women.

3.2   The aggregated HDI and GDI scores for India for 2011-12 and 2017-18 is presented in the **Table-3.1 and Figure-3.1** which shows that the level of human development has increased by 0.037 points and gender development by 0.067 points. GDI scores greater that the HDI scores in both years, which also indicate the reduction of gender disparities.

Table-3.1: HDI and GDI of India– 2011-12 and 2017-18

Year	HDI	GDI
2011-12	0.635	0.809
2017-18	0.672	0.876

Figure-3.1: HDI and GDI for India– 2011-12 and 2017-18
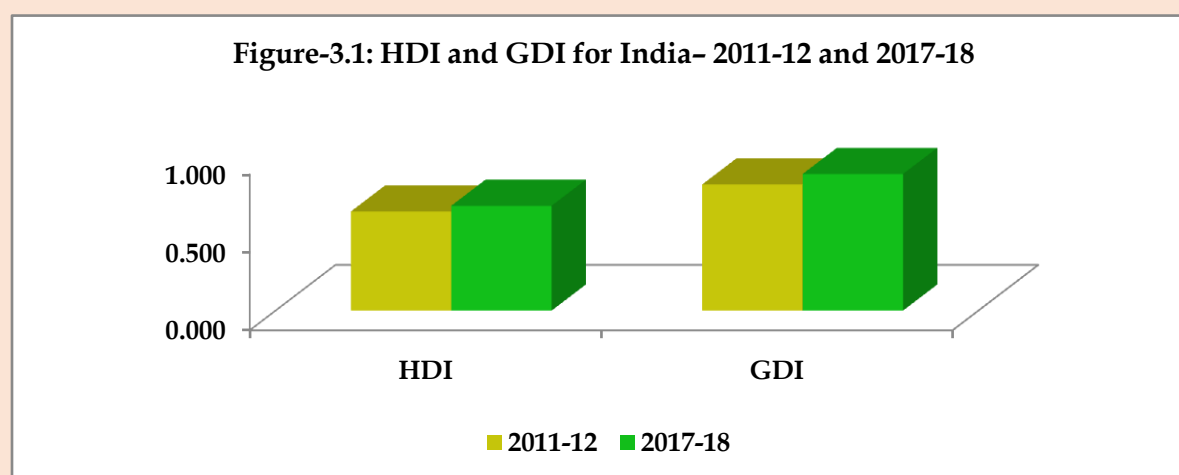
3.3   HDI scores and the scores of three dimensions for India for the two points of time viz., 2011-12 and 2017-18, are presented in **Table-3.2 and Figure-3.2**. Each of the three dimension indices of HDI also reflects an increase over the years.

Table-3.2: Dimension Scores of HDI for India- 2011-12 and 2017-18

Year	Health Index	Education Index	Income Index	Human Development Index (HDI)
2011-12	0.737	0.515	0.675	0.635
2017-18	0.754	0.545	0.739	0.672

Figure-3.2: Dimension Scores for HDI for India- 2011-12 and 2017-18
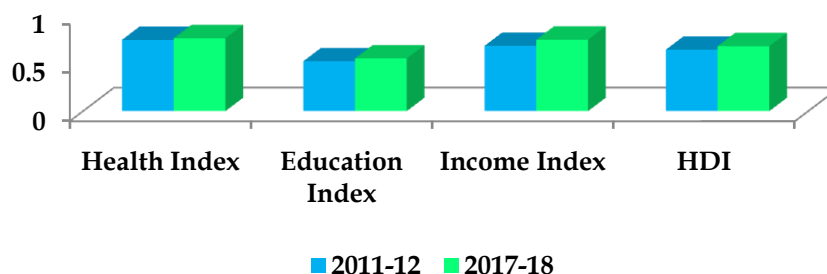
■ 2011-12   ■ 2017-18

3.4   GDI scores and the scores of three dimensions for India for the two points of time viz., 2011-12 and 2017-18, are presented in **Table-3.3 and Figure-3.3**. As is evident from Table-3.3 that Health Index for male has slightly decreased in 2017-18 from 2011-12 whereas for females, it has increased in 2017-18 from its level in 2011-12. Similarly, Education Index for males has deceased whereas for females, it has increased from 2011-12 to 2017-18. Moreover, Income Index for males as well as females has increased over the period 2011-12 to 2017-18.

3.5   HDI for females has significantly increased in 2017-18 from 2011-12 which is clearly reflected in the improvement in GDI in 2017-18.

Table-3.3: Dimension Scores of GDI for India: 2011-12 and 2017-18

Year	Health Index (HI)		Education Index (EI)		Income Index (II)		HDI		GDI
	Male	Female	Male	Female	Male	Female	Male	Female	
2011-12	0.752	0.725	0.557	0.473	0.762	0.494	0.683	0.553	0.809
2017-18	0.735	0.775	0.544	0.535	0.843	0.546	0.696	0.609	0.876

Figure-3.3: Dimension Scores of GDI for India: 2011-12 and 2017-18

■ 2011-12   ■ 2017-18
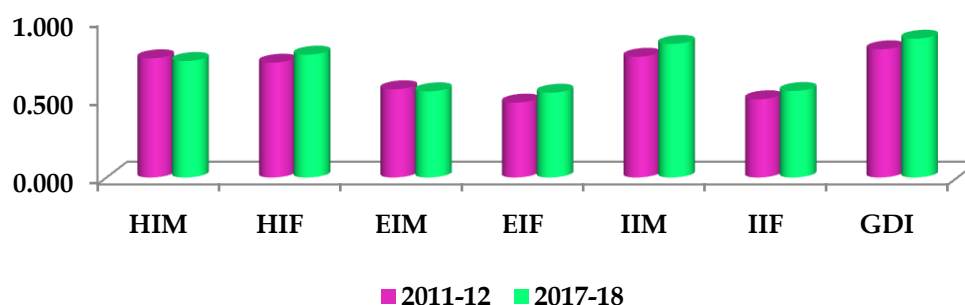
HIM: Health Index Male, **HIF:** Health Index Female, **EIM:** Education Index Male, **EIF:** Education Index Female, **IIM:** Income Index Male, **IIF:** Income Index Female, **GDI:** Gender Development Index

HDI Scores and Ranks for States/UTs

3.6   Scores of India and the States/UTs on HDI and each of the dimensions as also the ranking of the States/UTs on the HDI for the years 2011-12 and 2017-18 are presented in **Annexure-V** and **Annexure-VI**. The States/UTs, using the HDI score, have been categorized into four broad categories namely Very High (0.800 and above), High (0.700 to 0.799), Medium (0.550 to 0.699) and Low (below 0.550). The categorization of States/UTs for year 2011-12 and 2017-18 is given in the **Table-3.4**. HDI scores for 2017-18 and 2011-12 are also presented in the thematic maps in **Map-3.1** and **Map-3.2** respectively.

Table 3.4: Categorizing States/UTs based on HDI Scores – 2011-12 and 2017-18

HDI Category	2017-18	2011-12
Very High HDI (0.800 and above)	Chandigarh, Delhi, Goa	Delhi
High HDI (0.700 to 0.799)	A&N Islands, Haryana, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Meghalaya, Mizoram, Puducherry, Punjab,Sikkim, Tamil Nadu, Telangana, Uttarakhand	Chandigarh, Goa, Himachal Pradesh, Kerala, Maharashtra, Puducherry, Tamil Nadu
Medium HDI (0.550 to 0.699)	Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Dadra & N. Haveli, Daman & Diu, Gujarat, Jammu & Kashmir, Jharkhand, Lakshadweep, Madhya Pradesh, Manipur, Nagaland, Odisha, Rajasthan, Tripura, Uttar Pradesh, West Bengal	A&N Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Dadra & N. Haveli, Daman & Diu, Gujarat, Haryana, Jammu & Kashmir, Jharkhand, Karnataka, Lakshadweep, Madhya Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Punjab, Rajasthan, Sikkim, Telangana, Tripura, Uttar Pradesh, Uttarakhand, West Bengal
Low HDI (below 0.550)	-	Bihar

Map- 3.1: Human Development Index 2017-18

HDI 2017-18
Below 0.550
0.550-0.699
0.700 - 0.799
0.800 and Above

Map-3.2: Human Development Index 2011-12

HDI 2011-12
Below 0.550
0.550-0.699
0.700 - 0.799
0.800 and Above
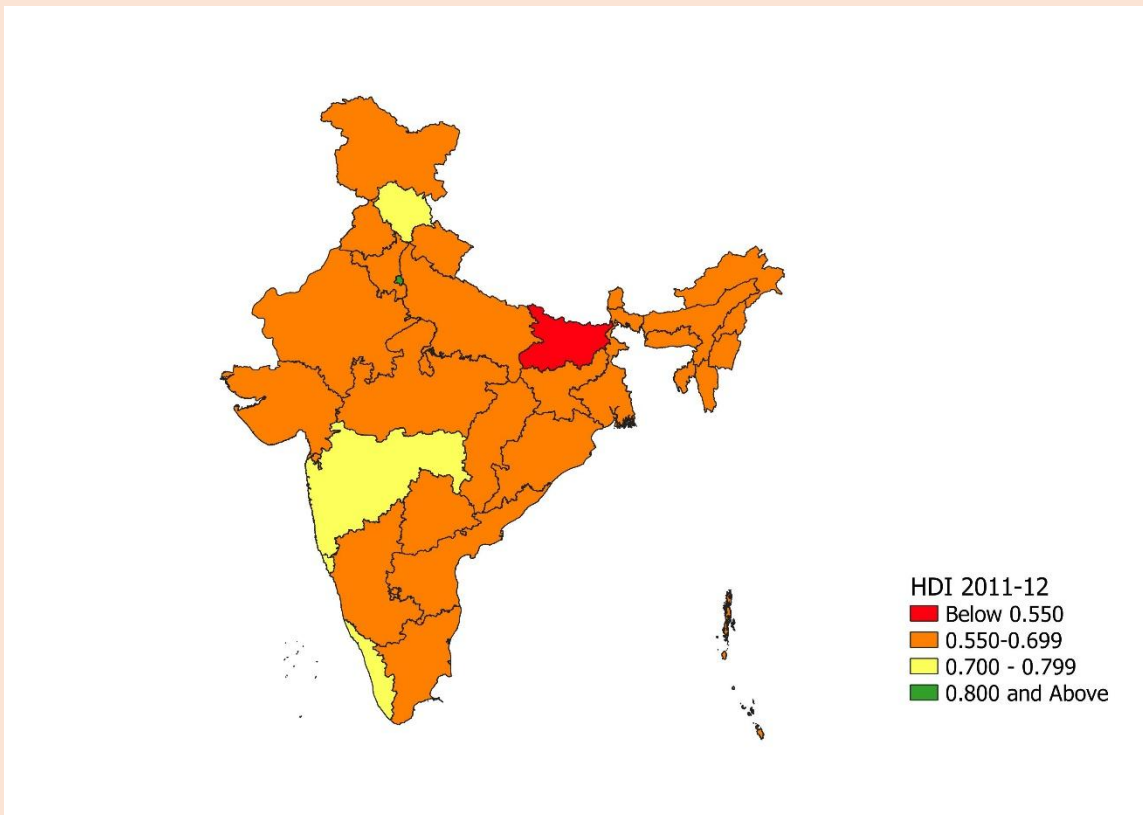
3.7 Salient points emerging from the state-wise HDI score and their raking are given below:

- The HDI score for India has improved from 2011-12 to 2017-18 and also score achieved by majority of States/UTs.

- Goa, Delhi and Chandigarh have been classified in very high HDI category in 2017-18 whereas only Delhi has been classified in very high HDI category in 2011-12.

- 14 States/UTs have been classified in high HDI category in 2017-18 over 7 States/UTs in 2011-12. Out of 14 States/UTs in high HDI category, 9 States/UTs namely Andaman & Nicobar Island, Haryana, Karnataka, Meghalaya, Mizoram, Punjab, Sikkim, Telangana and Uttarakhand were classified in the medium HDI category of 2011-12.

- Bihar shifted from low HDI category in 2011-12 to medium HDI category in 2017-18.

- The States/UT of Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Dadra & Nagar Haveli, Daman & Diu, Gujarat, Jammu & Kashmir, Jharkhand, Lakshadweep, Madhya Pradesh, Manipur, Nagaland, Odisha, Rajasthan, Tripura, Uttar Pradesh and West Bengal were still classified in medium HDI category in 2017-18 despite improving the HDI score over 2011-12.

- Among the States/UTs, Sikkim is the largest gainer on HDI score by 0.078 in 2017-18 over 2011-12 followed by Mizoram (0.076 points), Assam (0.072 points) and Uttarakhand (0.067 points).

- Delhi is ranked first in 2011-12 as well as in 2017-18. However, Chandigarh and Goa interchange their ranks in 2017-18 over 2011-12. Chandigarh and Goa were placed at 3rd and 2nd position in 2011-12.

- The States of Assam and Sikkim improved their rank from 34 to 28 and 11 to 5 respectively in 2017-18 from 2011-12 followed by Gujarat (4 rank), Telangana (4 rank), Mizoram (4 rank), Uttarakhand (3 rank) and Odisha (3 rank).

- The UT of Lakshadweep slips down its rank from 13 in 2011-12 to 20 in 2017-18 followed by Andaman & Nicobar Island (5 rank), Puducherry (4 rank) and Chhattisgarh (4 rank).

- HDI ranks of States of Bihar (36th), Uttar Pradesh (35th), Jharkhand (33rd), Jammu & Kashmir (26th), Punjab (12th) and Himachal Pradesh (6th) have remained same in 2011-12 and 2017-18.

3.8 The performances of States/UTs on the scores of each of the Dimensions constituting HDI are given below:

Dimension I: 'Long and Healthy Life'

- There has been significant improvement in scores of 'Health' index over the years both in All-India as well as the scores achieved by the States/UTs.

- Highest achievement on 'Health' Index is observed in the State of Kerala (0.849), followed by Delhi (0.842), Jammu & Kashmir (0.832), Himachal Pradesh (0.809), Maharashtra (0.808) and Punjab (0.806) in 2017-18.

- The States of Arunachal Pradesh, Assam, Chhattisgarh, Jharkhand, Madhya Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Rajasthan, Sikkim, Tripura and Uttar Pradesh had scores below the All-India Index score in both 2011-12 and 2017-18 respectively.

Dimension II: 'Knowledge'

- Highest achievement on 'Education' Index has been observed in the Union Territory of Chandigarh (0.790) followed by Mizoram (0.757), Delhi (0.749), Meghalaya (0.742) and Manipur (0.717) in 2017-18. Similarly, lowest score on this index has been observed in the State of Bihar (0.438) followed by Andhra Pradesh (0.464), Rajasthan (0.493) in 2017-18.

- The States of Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Jammu & Kashmir, Jharkhand, Odisha, Rajasthan and Uttar Pradesh have scores below the All-India Index in both 2011-12 and 2017-18.

Dimension 3: 'A Decent Standard of Living'

- Highest achievement on 'Income' Index is observed in the State/UT of Goa (0.979) followed by Delhi (0.936), Sikkim (0.926) and Chandigarh (0.912) in 2017-18. The lowest score on this index is observed in the State of Bihar (0.507) followed by Uttar Pradesh (0.603) and Manipur (0.632).

- The States of Assam, Bihar, Chhattisgarh, Jammu & Kashmir, Jharkhand, Madhya Pradesh, Manipur, Meghalaya, Nagaland, Odisha, Rajasthan, Tripura, Uttar Pradesh and West Bengal had score below the All-India Index in both 2011-12 and 2017-18.
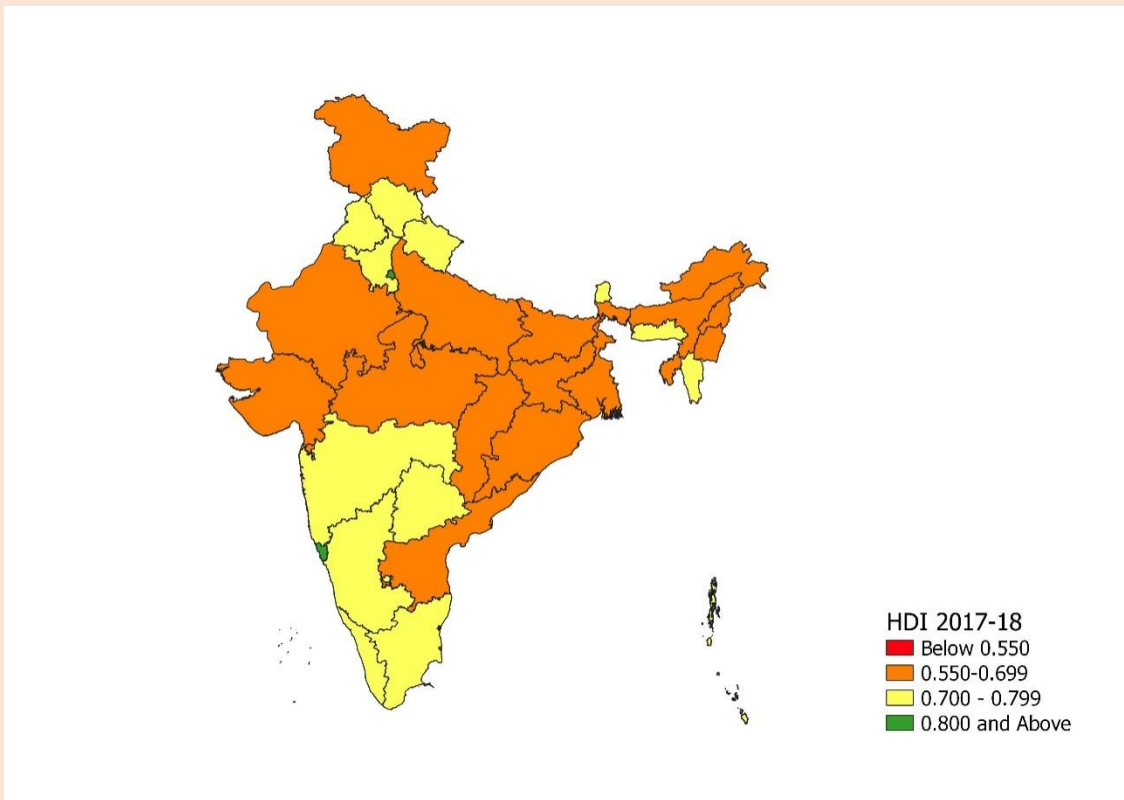
GDI Scores and Ranks for States/UTs

3.9   Scores of India and the States/UTs on GDI and each dimension as also the ranking of States/UTs on the GDI for the years 2011-12 and 2017-18 are presented in **Annexure-VII** and **Annexure-VIII**.

3.10   States/UTs are grouped into five categories based on the absolute deviation of GDI from gender parity, 100·|GDI – 1|. States/UTs with absolute deviation from gender parity of 2.5 percent or less are considered the States/UTs with high equality in

HDI achievements between women and men and are classified as Group-I. States/UTs with absolute deviation from gender parity of 2.5–5 percent are considered the States/UTs with medium-high equality in HDI achievements between women and men and are classified as Group-II. States/UTs with absolute deviation from gender parity of 5–7.5 percent are considered with medium equality in HDI achievements between women and men and are classified as Group-III. States/UTs with absolute deviation from gender parity of 7.5–10 percent are considered the States/UTs with medium-low equality in HDI achievements between women and men and are classified as Group-IV. States/UTs with absolute deviation from gender parity of more than 10 percent are considered the States/UTs with low equality in HDI achievements between women and men and are classified as Group-V. The categorization of States/UTs for year 2011-12 and 2017-18 is given in the **Table-3.5**and also presented in the thematic maps in **Map-3.3** and **Map-3.4** respectively.

Table-3.5: Categorizing States/UTs based on absolute deviation of GDI Scores – 2011-12 and 2017-18

Category/Year	2017-18	2011-12
Group I: High Equality (less or equal to 2.5%)	Chandigarh, Goa, Himachal Pradesh, Mizoram, Sikkim	-
Group II: Medium High Equality (2.5 - 5 %)	A&N Islands, Kerala, Meghalaya	-
Group III: Medium Equality (5 - 7.5 %)	Daman & Diu, Delhi, Jammu & Kashmir, Lakshadweep, Punjab	Meghalaya, Sikkim
Group IV: Medium Low Equality (7.5 - 10 %)	Andhra Pradesh, Dadra & Nagar Haveli, Gujarat, Haryana, Maharashtra, Rajasthan, Tamil Nadu, Uttarakhand	A&N Islands, Chandigarh, Himachal Pradesh
Group V: Low Equality (Above 10%)	Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Jharkhand, Karnataka, Madhya Pradesh, Manipur, Nagaland, Odisha, Puducherry, Telangana, Tripura, Uttar Pradesh, West Bengal	Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Dadra & N. Haveli, Daman & Diu, Delhi, Goa, Gujarat, Haryana, Jammu & Kashmir, Jharkhand, Karnataka, Kerala, Lakshadweep, Madhya Pradesh, Maharashtra, Manipur, Mizoram, Nagaland, Odisha, Puducherry, Punjab, Rajasthan, Tamil Nadu, Telangana, Tripura, Uttar Pradesh, Uttarakhand, West Bengal

Map-3.3: Gender Development Index 2017-18

GDI 2017-18
- Less than or Equal to 2.5%
- 2.5% to 5%
- 5.0% to 7.5%
- 7.5% to 10 %
- Above 10%

Map-3.4: Gender Development Index 2011-12

GDI 2017-18
- Less than or Equal to 2.5%
- 2.5% to 5%
- 5.0% to 7.5%
- 7.5% to 10 %
- Above 10%
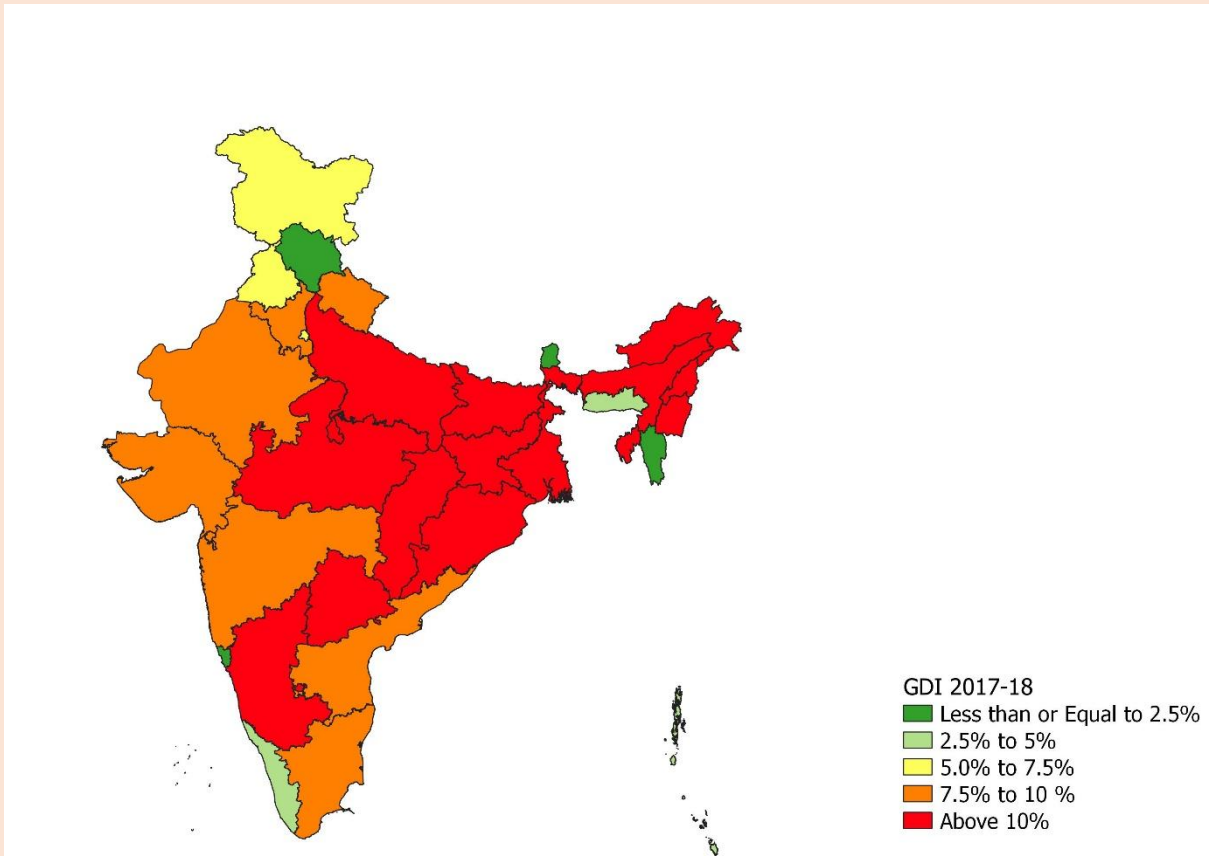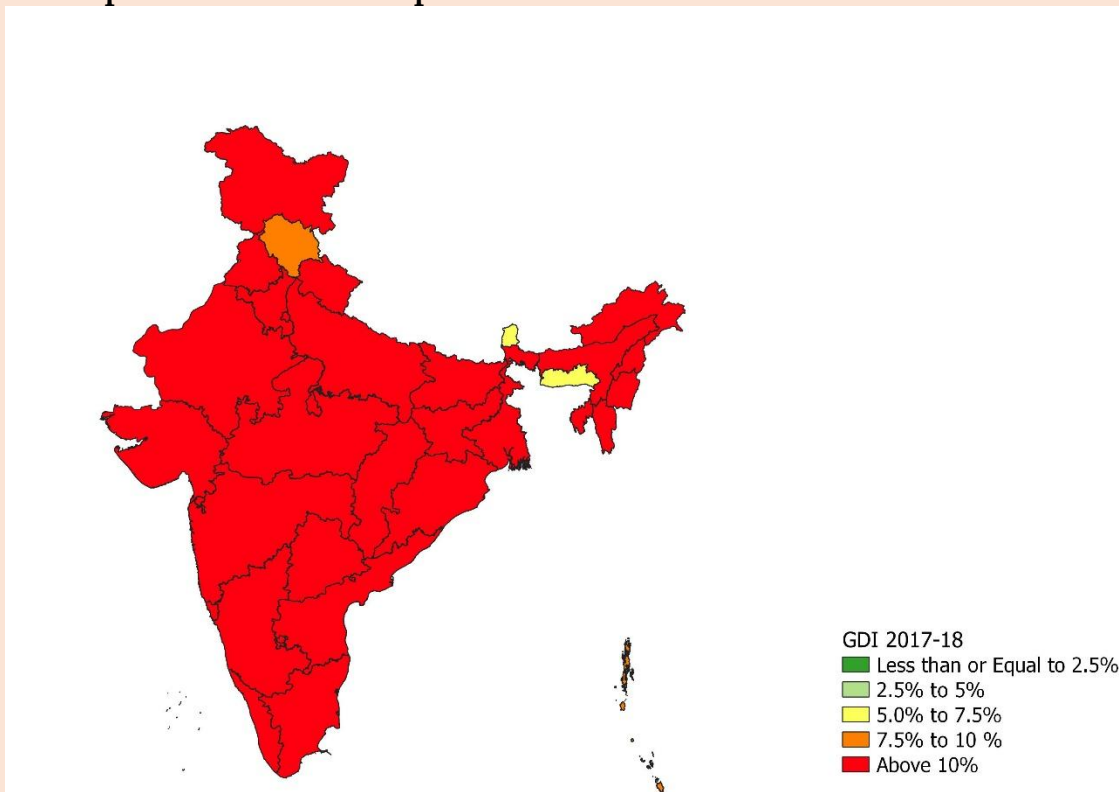
3.11   The salient points emerging from the state-wise analysis GDI score and GDI ranking are listed below:

- GDI score for India has increased from 0.809 in 2011-12 to 0.876 in 2017-18. Similarly, improvements in GDI scores have also been observed in all States/UTs in 2017-18 over 2011-12 except in Arunachal Pradesh.

- None of the States/UTs are classified in 'Group-I: High Equality Category' and 'Group-II: Medium High Equality' in 2011-12 whereas Chandigarh, Himachal Pradesh, Goa, Chandigarh, Mizoram and Sikkim have been classified in 'Group-I: High Equality Category' and 3 States/UTs namely Andaman & Nicobar Island, Kerala, Meghalaya have been classified under the 'Group-II: Medium High Equality' in 2017-18.

- The State of Kerala showed significant improvement in gender parity and classified in 'Group-II: Medium High Equality' in 2017-18 from 'Group-V: Low Equality' in 2011-12. In addition, the State/UT of Jammu & Kashmir, Punjab, Delhi, Daman & Diu and Lakshadweep get placed in 'Group-III: Medium Equality' in 2017-18 from 'Group-V: Low Equality' in 2011-12.

- The lowest GDI score is observed in Bihar (0.422) in 2011-12. Though improved its GDI score in 2017-18, Bihar is still having lowest GDI score.

- 21 States/UTs which increased their GDI scores in 2017-18 over 2011-12 with more than the All-India average gain of 0.067 points, include Andhra Pradesh, Bihar, Chandigarh, Dadra & Nagar Haveli, Daman & Diu, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Lakshadweep, Madhya Pradesh, Maharashtra, Manipur, Mizoram, Puducherry, Punjab and Rajasthan.

- In terms of GDI ranking, Goa is ranked first in 2017-18 rising from 6th rank in 2011-12. Similarly, Sikkim, Meghalaya, Andaman & Nicobar and Chandigarh ranked first, second, third and fourth respectively in 2011-12 have moved to fourth, sixth, seventh and three in 2017-18 respectively.

- Major improvements in GDI ranking have been observed over 2011-12 to 2017-18 in the States/UTs of Daman & Diu (by 22 ranks); Lakshadweep by (10 ranks); Jammu & Kashmir (by 8 ranks); Rajasthan and Dadra & Nagar Haveli (by 7 ranks each); Andhra Pradesh (by 6 ranks); Goa (by 5 ranks); Madhya Pradesh, Manipur and Mizoram (by 4 ranks each).

- Bihar retained the same rank on GDI over the years.

- Largest decrease in rank of GDI in 2017-18 over 2011-12 is observed in the States/UTs of Arunachal Pradesh (by 16 points); Nagaland (by 14 points); Telangana (by 10 points); Chhattisgarh (by 7 points); Uttarakhand (by 6 points); Tripura and West Bengal (by 5 points each) and Andaman & Nicobar Island and Meghalaya (by 4 points each).

3.12 The performances of States/UTs on the scores on each of the Dimensions constituting GDI are given below:

Dimension I: 'Long and Healthy Life'

- Highest achievement on 'Health' Index for male is observed in Delhi (0.820) followed by Kerala (0.808), Jammu & Kashmir (0.802), Maharashtra (0.788) and Punjab (0.785) in 2017-18. For females, highest achievement is seen in Kerala (0.889), Jammu & Kashmir (0.872), Delhi (0.866), Himachal Pradesh (0.855), Uttarakhand (0.834) and Punjab (0.831).

- The States/UTs of Odisha, Madhya Pradesh, Sikkim, Mizoram, Meghalaya, Nagaland, Arunachal Pradesh, Manipur, Tripura, Assam, Chhattisgarh and Uttar Pradesh are below the All-India Education Index for both male and female in 2017-18.

- The States/UTs of Arunachal Pradesh, Assam, Chhattisgarh, Madhya Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Sikkim, Tripura and Uttar Pradesh have scores below All-India Index for male and female both in 2011-12 and 2017-18 respectively.

Dimension II: 'Knowledge'

- Highest scores on 'Education' Index in 2017-18 for both male and female is observed in States/UTs of Chandigarh, Delhi, Manipur, Mizoram and Meghalaya.

- The States/UTs of Andhra Pradesh, Bihar, Dadra & Nagar Haveli, Jammu & Kashmir, Jharkhand, Madhya Pradesh, Odisha, Rajasthan and Uttar Pradesh are below the All-India Education Index for both male and female in 2017-18.

- The States/UTs of Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Jammu & Kashmir, Odisha, Rajasthan and Uttar Pradesh have scores below All-India Index for male and female both in 2011-12 and 2017-18.

Dimension III: A Decent Standard of Living'

- Highest score on 'Income' index in 2017-18 for both male and female is observed in the States/UTs of Goa, Delhi, Chandigarh and Sikkim.

- The State of Assam, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Manipur, Nagaland, Odisha, Rajasthan, Tripura, Uttar Pradesh and West Bengal are below the All-India average on the Income Index for both male and female in 2017-18.

- The States/UTs of Assam, Bihar, Jharkhand, Odisha, Manipur, Madhya Pradesh, Tripura, Uttar Pradesh and West Bengal have scores below All-India Index for male and female both in 2011-12 and 2017-18.

CHAPTER IV

Gender Inequality Index (GII) Estimates for India and the States/UTs: Results and Analysis

GII Score at All India Level

4.1 The GII is an inequality index which measures gender inequalities in three important aspects of human development-Reproductive Health measured by Maternal Mortality Ratio (MMR) and Adolescent Birth Rate (ABR); Empowerment measured by Proportion of parliamentary seats occupied by females and Proportion of adult females and males aged 25 years and older with at least some secondary education; and Economic Status expressed as labour market participation and measured by Labour Force Participation Rate (LFPR) of female and male populations aged 15 years and older. It measures the human development costs of gender inequality. Thus, the higher the GII value the more disparities between females and males and the more loss to human development.

4.2 The GII sheds new light on the position of women in States/UTs and it yields insights in gender gaps in major areas of human development. The component indicators highlight areas in need of critical policy intervention and stimulate proactive thinking and public policy to overcome systematic disadvantages of women.

4.3 The aggregate GII and the scores for each of the three dimensions estimated for India for 2011-12 and 2017-18 is presented in **Table-4.1** and **Figure-4.1**. Over the years, GII scores reduced by 0.069, shows reduction in disparities between females and males.

Table 4.1: GII and Dimension Index Scores of India– 2011-12 and 2017-18

Year	RHI	EI (Female)	EI(Male)	LMI (Female)	LMI(Male)	GII
2011-12	0.044	0.147	0.549	0.225	0.556	0.531
2017-18	0.083	0.174	0.590	0.175	0.555	0.462

Note: RHI: Reproductive Health Index, EI: Empowerment Index, LMI: Labour Market Index, GII: Gender Inequality Index

Figure 4.1: GII and the scores for each of the three dimensions for India– 2011-12 and 2017-18
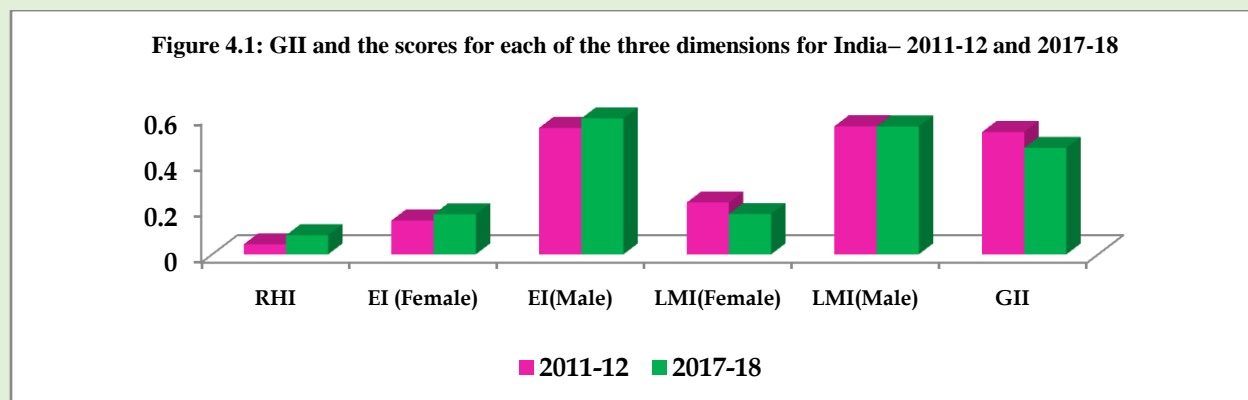
4.4 It is evident from Table 4.1 that Reproductive Health Index has increased in 2017-18 from 2011-12. Empowerment Index for both Female and Male have also increased.

However, Labour Market Index for female has significantly reduced in 2017-18 from2011-12 whereas minor decrease is also observed in case of Male.

GII Scores and Ranks for States/UTs

4.5   Scores of India and the States/UTs on GII and each of the dimensions as also ranking of the States/UTs for the years 2011-12 and 2017-18 are presented in **Annexure-IX** and **Annexure-X.** The categorization of States/UTs for year 2011-12 and 2017-18 is given in the **Table-4.2**. GII scores for 2017-18 and 2011-12 are also presented in the thematic maps in **Map-4.1** and **Map-4.2** respectively.

Table-4.2: Categorizing States/UTs based on GII Scores – 2011-12 and 2017-18

Category/Year	2017-18	2011-12
Category I (Below 0.400)	Andhra Pradesh, Himachal Pradesh, Jammu & Kashmir, Maharashtra, Tamil Nadu	Himachal Pradesh, Punjab
Category II (0.400 to 0.499)	Chandigarh, Chhattisgarh, Delhi, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Meghalaya, Odisha, Punjab, Telangana, Uttarakhand, West Bengal	Andhra Pradesh, Chhattisgarh, Gujarat, Kerala, Maharashtra, Meghalaya, Tamil Nadu, Telangana
Category III (0.500 to 0.599)	Assam, Rajasthan, Tripura, Uttar Pradesh	Delhi, Haryana, Karnataka, Madhya Pradesh, Odisha, Rajasthan, Tripura, Uttar Pradesh, Uttarakhand, West Bengal
Category IV (0.6 to 0.7)	Bihar, Goa, Puducherry	Assam, Bihar, Jammu & Kashmir, Jharkhand
Category V (0.7 and above)	A&N Islands, Arunachal Pradesh, Dadra & Nagar Haveli, Daman & Diu, Jharkhand, Lakshadweep, Manipur, Mizoram, Nagaland, Sikkim	A&N Islands, Arunachal Pradesh, Chandigarh, Dadra & Nagar Haveli, Daman & Diu, Goa, Lakshadweep, Manipur, Mizoram, Nagaland, Puducherry, Sikkim

Map-4.1: GII scores for 2017-18

GII 2017-18
- Below 0.400
- 0.400-0.499
- 0.500 - 0.599
- 0.600 - 0.699
- 0.700 and above
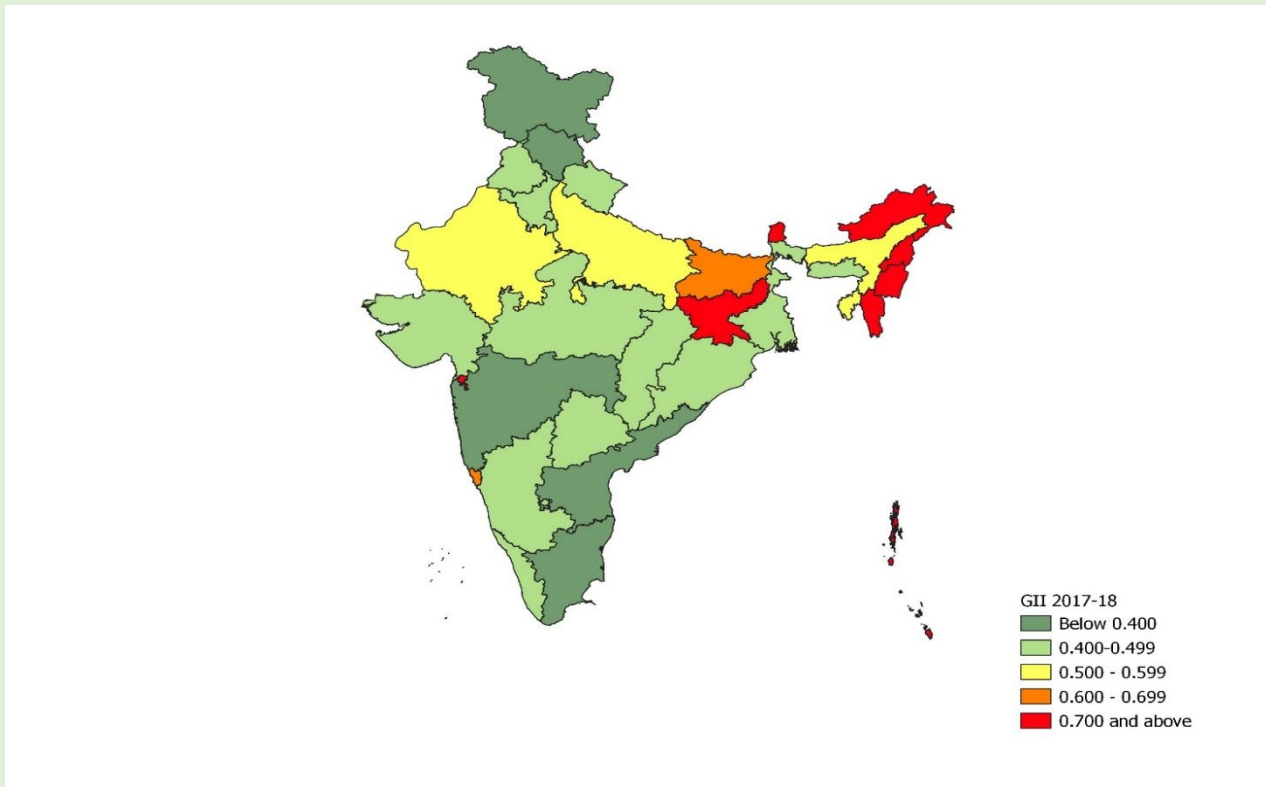
Map-4.2: GII scores for 2011-12

GII 2011-12
- Below 0.400
- 0.400-0.499
- 0.500 - 0.599
- 0.600 - 0.699
- 0.700 and above
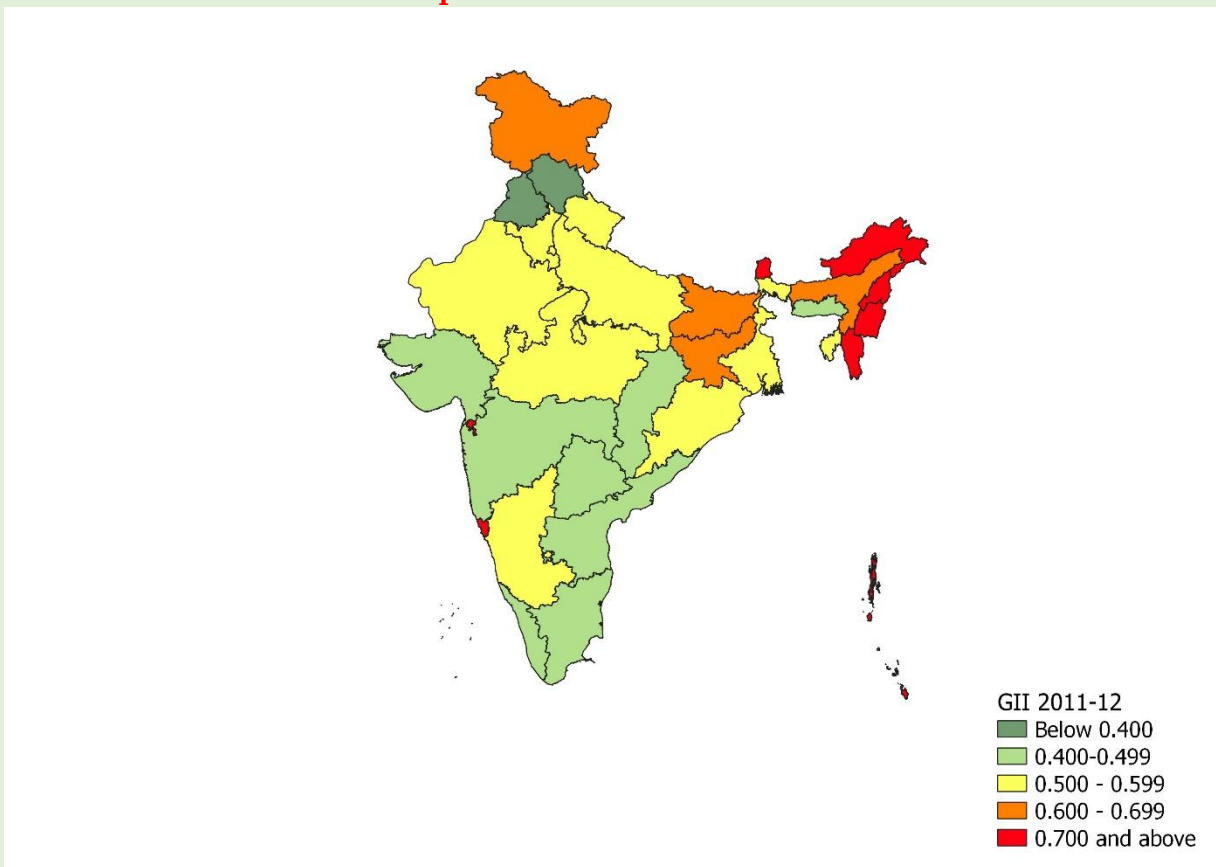
4.6 Some of the salient points emerging from the State/UT-wise analysis GII score and GII ranking are listed below:

- The GII score for India has decreased from 0.531 in 2011-12 to 0.462 in 2017-18. Also, there was significant overall improvement in performance on GII over the years, both in All-India score and in the scores achieved by 29 out of 36 States/UTs.

- 5 States/UTs viz. Andhra Pradesh, Himachal Pradesh, Jammu & Kashmir, Maharashtra and Tamil Nadu have been classified in Category I in 2017-18 whereas only 2 States viz. Himachal Pradesh and Punjab are in this Category during 2011-12.

- Three States Andhra Pradesh, Maharashtra and Tamil Nadu which were in Category II in 2011-12, have improved their GII score and moved to Category I in 2017-18. Similarly, Jammu & Kashmir that was in Category IV in 2011-12 moved to Category I in 2017-18.

- 12 States/UTs with High Inequality scores on GII are placed in Category V in 2011-12. Out of 12 States/UTs, 9 States/UTs remained in this Category in 2017-18 while Chandigarh improved the score by 0.320 points from 0.733 to 0.413 and got placed in Category II in 2017-18. 2 States/UTs viz., Goa and Puducherry moved to Category IV from Category V in 2017-18.

- Himachal Pradesh with the lowest GII score in 2011-12 lost its rank from first to fourth in 2017-18.

- Punjab, which had second rank in 2011-12 with a score of 0.398 moved to fifteenth place in 2017-18 with a score of 0.464. Reason being, the steep drop in percentage share of seats held by women in Parliament and Female Labour Force Participation Rate.

- Tamil Nadu ranked third in 2011-12, got second rank in 2017-18 by improvement of 0.091 points in the score from 0.449 to 0.358.

- Gujarat and Kerala placed fourth and fifth in 2011-12 slipped to rank tenth and ninth respectively in 2017-18, though improved their scores.

- 13 States/UTs which have decreased their GII scores in 2017-18 over 2011-12 by more than the All-India average reduction of 0.069 points, included Andhra Pradesh, Chandigarh, Dadra & Nagar Haveli, Daman & Diu, Delhi, Goa, Jammu & Kashmir, Karnataka, Maharashtra, Meghalaya, Odisha, Tamil Nadu and Uttarakhand. It is worth mentioning that in GII context, loss is treated as better to have reducing the gender inequality.

- Major gain in rank on GII was observed in Chandigarh by 20 ranks followed by

Jammu & Kashmir by 18, Dadra & Nagar Haveli and Maharashtra by 8 ranks each, Daman& Diu by 6 and Odisha and Lakshadweep by 3 ranks each. Improvement in ranks in respect of Chandigarh and Jammu & Kashmir was due to growth in percentage share of seats held by women in Parliament.

- The largest loss in rank on GII was observed in Punjab by 13 ranks followed by Jharkhand by 11 ranks, Tripura by 9 ranks, Gujarat and Rajasthan by 6 and 5 ranks respectively.

The States/UTs that attained the best and worst scores on each of the three Dimensions constituting GDI are given below:

Dimension I: 'Health'

- The States/UTs with the best performance on Dimension 1, 'Reproductive Health Index' in 2017-18 are Haryana, Maharashtra, Telangana, Uttarakhand, Delhi and Jammu & Kashmir.

- The value of this index is observed highest in Haryana (0.168) followed by Maharashtra (0.155), Telangana & Delhi (0.147) in 2017-18. However, in 2011-12, Jammu & Kashmir (0.095) followed by Kerala (0.090) and Punjab (0.083) had the highest value for this index.

Dimension II: 'Empowerment'

- The highest scores on the Empowerment Index in 2017-18 for males have been achieved by the States/UTs of Manipur, Puducherry, Goa, Delhi and Daman & Diu whereas for females, highest score were achieved by States/UTs of Chandigarh, Meghalaya, Himachal Pradesh, West Bengal and Delhi.

- Delhi, Gujarat, Himachal Pradesh, Maharashtra, Punjab, Tamil Nadu and Uttarakhand are above All-India Empowerment Index (Male: 0.590, female: 0.174) for both males and females respectively in 2017-18 whereas Delhi. Haryana, Punjab and Uttarakhand were above All-India Empowerment Index (Male: 0.549, female: 0.147) for both males and females respectively in 2011-12.

- The highest decrease in the value of the 'Empowerment Index' for males is observed in Chandigarh (0.707), Dadra and Nagar Haveli (0.040) followed by Nagaland (0.029), West Bengal (0.018), Andhra Pradesh & Meghalaya (0.017) in 2017-18 over 2011-12 while for females it was decreased in the States/UTs of Himachal Pradesh (0.120), Jharkhand (0.076), Punjab (0.074), Rajasthan (0.046), Haryana (0.043) and Madhya Pradesh (0.032).

Dimension III: 'Labour Market'

- The highest scores on the Labour Market Index in 2017-18 for males have been achieved by the States/UTs of Daman & Diu, Andaman & Nicobar Islands, Sikkim, Dadra & Nagar Haveli and West Bengal whereas for females, highest score were achieved by States/UTs of Himachal Pradesh, Chhattisgarh, Meghalaya, Andhra Pradesh and Sikkim.

- Andaman & Nicobar Islands, Andhra Pradesh, Chandigarh, Chhattisgarh, Dadra & Nagar Haveli, Daman & Diu, Himachal Pradesh, Jammu & Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Mizoram, Sikkim, Tamil Nadu and Telangana are above All-India Labour Market Index (Male: 0.555, female: 0.175) for both males and females respectively in 2017-18 whereas Andaman & Nicobar Islands, Andhra Pradesh, Jammu & Kashmir, Karnataka, Kerala, Maharashtra, Nagaland, Odisha, Sikkim, Tamil Nadu and Tripura are above All-India Labour Market Index (Male: 0.556, female: 0.225) for both males and females respectively in 2011-12.

- The highest decrease scores value of the 'Labour Market Index' for males were observed in Lakshadweep (0.055) followed by Nagaland (0.044), Kerala (0.040), Meghalaya (0.030), Jharkhand (0.029), Bihar (0.028) and Odisha (0.025) in 2017-18 over 2011-12 while for females, it was decrease in the States/UTs of Nagaland (0.190), Tripura (0.181), Arunachal Pradesh (0.149), Uttarakhand (0.126), Sikkim (0.112), Rajasthan (0.108), Mizoram (0.102) and Himachal Pradesh (0.101).

Annexes

I. Methodology for Calculating Human Development Index (HDI), Gender Development Index (GDI) and Gender Inequality Index (GII)

1. Human Development Index

The Human Development Index (HDI) is a summary measure of achievements in three key dimensions of human development: a long and healthy life, access of knowledge and a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions.

Steps to Calculate Human Development Index

There are two steps to calculating the HDI.

Step-1: Creating the dimension indices

Minimum and maximum values (goalposts) are set in order to transform the indicators expressed in different units into indices between 0 and 1. These goalposts act as the "natural zeroes" and "aspirational targets", respectively, from which component indicators are standardized (see equation 1 below). They are set at the following values:

Dimension	Indicator	Minimum	Maximum
Long & Healthy Life	Life Expectancy at Birth (years)	20	85
Knowledge	Expected Years of Schooling (years)	0	18
	Mean Years of Schooling (years)	0	15
A Decent Standard of Living	Per Capita Gross State Domestic Product (Rs.)	2000	400000

The justification for placing the natural zero for life expectancy at 20 years is based on historical evidence that no country in the 20th century had a life expectancy of less than 20 years (Maddison, 2010[1]; Oeppen and Vaupel, 2002[2]; Riley, 2005[3]). Maximum life expectancy is set at 85, a realistic aspirational target for many countries over the last 30 years. Due to constantly improving living conditions and medical advances, life expectancy has already come very close to 85 years in several economies: 84.7 years in Hong Kong, China (Special Administrative Region) and 84.5 years in Japan (As adopted from HDR 2019 Technical Notes).

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[1] Maddison, A. 2010. *Historical Statistics of the World Economy, 1-2030 AD*. Paris: Organisation for Economic Co-operation and Development
[2] Oeppen and Vaupel, 2002. "Broken Limits to Life Expectancy." *Science 296: 1029-1031*
[3] Riley, 2005. *Poverty and Life Expectancy*. Cambridge, UK: Cambridge University Press

Societies can subsist without formal education, justifying the education minimum of 0 years. The maximum for expected years of schooling, 18, is equivalent to achieving a master's degree in most countries. The maximum for mean years of schooling, 15, is the projected maximum of this indicator for 2025 (As adopted from HDR 2019 Technical Notes).

The low minimum value for Gross State Domestic Product (GSDP) per capita, Rs. 2795 was found in Bihar in 2011-12 and maximum estimate of income was around Rs. 4,95,000 per capita for males in Goa in 2017-18. Hence low minimum value for Gross State Domestics Product per capita was assumed to be Rs. 2000. The maximum is set at Rs. 4,00,000 per capita. It can be realistically assumed that there is no significant gain in human development and well-being from annual income per capita above Rs. 4,00,000. Currently, only two UTs (Delhi and Goa) exceed the Rs. 4,00,000 income per capita ceiling.

Having defined the minimum and maximum values, the dimension indices are calculated as:

$$\text{Dimension index} = \frac{\text{actual value} - \text{minimum value}}{\text{maximum value} - \text{minimum value}} \quad\quad (1)$$

For the education dimension, equation 1 is first applied to each of the two indicators, and then the arithmetic mean of the two resulting indices is taken. Using the arithmetic mean of two education indices allows perfect substitutability between mean years of schooling and expected years of schooling, which seems to be right given that many developing countries have low school attainment among adults but are eager to achieve universal primary and secondary enrolment among school-age children.

Because each dimension index is a proxy for capabilities in the corresponding dimension, the transformation function from income to capabilities is likely to be concave – that is, each additional rupee of income has a smaller effect on expanding capabilities. Thus for income, the natural logarithm of the actual, minimum and maximum values is used.

Step-2: Aggregating the dimensional indices to produce the Human Development Index

The HDI is the geometric mean of the three dimensional indices:

$$\text{HDI} = \left(I_{Health} * I_{Education} * I_{Income} \right)^{1/3} \quad\quad (2)$$

<u>Human Development Categories</u>

The 2014 Human Development Report introduced fixed cut-off points for four categories of human development achievements. In the state-wise analysis, the same

cut-off points of the HDI for grouping countries that were adopted by HDRO have been considered:

Very high human development	0.800 and above
High human development	0.700 – 0.799
Medium human development	0.550 - 0.699
Low human development	Below 0.550

2. Gender Development Index

The Gender Development Index (GDI) measures gender inequalities in achievement in three basic dimensions of human development: health, measured by female and male life expectancy at birth; education, measured by female and male expected years of schooling for children and female and male mean years of schooling for adults ages 25 and older; and command over economic resources, measured by female and male estimated earned income.

Steps to calculate the Gender Development Index

There are five steps to calculating the GDI.

Step-1: Estimating wage per day for each gender

NSS 68th (2011-12) Round captures the information on wage/income earned by Casual Labour, Regular Employee and Self-Employee in the last seven days under the Current Weekly Status Activity. Similarly, Periodic Labour Force Survey (PLFS) 2017-18 captures the information on wage/income earned by Casual Labour in the last seven days under the Current Weekly Status Activity and monthly wage/income earned by regular employee and also monthly gross income earned by self-employee.

Based on the criteria (casual and regular wage employee) adopted by ILO and information available in NSS 68th (2011-12) Round and PLFS 2017-18, wage per day earned by male/female (combined casual and regular) was estimated considering the assumption that wage earned by casual labour will be same for the whole month.

Step-2: Estimating the female and male earned incomes

To calculate estimated earned incomes, the share of the wage bill is calculated for each gender. The female share of the wage bill (S_f) is calculated as follows:

$$S_f = \frac{W_f / W_m * EA_f}{W_f / W_m * EA_f + EA_m}.$$

Where W_f/W_m is the ratio of female to male wage, EA_f is the female share of the economically active population and EA_m is the male share.

The male share of the wage bill is calculated as:

$$S_m = 1 - S_f.$$

Estimated female earned income per capita (GSDPpc$_f$) is obtained from GSDP per capita (GSDPpc), first by multiplying it by the female share of the wage bill, S_f, and then rescaling it by the female share of the population, $P_f = N_f / N$:

$$GSDPpc_f = GSDSPpc * S_f / P_f.$$

Estimated male earned income per capita is obtained in the same way:

$$GSDPpc_m = GSDPpc * S_m / P_m$$

Where $P_m = 1 - P_f$ is the male share of population.

Step-3: Normalizing the indicators

To construct the female and male HDI values, first the indicators, which are in different units, are transformed into indices and then dimension indices for each sex are aggregated by taking the geometric mean.

The indicators are transformed into indices on a scale of 0 to 1 using the same goalposts that are used for the HDI, except life expectancy at birth, which is adjusted for the average five-year biological advantage that women have over men.

Goalposts for the Gender Development Index are as follows:

Dimensions	Indicator	Minimum	Maximum
Long and Healthy Life	Life Expectancy at Birth (years)		
	Female	22.5	87.5
	Male	17.5	82.5
Knowledge	Expected Years of Schooling (years)	0	18
	Mean Years of Schooling (years)	0	15
A Decent Standard of Living	Estimated Earned Income (Rs.)	2000	400000

Having defined the minimum and maximum values, the sub-indices are calculated as follows:

$$\text{Dimension index} = \frac{\text{actual value} - \text{minimum value}}{\text{maximum value} - \text{minimum value}} \quad\quad (3)$$

For education, the dimension index is first obtained for each of the two subcomponents, and then the unweighted arithmetic mean of the two resulting indices is taken.

Step-4: Calculating the female and male Human Development Index

The female and male HDIs are the geometric means of the three dimensional indices for each gender:

$$HDI_f = \left(I_{Health\ f} * I_{Education\ f} * I_{Income\ f}\right)^{1/3} \text{------------------------------------} \quad (4)$$

$$HDI_m = \left(I_{Health\ m} * I_{Education\ m} * I_{Income\ m}\right)^{1/3} \text{------------------------------} \quad (5)$$

Step-5: Calculating the Gender Development Index

The GDI is simply the ratio of female HDI to male HDI:

$$GDI = \frac{HDI_f}{HDI_m} \text{---} \quad (6)$$

<u>**Gender Development Index groups**</u>

The GDI groups are based on the absolute deviation of GDI from gender parity, 100 * |GDI - 1|. Using the same criteria as adopted for GDI in the Human Development Report, States with absolute deviation from gender parity of 2.5 percent or less are classified as **Group-1**. States with absolute deviation from gender parity of 2.5 – 5 percent are considered states with medium-high equality in HDI achievements between women and men and are classified as **Group-2**. States with absolute deviation from gender parity of 5 – 7.5 percent are considered states with medium equality in HDI achievements between women and men and are classified as **Group-3**. States with absolute deviation from gender parity of 7.5 - 10 percent are considered states with medium-low equality in HDI achievements between women and men and are classified as **Group-4**. States with absolute deviation from gender parity of more than 10 percent are considered states with low equality in HDI achievements between women and men and are classified as **Group-5**.

3. Gender Inequality Index

The Gender Inequality Index (GII) reflects gender-based disadvantage in three dimensions – reproductive health, empowerment and the labour market– for as many countries as data of reasonable quality allow. It shows the loss in potential human development due to inequality between female and male achievements in these dimensions. It ranges from 0, where women and men fare equally, to 1, where one gender fares as poorly as possible in all measured dimensions.

The GII is computed using the association-sensitive inequality measure suggested by Seth (2009)[4], which implies that the index is based on the general mean of general means of different orders– the first aggregation is by a geometric mean across dimensions; these means, calculated separately for women and men, are then aggregated using a harmonic mean across genders.

The details of parameters used in the GII are given below:

Dimensions	Indicator
Health	Maternal Mortality Ratio (Maternal Death per 100000 live birth within 42 days)
	Adolescent Birth Rate (Birth per 1000 women ages 15-19 years)
Empowerment	Women's share of seats in Parliament (%)
	Population with at least some secondary education age 25+ years (%)
Labour Market	Labour Force Participation Rate (%)

Steps to calculate the Gender Inequality Index

There are five steps to calculating the GII.

Step 1: Treating zeroes and extreme values

Because a geometric mean cannot be computed from zero values, a minimum value of 0.1 percent is set for all component indicators. Further, as higher maternal mortality suggests poorer maternal health, for the maternal mortality ratio the maximum value is truncated at 1,000 deaths per 100,000 births and the minimum value at 10. The rationale is that countries where maternal mortality ratios exceed 1,000 do not differ in their inability to create conditions and support for maternal health and that countries with 10 or fewer deaths per 100,000 births are performing at essentially the same level and that small differences are random.

Step 2: Aggregating across dimensions within each gender group

Aggregating across dimensions for each gender group by the geometric mean makes the GII association sensitive.

For women and girls, the aggregation formula is:

$$G_F = \sqrt[3]{\left(\frac{10}{MMR} * \frac{1}{ABR}\right)^{1/2} * (PR_F * SE_F)^{1/2} * LFPR_F} \text{------------(7)}$$

and for men and boys the formula is

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[4]Seth (2009). "Inequality, Interactions, and Human Development." *Journal of Human development and Capabilities* 10(3):375-396

$$G_M = \sqrt[3]{1 * (PR_M * SE_M)^{1/2} * LFPR_M} \qquad \text{---------------------------(8)}$$

The rescaling by 0.1 of the maternal mortality ratio in equation (7) is needed to account for the truncation of the maternal mortality ratio at 10.

Step 3: Aggregating across gender groups, using a harmonic mean

The female and male indices are aggregated by the harmonic mean to create the equally distributed gender index

$$\text{HARM } (G_F, G_M) = \left[\frac{(G_F)^{-1} + (G_M)^{-1}}{2}\right]^{-1} \qquad \text{-----------------------------(9)}$$

Using the harmonic mean of within-group geometric means captures the inequality between women and men and adjusts for association between dimensions — that is, it accounts for the overlapping inequalities in dimensions.

Step 4: Calculating the geometric mean of the arithmetic means for each indicator

The reference standard for computing inequality is obtained by aggregating female and male indices using equal weights (thus treating the genders equally) and then aggregating the indices across dimensions:

$$G_{\overline{F},\overline{M}} = \sqrt[3]{\overline{Health} * \overline{Empowerment} * \overline{LFPR}}$$

where,

$$\overline{Health} = \left(\sqrt{\frac{10}{MMR} * \frac{1}{ABR}} + 1\right)/2,$$

$$\overline{Empowerment} = (\sqrt{PR_F * SE_F} + \sqrt{PR_M * SE_M})/2 \text{ and}$$

$$\overline{LFPR} = \frac{LFPR_F + LFPR_M}{2}$$

$\overline{Health}$ should not be interpreted as an average of corresponding female and male indices but rather as half the distance from the norms established for the reproductive health indicators — fewer maternal deaths and fewer adolescent pregnancies.

Step 5: Calculating the Gender Inequality Index

Comparing the equally distributed gender index to the reference standard yields the GII,

$$\text{GII} = 1 - \frac{\text{HARM } (G_F, G_M)}{G_{\overline{F},\overline{M}}} \qquad \text{---------------------------------} \quad (10)$$

Gender Inequality Categories

In the state-wise analysis, the following cut-off points of the GII for grouping States/UTs have been considered:

Category I	Below 0.400
Category II	0.400 to 0.499
Category III	0.500 to 0.599
Category IV	0.600 to 0.699
Category V	0.700 and above

State-wise, Dimension-wise, Indicators used for Human Development Index- 2011-12 and 2017-18

Sl. No.	States/UTs	2011-12				2017-18			
		Long & Healthy Life	Knowledge		Income	Health	Knowledge		Income
		Expectation of Life at Birth	Mean Years of Schooling (Population Age>=25 years)	Expected Years of Schooling (Yrs)	Per Capita GSDP at Constant Prices 2011-12 (Rupees)	Expectation of Life at Birth	Mean Years of Schooling (Population Age>=25 years)	Expected Year of Schooling (Yrs)	Per Capita GSDP at Constant Prices 2011-12 (Rupees)
		Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons
1	A & N Islands	67.90	6.83	14.08	103068	69	7.48	11.80	146990
2	Andhra Pradesh	68.50	4.46	10.01	76997	69.7	4.43	11.38	116542
3	Arunachal Pradesh	63.90	5.37	15.65	79019	66.2	5.21	15.60	100972
4	Assam	63.90	5.67	10.73	45538	66.2	6.34	13.69	65138
5	Bihar	68.10	3.87	9.90	23525	68.9	4.66	10.18	29385
6	Chandigarh	70.10	8.77	14.52	176227	71.05	10.72	15.56	250609
7	Chhattisgarh	64.80	4.62	12.39	61305	65.2	5.34	12.38	76073
8	Dadra & N. Haveli	67.90	6.11	11.50	71609	69	5.75	11.84	100268
9	Daman & Diu	67.90	8.13	11.29	71609	69	9.25	10.59	100268
10	Delhi	73.20	9.40	15.04	202139	74.7	9.20	15.93	284434
11	Goa	70.20	8.42	13.44	289192	70.85	9.18	13.61	357804
12	Gujarat	68.70	5.57	11.27	101075	69.7	6.33	11.66	163090
13	Haryana	68.60	6.23	11.28	116408	69.7	7.00	12.66	177652
14	Himachal Pradesh	71.60	6.43	14.37	105376	72.6	7.73	14.67	152128
15	Jammu & Kashmir	72.60	5.24	10.87	61852	74.1	5.80	11.33	76724
16	Jharkhand	66.60	4.52	11.49	45318	68.6	4.67	12.31	57465
17	Karnataka	68.80	5.79	12.11	98567	69.2	6.21	12.84	159061
18	Kerala	74.90	7.85	12.13	108666	75.2	8.70	13.73	150922
19	Lakshadweep	67.90	6.97	13.88	71609	69	8.57	10.71	100268
20	Madhya Pradesh	64.20	4.70	13.62	43023	66	5.06	12.31	61220
21	Maharashtra	71.60	6.69	13.48	113192	72.5	7.30	13.96	159605
22	Manipur	63.90	7.73	14.87	44649	66.2	8.65	15.44	56919
23	Meghalaya	63.90	7.00	15.22	66304	66.2	6.47	18.96	66113

Sl. No.	States/UTs	2011-12				2017-18			
		Long & Healthy Life	Knowledge		Income	Health	Knowledge		Income
		Expectation of Life at Birth	Mean Years of Schooling (Population Age>=25 years)	Expected Years of Schooling (Yrs)	Per Capita GSDP at Constant Prices 2011-12 (Rupees)	Expectation of Life at Birth	Mean Years of Schooling (Population Age>=25 years)	Expected Year of Schooling (Yrs)	Per Capita GSDP at Constant Prices 2011-12 (Rupees)
		Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons
24	Mizoram	63.90	7.56	15.37	65347	66.2	8.22	17.95	121287
25	Nagaland	63.90	8.46	13.10	61159	66.2	7.61	13.62	79369
26	Odisha	65.80	4.58	11.46	54855	68.4	5.20	12.55	83107
27	Puducherry	70.60	8.13	15.13	132739	71.7	8.87	12.87	151544
28	Punjab	71.60	6.11	12.19	95379	72.4	7.37	14.20	124152
29	Rajasthan	67.70	3.99	11.40	62907	68.5	4.59	12.25	84064
30	Sikkim	63.90	5.36	13.75	181842	66.2	7.48	15.39	270235
31	Tamil Nadu	70.60	6.11	13.95	103743	71.7	6.80	14.20	149717
32	Telangana	68.50	4.46	13.32	100733	69.7	6.17	12.93	147697
33	Tripura	63.90	5.24	13.98	51999	66.2	5.63	14.46	85480
34	Uttar Pradesh	64.10	4.38	12.47	35917	65	5.39	11.45	48900
35	Uttarakhand	71.70	6.23	12.09	113456	71	8.25	14.09	164165
36	West Bengal	70.20	5.14	12.78	56693	71.2	5.63	13.99	71312
	All India	67.90	5.30	12.18	71609	69	5.97	12.45	100268

Note:
Expectation of Life at Birth:

- **Telangana:** Figure of Andhra Pradesh was applied.
- **Other North-East States:** Figure of Assam was used to all other North-Eastern States, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura
- **Chandigarh:** Average value of Punjab and Haryana was used to Chandigarh.
- **Puducherry:** Figure of Tamil Nadu was applied.
- **Goa:** Average value of Karnataka and Maharashtra were used for Goa.
- **UTs without Legislature:** All India average value was applied to Union Territories, Andaman & Nicobar Island, Dadra& Nagar Haveli, Daman & Diu and Lakshadweep.

Mean Years of Schooling (Population Age 25 years and above)

- **Telangana:** Figure of Andhra Pradesh was applied in 2011-12.

Per Capita GSDP at Constant Prices 2011-12

- **UTs without Legislature:** All India average value was applied to Union Territories of Dadra& Nagar Haveli, Daman & Diu and Lakshadweep.

State-wise, Dimension-wise, Indicators used for Gender Development Index- 2011-12 and 2017-18

Sl. No.	States/UTs	2011-12									2017-18							
		Health		Education				Earned Income			Health		Education				Earned Income	
		Expectation of Life at Birth		Mean Years of Schooling (Population Age>=25 years)		Expected Years of Schooling (Years)		Estimated Earned Income (Rs.)			Expectation of Life at Birth		Mean Years of Schooling (Population Age>=25 years)		Expected Years of Schooling (Years)		Estimated Earned Income (Rs.)	
		Male	Female	Male	Female	Male	Female	Male	Female		Male	Female	Male	Female	Male	Female	Male	Female
1	A & N Islands	**66.40**	**69.60**	7.45	6.21	13.84	14.29	136631	65371		67.8	70.4	8.08	6.83	10.69	12.59	191347	97149
2	Andhra Pradesh	66.30	70.80	5.74	3.25	10.03	9.98	122744	31102		68.3	71.2	5.47	3.44	10.41	12.10	177331	55658
3	Arunachal Pradesh.	62.70	65.50	6.32	4.33	15.96	15.27	110005	45893		65.4	67.3	6.17	4.20	13.98	15.97	170802	26766
4	Assam	62.70	65.50	6.54	4.76	10.53	10.95	79729	9856		65.4	67.3	7.24	5.38	12.43	13.95	116075	12183
5	Bihar	67.80	68.40	5.36	2.32	10.09	9.69	42558	2795		69.2	68.6	5.93	3.31	9.50	10.64	52998	3741
6	Chandigarh	68.00	72.55	9.19	8.28	14.10	15.04	257742	76881		69.3	73.15	11.49	9.95	12.47	18.79	373695	103512
7	Chhattisgarh	63.30	66.30	5.96	3.30	12.62	12.16	92627	29694		63.8	66.6	6.62	4.05	11.66	12.70	117627	34235
8	Dadra & N.	**66.40**	**69.60**	7.55	4.32	11.69	11.31	105016	27610		67.8	70.4	7.23	3.94	9.79	13.46	142268	40903
9	Daman & Diu	**66.40**	**69.60**	8.96	6.93	10.88	11.41	107557	11821		67.8	70.4	10.09	7.98	8.67	13.14	130070	39030
10	Delhi	72.00	74.70	10.37	8.29	14.82	15.28	306699	81733		73.3	76.3	10.20	7.99	13.69	18.07	400000	97957
11	Goa	68.40	72.20	9.23	7.66	13.48	13.47	400000	141746		69.45	72.35	9.79	8.47	12.11	14.85	400000	217241
12	Gujarat	66.60	71.00	6.59	4.46	11.51	10.99	159716	37224		67.6	72	7.49	5.13	9.81	13.39	265802	50285
13	Haryana	66.30	71.30	7.60	4.78	10.92	11.74	180685	43290		67.6	72.3	8.34	5.55	10.23	15.29	290634	49831
14	Himachal	69.30	74.10	7.76	5.25	14.32	14.43	138298	71494		69.8	75.6	8.88	6.67	12.69	16.29	206897	95776
15	Jammu &	70.90	74.90	6.72	3.68	10.80	10.96	89745	30508		72.1	76.7	7.06	4.50	9.47	12.56	106531	43567
16	Jharkhand	66.20	66.90	5.84	3.17	11.35	11.64	74900	14134		68.8	68.4	5.98	3.29	11.03	13.02	100957	11723
17	Karnataka	66.90	70.80	7.01	4.59	12.12	12.11	157089	38414		67.7	70.8	7.22	5.19	11.63	13.63	258031	57223
18	Kerala	72.00	77.80	8.16	7.59	11.96	12.29	175049	47439		72.5	77.8	8.81	8.61	12.68	14.33	232274	75829
19	Lakshadweep	**66.40**	**69.60**	8.15	5.84	15.25	15.76	117483	25086		67.8	70.4	9.37	7.88	11.53	12.21	140675	58636
20	Madhya Pradesh	62.50	66.00	5.92	3.42	13.81	13.39	69833	14236		64.2	67.9	6.29	3.76	10.80	13.36	94243	25924

Sl. No.	States/UTs	2011-12								2017-18							
		Health		Education				Earned Income		Health		Education				Earned Income	
		Expectation of Life at Birth		Mean Years of Schooling (Population Age>=25 years)		Expected Years of Schooling (Years)		Estimated Earned Income (Rs.)		Expectation of Life at Birth		Mean Years of Schooling (Population Age>=25 years)		Expected Years of Schooling (Years)		Estimated Earned Income (Rs.)	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
21	Maharashtra	69.90	73.60	7.94	5.44	13.63	13.32	175887	45703	71.2	73.9	8.40	6.18	11.96	15.63	249241	62699
22	Manipur	62.70	65.50	8.99	6.52	14.69	15.09	72895	15985	65.4	67.3	9.84	7.49	13.51	16.22	87612	25919
23	Meghalaya	62.70	65.50	7.44	6.53	14.76	15.74	85460	46928	65.4	67.3	6.74	6.20	17.17	19.26	86180	45893
24	Mizoram	62.70	65.50	8.11	7.00	15.69	14.95	89394	40727	65.4	67.3	8.66	7.77	15.51	18.42	163767	78138
25	Nagaland	62.70	65.50	9.20	7.65	13.15	13.09	84688	35888	65.4	67.3	8.19	6.95	11.49	14.37	126373	29056
26	Odisha	64.70	67.10	5.63	3.52	11.69	11.24	91934	17163	67.1	69.9	6.13	4.27	11.33	13.16	152011	16492
27	Puducherry	68.60	72.70	9.03	7.31	15.11	14.05	229003	40412	69.9	73.7	9.64	8.11	11.73	13.66	259469	50853
28	Punjab	69.70	73.80	6.77	5.41	12.13	12.26	139937	45623	71	74	7.98	6.74	11.35	17.00	197143	43064
29	Rajasthan	65.50	70.20	5.75	2.28	11.93	10.81	93171	30332	66.3	70.9	6.27	2.85	10.37	14.00	130400	34700
30	Sikkim	62.70	65.50	6.22	4.45	13.15	14.14	206445	154174	65.4	67.3	8.05	6.87	13.81	15.95	345642	186647
31	Tamil Nadu	68.60	72.70	7.16	5.09	13.79	14.13	164091	43198	69.9	73.7	7.74	5.91	12.94	14.93	239767	59646
32	Telangana	66.30	70.80	5.74	3.25	13.37	13.27	159835	40882	68.3	71.2	7.42	4.99	11.92	13.62	240131	54097
33	Tripura	62.70	65.50	5.93	4.54	14.22	13.71	83113	19613	65.4	67.3	6.34	4.95	13.07	14.94	148134	20456
34	Uttar Pradesh	62.90	65.40	5.89	2.91	12.61	12.30	57388	12395	64.3	65.6	6.87	3.87	10.23	12.45	80400	14533
35	Uttarakhand	69.10	74.50	7.68	4.92	11.91	12.31	156645	68554	68	74.2	9.74	6.80	11.95	16.08	266909	56603
36	West Bengal	68.90	71.60	6.03	4.22	12.52	13.06	91817	19741	70.4	72.2	6.43	4.81	12.89	14.16	119287	21108
	All India	66.40	69.60	6.50	4.10	12.25	12.09	113308	27391	67.8	70.4	7.09	4.83	11.07	13.46	173917	36034

Note:
Expectation of Life at Birth:

- **Telangana:** Figure of Andhra Pradesh was applied.
- **Other North-East States:** Figure of Assam was used to all other North-Eastern States, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura
- **Chandigarh:** Average value of Punjab and Haryana was used to Chandigarh.
- **Puducherry:** Figure of Tamil Nadu was applied.
- **Goa:** Average value of Karnataka and Maharashtra were used for Goa.
- **UTs without Legislature:** All India average value was applied to Union Territories, Andaman & Nicobar Island, Dadra& Nagar Haveli, Daman & Diu and Lakshadweep.

Mean Years of Schooling (Population Age 25 years and above)

- **Telangana:** Figure of Andhra Pradesh was applied in 2011-12.

State-wise, Dimension-wise, Indicators used for Gender Inequality Index- 2011-12 and 2017-18

S. No.	States/UTs	2011-12							2017-18						
		Female Reproductive Health		Empowerment			Labour Market		Female Reproductive Health		Empowerment			Labour Market	
		Maternal mortality ratio (maternal deaths per 100,000 live births)	Adolescent fertility ratio (births per 1000 women ages 15-19)	Women's share of seats in Parliament (%)	Population with at least secondary education ages 25 and older(%)		Labour Force Participation Rate (%)		Maternal mortality ratio (maternal deaths per 100,000 live births)	Adolescent fertility ratio (births per 1000 women ages 15-19)	Women's share of seats in Parliament (%))	Population with at least secondary education ages 25 and older(%)		Labour Force Participation Rate(%)	
		2011-13	2011	2011-12	2011-12		2011-12		2016-18	2018	2018	2017-18		2017-18	
		F	F	F	F	M	F	M	F	F	F	F	M	F	M
1	A& N Islands	192.4	40.6	0.0	27.58	34.36	28.1	61.4	133.5	14.0	0.0	35.80	46.91	25.4	62.7
2	Andhra Pradesh	92.0	38.8	11.7	15.92	32.62	36.1	60.0	65.0	10.7	11.1	17.48	30.42	34.4	60.4
3	Arunachal Pradesh	300.0	45.8	0.0	19.71	31.01	25.6	48.8	215.0	23.6	0.0	19.75	34.11	10.7	50.7
4	Assam	300.0	45.8	14.3	16.10	27.40	12.6	56.5	215.0	23.6	14.3	25.21	39.65	9.8	59.3
5	Bihar	208.0	33.0	7.1	10.70	29.27	5.7	48.2	149.0	14.0	8.9	15.91	33.99	2.8	45.4
6	Chandigarh	134.0	13.7	0.0	50.18	53.63	12.9	57.8	110.0	5.0	100	63.32	79.24	19.1	59.3
7	Chhattisgarh	221.0	39.8	25.0	10.84	26.75	38.2	55.3	159.0	15.8	12.5	17.68	32.68	36.5	57.3
8	Dadra & Nagar Haveli	192.4	40.6	0.0	23.23	48.08	14.2	52.9	133.5	14.0	0.0	21.48	42.71	26.4	62
9	Daman & Diu	192.4	40.6	0.0	37.12	49.94	7.8	66.8	133.5	14.0	0.0	43.98	60.43	19.9	71.4
10	Delhi	206.0	9.2	10.0	53.36	66.81	11.1	54.8	144.0	3.2	10.0	50.18	68.39	11.2	57.3
11	Goa	100.5	32.2	0.0	48.18	58.79	19.3	55.6	69.0	8.9	0.0	53.95	62.74	24.7	57.4
12	Gujarat	112.0	23.4	16.2	21.29	33.20	22.2	60.4	75.0	10.9	16.2	26.33	41.65	15.4	58.8
13	Haryana	127.0	17.0	13.3	25.89	46.20	14.5	53.3	91.0	3.9	6.7	30.78	51.24	10.7	53.7
14	Himachal Pradesh	134.0	12.3	42.9	29.82	49.39	49.8	55.5	110.0	12.8	14.3	39.35	59.16	39.7	58.7
15	Jammu & Kashmir	192.4	5.7	0.0	17.82	34.55	23.6	56.0	133.5	3.6	10.0	24.04	39.24	22.9	57.4
16	Jharkhand	208.0	37.8	5.0	15.31	31.42	17.6	53.3	71.0	13.9	0.0	14.01	30.65	10.9	50.4
17	Karnataka	133.0	35.8	7.5	25.04	41.08	24.6	61.0	92.0	8.7	5.0	30.52	44.62	20.4	59.7
18	Kerala	61.0	20.3	3.4	34.47	36.01	24.8	57.9	43.0	11.8	3.4	50.23	49.63	21.3	53.9
19	Lakshadweep	192.4	40.6	0.0	23.04	40.76	17.8	59.0	133.5	14.0	0.0	39.24	57.56	14.6	53.5
20	Madhya Pradesh	221.0	32.5	22.5	14.83	28.07	20.8	55.6	173.0	17.5	15.0	15.20	30.68	23.4	58.8
21	Maharashtra	68.0	28.6	6.0	27.95	45.18	29.0	57.2	46.0	9.1	11.9	34.45	50.81	24.1	57.6
22	Manipur	300.0	45.8	0.0	34.59	55.38	25.2	51.2	215.0	23.6	0.0	46.45	64.73	17.7	53.7

S. No.	States/UTs	2011-12							2017-18						
		Female Reproductive Health		Empowerment			Labour Market		Female Reproductive Health		Empowerment			Labour Market	
		Maternal mortality ratio (maternal deaths per 100,000 live births)	Adolescent fertility ratio (births per 1000 women ages 15-19)	Women's share of seats in Parliament (%)	Population with at least secondary education ages 25 and older(%)		Labour Force Participation Rate (%)		Maternal mortality ratio (maternal deaths per 100,000 live births)	Adolescent fertility ratio (births per 1000 women ages 15-19)	Women's share of seats in Parliament (%))	Population with at least secondary education ages 25 and older(%)		Labour Force Participation Rate(%)	
		2011-13	2011	2011-12	2011-12		2011-12		2016-18	2018	2018	2017-18		2017-18	
		F	F	F	F	M	F	M	F	F	F	F	M	F	M
23	Meghalaya	300.0	45.8	33.3	24.83	32.27	35.3	52.7	215.0	23.6	33.3	24.11	29.91	34.9	49.7
24	Mizoram	300.0	45.8	0.0	22.52	29.92	33.6	55.5	215.0	23.6	0.0	31.64	40.83	23.4	56.7
25	Nagaland	300.0	45.8	0.0	37.61	51.88	32.1	56.1	215.0	23.6	0.0	41.96	47.80	13.1	51.7
26	Odisha	222.0	29.8	6.5	12.08	22.93	23.8	60.5	150.0	10.0	12.9	18.38	29.73	15	58
27	Puducherry	79.0	19.4	0.0	38.07	54.48	18.0	54.8	60.0	10.6	0.0	49.38	63.29	14	53.6
28	Punjab	141.0	10.4	25.0	30.71	41.84	20.3	58.1	129.0	6.0	10.0	41.04	49.75	12.3	59.2
29	Rajasthan	244.0	32.7	11.4	9.64	28.03	30.1	50.1	164.0	14.9	2.9	12.04	30.32	19.3	51.6
30	Sikkim	300.0	45.8	0.0	16.64	29.39	45.4	59.4	215.0	23.6	0.0	37.95	46.35	34.2	62.4
31	Tamil Nadu	79.0	19.4	7.0	24.97	37.40	30.8	60.4	60.0	10.6	12.3	31.20	43.46	27.2	61
32	Telangana	92.0	38.8	11.7	15.92	32.62	36.1	60.0	63.0	7.3	4.2	31.34	48.51	26.1	58.2
33	Tripura	300.0	45.8	33.3	11.99	19.74	28.2	59.8	215.0	23.6	33.3	14.52	22.39	10.1	60.1
34	Uttar Pradesh	285.0	26.1	12.6	13.90	30.28	16.3	50.4	197.0	7.8	15.3	19.58	37.43	9.4	51
35	Uttarakhand	285.0	26.1	12.5	23.75	38.49	26.3	47.9	99.0	7.3	12.5	37.13	59.47	13.7	52.3
36	West Bengal	113.0	55.4	12.1	16.33	26.97	19.2	61.0	98.0	36.1	25.9	20.14	29.69	16.4	61.3
	All India	167.0	30.7	11.2	19.39	33.92	22.5	55.6	113.0	13.0	12.2	24.96	39.60	17.5	55.5

Note:

Telangana: Figure of Andhra Pradesh was applied

Other North-East States: Figure of Assam was used to all other North-Eastern States, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura

Chandigarh: Average value of Punjab and Haryana was used to Chandigarh.

Puducherry: Figure of Tamil Nadu has been used.

Goa: Average value of Karnataka and Maharashtra were used to Goa.

UTs without Legislature: All India average value was applied to Union Territories, Andaman & Nicobar Island, Dadra& Nagar Haveli, Daman & Diu and Lakshadweep.

State-wise HDI Scores and Ranks for the Years 2011-12 and 2017-18

S. No.	States/UT	HDI Score 2017-18	HDI Score 2011-12	Difference in HDI Score	Rank based on Score difference	Rank HDI 2017-18	Rank HDI 2011-12	Difference in HDI Rank
1	2	3	4	5= 3-4	6	7	8	9=8-7
1	A & N Islands	0.707	0.697	0.009	35	14	9	-5
2	Andhra Pradesh	0.648	0.603	0.045	14	30	29	-1
3	Arunachal Pradesh	0.684	0.660	0.023	30	22	19	-3
4	Assam	0.651	0.579	0.072	3	28	34	6
5	Bihar	0.551	0.518	0.033	25	36	36	0
6	Chandigarh	0.827	0.768	0.059	5	2	3	1
7	Chhattisgarh	0.629	0.605	0.024	29	32	28	-4
8	Dadra & N. Haveli	0.662	0.639	0.023	31	27	24	-3
9	Daman & Diu	0.695	0.663	0.032	26	19	18	-1
10	Delhi	0.839	0.805	0.034	23	1	1	0
11	Goa	0.806	0.780	0.026	27	3	2	-1
12	Gujarat	0.698	0.652	0.046	12	18	22	4
13	Haryana	0.724	0.669	0.055	8	13	15	2
14	Himachal Pradesh	0.761	0.714	0.046	11	6	6	0
15	Jammu & Kashmir	0.663	0.630	0.033	24	26	26	0
16	Jharkhand	0.618	0.583	0.034	22	33	33	0
17	Karnataka	0.706	0.664	0.043	16	15	17	2
18	Kerala	0.775	0.725	0.050	10	4	5	1
19	Lakshadweep	0.687	0.675	0.012	34	20	13	-7
20	Madhya Pradesh	0.616	0.595	0.021	33	34	31	-3
21	Maharashtra	0.750	0.712	0.037	21	9	7	-2
22	Manipur	0.686	0.643	0.043	15	21	23	2
23	Meghalaya	0.704	0.664	0.040	17	17	16	-1
24	Mizoram	0.747	0.671	0.076	2	10	14	4
25	Nagaland	0.678	0.655	0.023	32	23	21	-2
26	Odisha	0.649	0.592	0.057	7	29	32	3
27	Puducherry	0.752	0.753	-0.001	36	8	4	-4
28	Punjab	0.738	0.680	0.058	6	12	12	0
29	Rajasthan	0.638	0.599	0.039	18	31	30	-1
30	Sikkim	0.764	0.686	0.078	1	5	11	6
31	Tamil Nadu	0.738	0.700	0.038	20	11	8	-3
32	Telangana	0.705	0.659	0.046	13	16	20	4
33	Tripura	0.667	0.616	0.051	9	25	27	2
34	Uttar Pradesh	0.592	0.567	0.026	28	35	35	0
35	Uttarakhand	0.758	0.691	0.067	4	7	10	3
36	West Bengal	0.674	0.635	0.039	19	24	25	1
	All India	0.672	0.635	0.037				

Dimension-wise HDI Scores for States/UTs – 2011-12 and 2017-18

S. No.	State/UTs	2011-12				2017-18			
		HI	EI	II	HDI	HI	EI	II	HDI
1	A & N Islands	0.737	0.619	0.744	0.697	0.754	0.577	0.811	0.707
2	Andhra Pradesh	0.746	0.427	0.689	0.603	0.765	0.464	0.767	0.648
3	Arunachal Pradesh	0.675	0.614	0.694	0.660	0.711	0.607	0.740	0.684
4	Assam	0.675	0.487	0.590	0.579	0.711	0.591	0.657	0.651
5	Bihar	0.740	0.404	0.465	0.518	0.752	0.438	0.507	0.551
6	Chandigarh	0.771	0.696	0.845	0.768	0.785	0.790	0.912	0.827
7	Chhattisgarh	0.689	0.498	0.646	0.605	0.695	0.522	0.687	0.629
8	Dadra & N. Haveli	0.737	0.523	0.675	0.639	0.754	0.521	0.739	0.662
9	Daman & Diu	0.737	0.585	0.675	0.663	0.754	0.602	0.739	0.695
10	Delhi	0.818	0.731	0.871	0.805	0.842	0.749	0.936	0.839
11	Goa	0.772	0.654	0.939	0.780	0.782	0.684	0.979	0.806
12	Gujarat	0.749	0.499	0.740	0.652	0.765	0.535	0.831	0.698
13	Haryana	0.748	0.521	0.767	0.669	0.765	0.585	0.847	0.724
14	Himachal Pradesh	0.794	0.613	0.748	0.714	0.809	0.665	0.818	0.761
15	Jammu & Kashmir	0.809	0.477	0.648	0.630	0.832	0.508	0.688	0.663
16	Jharkhand	0.717	0.470	0.589	0.583	0.748	0.498	0.634	0.618
17	Karnataka	0.751	0.529	0.736	0.664	0.757	0.564	0.826	0.706
18	Kerala	0.845	0.598	0.754	0.725	0.849	0.671	0.816	0.775
19	Lakshadweep	0.737	0.618	0.675	0.675	0.754	0.583	0.739	0.687
20	Madhya Pradesh	0.680	0.535	0.579	0.595	0.708	0.511	0.646	0.616
21	Maharashtra	0.794	0.598	0.762	0.712	0.808	0.631	0.827	0.750
22	Manipur	0.675	0.671	0.586	0.643	0.711	0.717	0.632	0.686
23	Meghalaya	0.675	0.656	0.661	0.664	0.711	0.742	0.660	0.704
24	Mizoram	0.675	0.679	0.658	0.671	0.711	0.757	0.775	0.747
25	Nagaland	0.675	0.646	0.646	0.655	0.711	0.632	0.695	0.678
26	Odisha	0.705	0.471	0.625	0.592	0.745	0.522	0.703	0.649
27	Puducherry	0.778	0.691	0.792	0.753	0.795	0.653	0.817	0.752
28	Punjab	0.794	0.542	0.729	0.680	0.806	0.640	0.779	0.738
29	Rajasthan	0.734	0.450	0.651	0.599	0.746	0.493	0.706	0.638
30	Sikkim	0.675	0.560	0.851	0.686	0.711	0.677	0.926	0.764
31	Tamil Nadu	0.778	0.591	0.745	0.700	0.795	0.621	0.815	0.738
32	Telangana	0.746	0.519	0.740	0.659	0.765	0.565	0.812	0.705
33	Tripura	0.675	0.563	0.615	0.616	0.711	0.589	0.709	0.667
34	Uttar Pradesh	0.678	0.492	0.545	0.567	0.692	0.498	0.603	0.592
35	Uttarakhand	0.795	0.543	0.762	0.691	0.785	0.666	0.832	0.758
36	West Bengal	0.772	0.526	0.631	0.635	0.788	0.576	0.675	0.674
	All India	**0.737**	**0.515**	**0.675**	**0.635**	**0.754**	**0.545**	**0.739**	**0.672**

Note: HI: Health Index; EI: Education Index; II: Income Index, HDI: Human Development Index

State-wise GDI Scores and Ranks for the Years - 2017-18 and 2011-12

S. No.	States/UTs	GDI Score 2017-18	GDI Score 2011-12	Difference in GDI Score	Rank based on Score difference	Rank GDI 2017-18	Rank GDI 2011-12	Difference in Rank
1	2	3	4	5=3-4	6	7	8	9=8-7
1	A & N Islands	0.971	0.912	0.059	22	7	3	-4
2	Andhra Pradesh	0.909	0.815	0.094	10	18	24	6
3	Arunachal Pradesh	0.842	0.865	-0.023	36	29	13	-16
4	Assam	0.765	0.720	0.045	27	34	35	1
5	Bihar	0.550	0.422	0.127	2	36	36	0
6	Chandigarh	0.984	0.905	0.079	15	3	4	1
7	Chhattisgarh	0.873	0.819	0.054	25	28	21	-7
8	Dadra & N. Haveli	0.903	0.798	0.105	6	20	27	7
9	Daman & Diu	0.936	0.732	0.204	1	12	34	22
10	Delhi	0.939	0.868	0.071	20	11	12	1
11	Goa	0.994	0.898	0.096	9	1	6	5
12	Gujarat	0.908	0.822	0.086	13	19	20	1
13	Haryana	0.917	0.841	0.075	17	16	15	-1
14	Himachal Pradesh	0.990	0.904	0.086	14	2	5	3
15	Jammu & Kashmir	0.945	0.830	0.115	4	10	18	8
16	Jharkhand	0.747	0.745	0.002	35	35	32	-3
17	Karnataka	0.896	0.828	0.068	21	22	19	-3
18	Kerala	0.963	0.891	0.072	18	8	7	-1
19	Lakshadweep	0.927	0.816	0.111	5	13	23	10
20	Madhya Pradesh	0.889	0.764	0.124	3	26	30	4
21	Maharashtra	0.923	0.836	0.087	12	15	16	1
22	Manipur	0.889	0.791	0.098	8	25	29	4
23	Meghalaya	0.972	0.927	0.045	28	6	2	-4
24	Mizoram	0.977	0.885	0.092	11	5	9	4
25	Nagaland	0.895	0.877	0.018	34	24	10	-14
26	Odisha	0.796	0.763	0.033	31	33	31	-2
27	Puducherry	0.896	0.818	0.077	16	23	22	-1
28	Punjab	0.947	0.875	0.072	19	9	11	2
29	Rajasthan	0.901	0.797	0.104	7	21	28	7
30	Sikkim	0.982	0.944	0.037	29	4	1	-3
31	Tamil Nadu	0.911	0.853	0.058	23	17	14	-3
32	Telangana	0.883	0.833	0.050	26	27	17	-10
33	Tripura	0.828	0.806	0.023	33	31	26	-5
34	Uttar Pradesh	0.800	0.744	0.056	24	32	33	1
35	Uttarakhand	0.925	0.890	0.035	30	14	8	-6
36	West Bengal	0.833	0.806	0.026	32	30	25	-5
	All India	0.876	0.809	0.067				

Dimension-wise GDI scores for States/UTs - 2017-18 and 2011-12

Sl. No.	Year/States	2011-12									2017-18								
		HI		EI		II		HDI	HDI	GDI	HI		EI		II		HDI	HDI	GDI
		M	F	M	F	M	F	M	F		M	F	M	F	M	F	M	F	
1	A & N Islands	0.752	0.725	0.633	0.604	0.797	0.658	0.724	0.660	0.912	0.735	0.775	0.566	0.578	0.861	0.733	0.710	0.690	0.971
2	Andhra Pradesh	0.751	0.743	0.470	0.385	0.777	0.518	0.650	0.529	0.815	0.743	0.788	0.472	0.451	0.846	0.628	0.667	0.606	0.909
3	Arunachal Pradesh	0.695	0.662	0.654	0.569	0.756	0.591	0.701	0.606	0.865	0.698	0.728	0.594	0.584	0.839	0.490	0.704	0.592	0.842
4	Assam	0.695	0.662	0.510	0.463	0.696	0.301	0.627	0.452	0.720	0.698	0.728	0.587	0.567	0.766	0.341	0.680	0.520	0.765
5	Bihar	0.774	0.706	0.459	0.346	0.577	0.063	0.590	0.249	0.422	0.757	0.748	0.461	0.406	0.619	0.118	0.600	0.330	0.550
6	Chandigarh	0.777	0.770	0.698	0.694	0.917	0.689	0.792	0.717	0.905	0.758	0.818	0.729	0.854	0.987	0.745	0.817	0.804	0.984
7	Chhattisgarh	0.705	0.674	0.549	0.448	0.724	0.509	0.654	0.536	0.819	0.674	0.717	0.545	0.488	0.769	0.536	0.656	0.572	0.873
8	Dadra & N. Haveli	0.752	0.725	0.576	0.458	0.748	0.495	0.687	0.548	0.798	0.735	0.775	0.513	0.505	0.805	0.570	0.672	0.607	0.903
9	Daman & Diu	0.752	0.725	0.601	0.548	0.752	0.335	0.698	0.511	0.732	0.735	0.775	0.577	0.631	0.788	0.561	0.694	0.650	0.936
10	Delhi	0.838	0.803	0.757	0.701	0.950	0.700	0.845	0.733	0.868	0.820	0.866	0.720	0.768	1.000	0.734	0.839	0.788	0.939
11	Goa	0.783	0.765	0.682	0.630	1.000	0.804	0.811	0.729	0.898	0.761	0.805	0.663	0.695	1.000	0.885	0.796	0.791	0.994
12	Gujarat	0.755	0.746	0.539	0.454	0.827	0.552	0.696	0.572	0.822	0.732	0.800	0.522	0.543	0.923	0.609	0.707	0.642	0.908
13	Haryana	0.751	0.751	0.557	0.485	0.850	0.580	0.708	0.596	0.841	0.732	0.805	0.562	0.610	0.940	0.607	0.729	0.668	0.917
14	Himachal Pradesh	0.797	0.794	0.656	0.576	0.800	0.675	0.748	0.676	0.904	0.766	0.855	0.649	0.675	0.876	0.730	0.758	0.750	0.990
15	Jammu & Kashmir	0.822	0.806	0.524	0.427	0.718	0.514	0.676	0.561	0.830	0.802	0.872	0.499	0.499	0.750	0.582	0.669	0.632	0.945
16	Jharkhand	0.749	0.683	0.510	0.429	0.684	0.369	0.639	0.476	0.745	0.751	0.745	0.506	0.471	0.740	0.334	0.655	0.489	0.747
17	Karnataka	0.760	0.743	0.570	0.489	0.824	0.558	0.709	0.587	0.828	0.734	0.782	0.564	0.552	0.917	0.633	0.724	0.649	0.896
18	Kerala	0.838	0.851	0.604	0.594	0.844	0.598	0.753	0.671	0.891	0.808	0.889	0.646	0.685	0.897	0.686	0.777	0.748	0.963
19	Lakshadweep	0.752	0.725	0.695	0.632	0.769	0.477	0.738	0.603	0.816	0.735	0.775	0.633	0.602	0.803	0.638	0.720	0.668	0.927
20	Madhya Pradesh	0.692	0.669	0.581	0.486	0.671	0.370	0.646	0.494	0.764	0.680	0.737	0.510	0.496	0.727	0.484	0.632	0.561	0.889
21	Maharashtra	0.806	0.786	0.643	0.552	0.845	0.591	0.760	0.635	0.836	0.788	0.829	0.612	0.640	0.911	0.650	0.760	0.701	0.923

Sl. No.	Year/States	2011-12												2017-18								
		HI		EI		II		HDI	HDI	GDI	HI		EI		II		HDI	HDI	GDI			
		M	F	M	F	M	F	M	F		M	F	M	F	M	F	M	F				
22	Manipur	0.695	0.662	0.708	0.636	0.679	0.392	0.694	0.549	0.791	0.698	0.728	0.703	0.700	0.713	0.484	0.705	0.627	0.889
23	Meghalaya	0.695	0.662	0.658	0.655	0.709	0.596	0.687	0.637	0.927	0.698	0.728	0.702	0.742	0.710	0.591	0.703	0.683	0.972
24	Mizoram	0.695	0.662	0.706	0.649	0.717	0.569	0.706	0.625	0.885	0.698	0.728	0.703	0.756	0.831	0.692	0.742	0.725	0.977
25	Nagaland	0.695	0.662	0.672	0.618	0.707	0.545	0.691	0.606	0.877	0.698	0.728	0.592	0.631	0.783	0.505	0.687	0.614	0.895
26	Odisha	0.726	0.686	0.512	0.430	0.722	0.406	0.645	0.493	0.763	0.725	0.768	0.519	0.508	0.817	0.398	0.675	0.537	0.796
27	Puducherry	0.786	0.772	0.721	0.634	0.895	0.567	0.797	0.652	0.818	0.768	0.826	0.647	0.650	0.918	0.611	0.770	0.690	0.896
28	Punjab	0.803	0.789	0.563	0.521	0.802	0.590	0.713	0.624	0.875	0.785	0.831	0.581	0.697	0.866	0.579	0.734	0.695	0.947
29	Rajasthan	0.738	0.734	0.523	0.376	0.725	0.513	0.654	0.521	0.797	0.712	0.783	0.497	0.484	0.788	0.539	0.654	0.589	0.901
30	Sikkim	0.695	0.662	0.573	0.541	0.875	0.820	0.704	0.665	0.944	0.698	0.728	0.652	0.672	0.972	0.856	0.762	0.748	0.982
31	Tamil Nadu	0.786	0.772	0.622	0.562	0.832	0.580	0.741	0.632	0.853	0.768	0.826	0.618	0.612	0.903	0.641	0.754	0.687	0.911
32	Telangana	0.751	0.743	0.563	0.477	0.827	0.570	0.704	0.587	0.833	0.743	0.788	0.578	0.545	0.904	0.622	0.730	0.644	0.883
33	Tripura	0.695	0.662	0.593	0.532	0.703	0.431	0.662	0.533	0.806	0.698	0.728	0.575	0.580	0.813	0.439	0.688	0.570	0.828
34	Uttar Pradesh	0.698	0.660	0.547	0.439	0.634	0.344	0.623	0.464	0.744	0.682	0.702	0.513	0.475	0.697	0.374	0.625	0.500	0.800
35	Uttarakhand	0.794	0.800	0.587	0.506	0.823	0.667	0.727	0.646	0.890	0.738	0.834	0.657	0.673	0.924	0.631	0.765	0.708	0.925
36	West Bengal	0.791	0.755	0.549	0.503	0.722	0.432	0.679	0.548	0.806	0.775	0.803	0.572	0.554	0.772	0.445	0.700	0.583	0.833
	All India	0.752	0.725	0.557	0.473	0.762	0.494	0.683	0.553	0.809	0.735	0.775	0.544	0.535	0.843	0.546	0.696	0.609	0.876

Note: M: Male, F: Female, HI: Health Index, EI: Education Index, II: Income Index, HDI: Human Development Index, GDI: Gender Development Index

State-wise GII Scores and Ranks for the Years – 2011-12 and 2017-18

S. No.	States/UT	GII Score 2017-18	GII Score 2011-12	GII Score Difference	Rank based on Score difference	Rank GII 2017-18	Rank GII 2011-12	Difference in GII Rank
1	2	3	4	5= 3-4	6	7	8	9=8-7
1	A & N Islands	0.704	0.752	-0.047	17	27	28	1
2	Andhra Pradesh	0.361	0.479	-0.118	33	3	6	3
3	Arunachal Pradesh	0.789	0.774	0.016	6	36	32	-4
4	Assam	0.598	0.628	-0.030	12	23	22	-1
5	Bihar	0.682	0.698	-0.016	8	25	24	-1
6	Chandigarh	0.413	0.733	-0.320	35	7	27	20
7	Chhattisgarh	0.440	0.492	-0.052	19	12	10	-2
8	Dadra & N. Haveli	0.719	0.796	-0.077	25	28	35	7
9	Daman & Diu	0.730	0.825	-0.095	31	30	36	6
10	Delhi	0.444	0.526	-0.082	27	13	15	2
11	Goa	0.646	0.733	-0.087	29	24	26	2
12	Gujarat	0.425	0.468	-0.043	16	10	4	-6
13	Haryana	0.462	0.504	-0.042	15	14	11	-3
14	Himachal Pradesh	0.373	0.296	0.077	2	4	1	-3
15	Jammu & Kashmir	0.374	0.697	-0.323	36	5	23	18
16	Jharkhand	0.741	0.624	0.117	1	32	21	-11
17	Karnataka	0.464	0.546	-0.081	26	16	16	0
18	Kerala	0.418	0.474	-0.055	20	9	5	-4
19	Lakshadweep	0.734	0.785	-0.051	18	31	34	3
20	Madhya Pradesh	0.488	0.523	-0.035	13	18	14	-4
21	Maharashtra	0.340	0.480	-0.140	34	1	9	8
22	Manipur	0.758	0.777	-0.020	10	34	33	-1
23	Meghalaya	0.403	0.480	-0.076	24	6	8	2
24	Mizoram	0.742	0.761	-0.019	9	33	29	-4
25	Nagaland	0.765	0.765	0.000	7	35	31	-4
26	Odisha	0.483	0.583	-0.100	32	17	20	3
27	Puducherry	0.688	0.713	-0.025	11	26	25	-1
28	Punjab	0.464	0.398	0.066	3	15	2	-13
29	Rajasthan	0.589	0.551	0.038	4	22	17	-5
30	Sikkim	0.725	0.762	-0.037	14	29	30	1
31	Tamil Nadu	0.358	0.449	-0.091	30	2	3	1
32	Telangana	0.415	0.479	-0.064	22	8	6	-2
33	Tripura	0.551	0.516	0.035	5	21	12	-9
34	Uttar Pradesh	0.520	0.577	-0.057	21	20	19	-1
35	Uttarakhand	0.434	0.519	-0.085	28	11	13	2
36	West Bengal	0.491	0.559	-0.068	23	19	18	-1
	All India	0.462	0.531	-0.069				

Dimension-wise GII Scores for States/UTs – 2011-12 and 2017-18

States/UTs	GII 2011-12						GII 2017-18					
	RHI	EI		LMI		GII	RHI	EI		LMI		GII
	Female	Female	Male	Female	Male		Female	Female	Male	Female	Male	
A & N Islands	0.036	0.017	0.586	0.281	0.614	0.752	0.073	0.019	0.685	0.254	0.627	0.704
Andhra Pradesh	0.053	0.136	0.537	0.361	0.600	0.479	0.120	0.139	0.520	0.344	0.604	0.361
Arunachal Pradesh	0.027	0.014	0.557	0.256	0.488	0.774	0.044	0.014	0.584	0.107	0.507	0.789
Assam	0.027	0.152	0.485	0.126	0.565	0.628	0.044	0.190	0.583	0.098	0.593	0.598
Bihar	0.038	0.087	0.521	0.057	0.482	0.698	0.069	0.119	0.556	0.028	0.454	0.682
Chandigarh	0.074	0.022	0.732	0.129	0.578	0.733	0.136	0.795	0.028	0.191	0.593	0.413
Chhattisgarh	0.034	0.165	0.448	0.382	0.553	0.492	0.063	0.149	0.535	0.365	0.573	0.440
Dadra & Nagar Haveli	0.036	0.015	0.693	0.142	0.529	0.796	0.073	0.015	0.653	0.264	0.620	0.719
Daman & Diu	0.036	0.019	0.706	0.078	0.668	0.825	0.073	0.021	0.777	0.199	0.714	0.730
Delhi	0.073	0.231	0.775	0.111	0.548	0.526	0.147	0.224	0.785	0.112	0.573	0.444
Goa	0.056	0.022	0.766	0.193	0.556	0.733	0.128	0.023	0.792	0.247	0.574	0.646
Gujarat	0.062	0.186	0.527	0.222	0.604	0.468	0.111	0.207	0.591	0.154	0.588	0.425
Haryana	0.068	0.186	0.633	0.145	0.533	0.504	0.168	0.143	0.692	0.107	0.537	0.462
Himachal Pradesh	0.078	0.357	0.531	0.498	0.555	0.296	0.084	0.237	0.712	0.397	0.587	0.373
Jammu & Kashmir	0.095	0.013	0.587	0.236	0.560	0.697	0.144	0.155	0.594	0.229	0.574	0.374
Jharkhand	0.036	0.088	0.546	0.176	0.533	0.624	0.101	0.012	0.553	0.109	0.504	0.741
Karnataka	0.046	0.137	0.616	0.246	0.610	0.546	0.112	0.124	0.651	0.204	0.597	0.464
Kerala	0.090	0.109	0.590	0.248	0.579	0.474	0.140	0.132	0.692	0.213	0.539	0.418
Lakshadweep	0.036	0.015	0.638	0.178	0.590	0.785	0.073	0.020	0.758	0.146	0.535	0.734
Madhya Pradesh	0.037	0.183	0.466	0.208	0.556	0.523	0.057	0.151	0.511	0.234	0.588	0.488
Maharashtra	0.072	0.129	0.652	0.290	0.572	0.480	0.155	0.203	0.669	0.241	0.576	0.340
Manipur	0.027	0.019	0.744	0.252	0.512	0.777	0.044	0.022	0.804	0.177	0.537	0.758
Meghalaya	0.027	0.288	0.464	0.353	0.527	0.480	0.044	0.283	0.447	0.349	0.497	0.403
Mizoram	0.027	0.015	0.547	0.336	0.555	0.761	0.044	0.018	0.639	0.234	0.567	0.742
Nagaland	0.027	0.019	0.720	0.321	0.561	0.765	0.044	0.020	0.691	0.131	0.517	0.765
Odisha	0.039	0.088	0.463	0.238	0.605	0.583	0.082	0.154	0.509	0.150	0.580	0.483
Puducherry	0.081	0.020	0.738	0.180	0.548	0.713	0.125	0.022	0.795	0.140	0.536	0.688
Punjab	0.083	0.277	0.560	0.203	0.581	0.398	0.114	0.203	0.669	0.123	0.592	0.464
Rajasthan	0.035	0.105	0.498	0.301	0.501	0.551	0.064	0.059	0.543	0.193	0.516	0.589
Sikkim	0.027	0.013	0.542	0.454	0.594	0.762	0.044	0.019	0.680	0.342	0.624	0.725
Tamil Nadu	0.081	0.132	0.590	0.308	0.604	0.449	0.125	0.196	0.617	0.272	0.610	0.358
Telangana	0.053	0.136	0.537	0.361	0.600	0.479	0.147	0.114	0.682	0.261	0.582	0.415
Tripura	0.027	0.200	0.363	0.282	0.598	0.516	0.044	0.220	0.386	0.101	0.601	0.551
Uttar Pradesh	0.037	0.132	0.514	0.163	0.504	0.577	0.081	0.173	0.563	0.094	0.510	0.520
Uttarakhand	0.037	0.172	0.580	0.263	0.479	0.519	0.118	0.215	0.721	0.137	0.523	0.434
West Bengal	0.040	0.140	0.487	0.192	0.610	0.559	0.053	0.228	0.469	0.164	0.613	0.491
India	0.044	0.147	0.549	0.225	0.556	0.531	0.083	0.174	0.590	0.175	0.555	0.462

Note: RHI: Reproductive Health Index, EI: Empowerment Index, LMI: Labour Market Index, GII Gender Inequality Index

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