

# Development & Behavioural Economics

Prof Amir Ullah Khan





## Table of Contents

1. Understanding Development and Behavioural Economics in the Indian Context
2. India's Development Challenges
  - Economy
  - Health
  - Education
  - Labour and Workforce
  - Gender

# Learning Objectives/ Session Plan



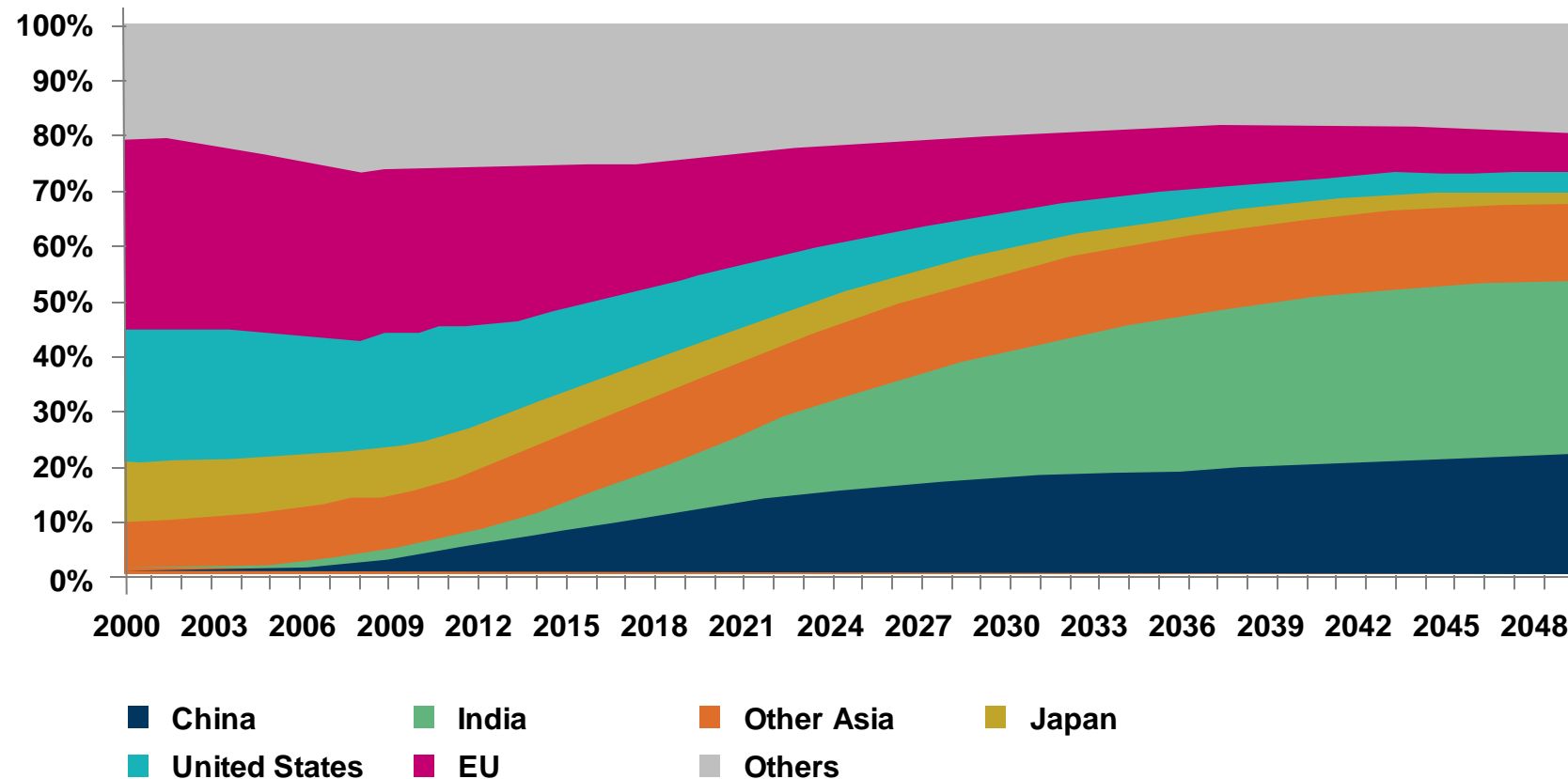
- *To understand the landscape of the Indian Economy and its challenges today.*

# STATE OF THE INDIAN ECONOMY

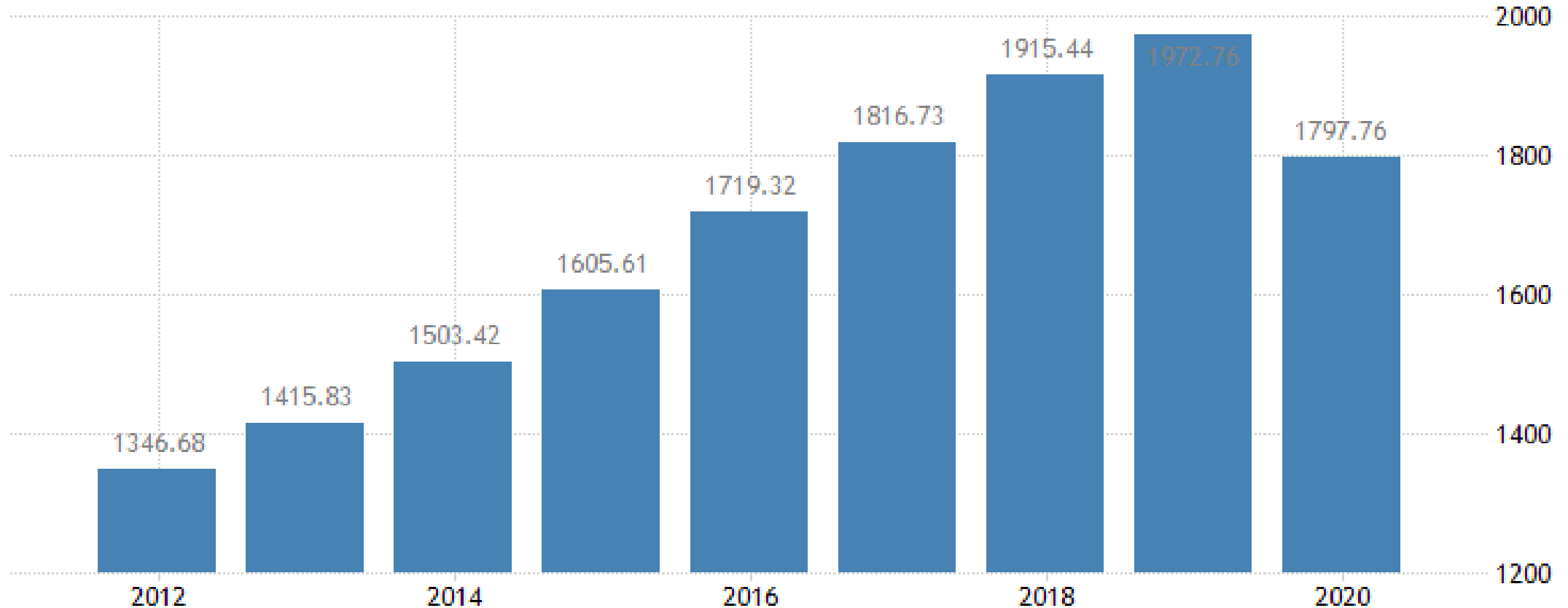
# Why is India important?

Middle Class market - Brookings' projection

Shares of Global Middle Class Consumption, 2000-2050



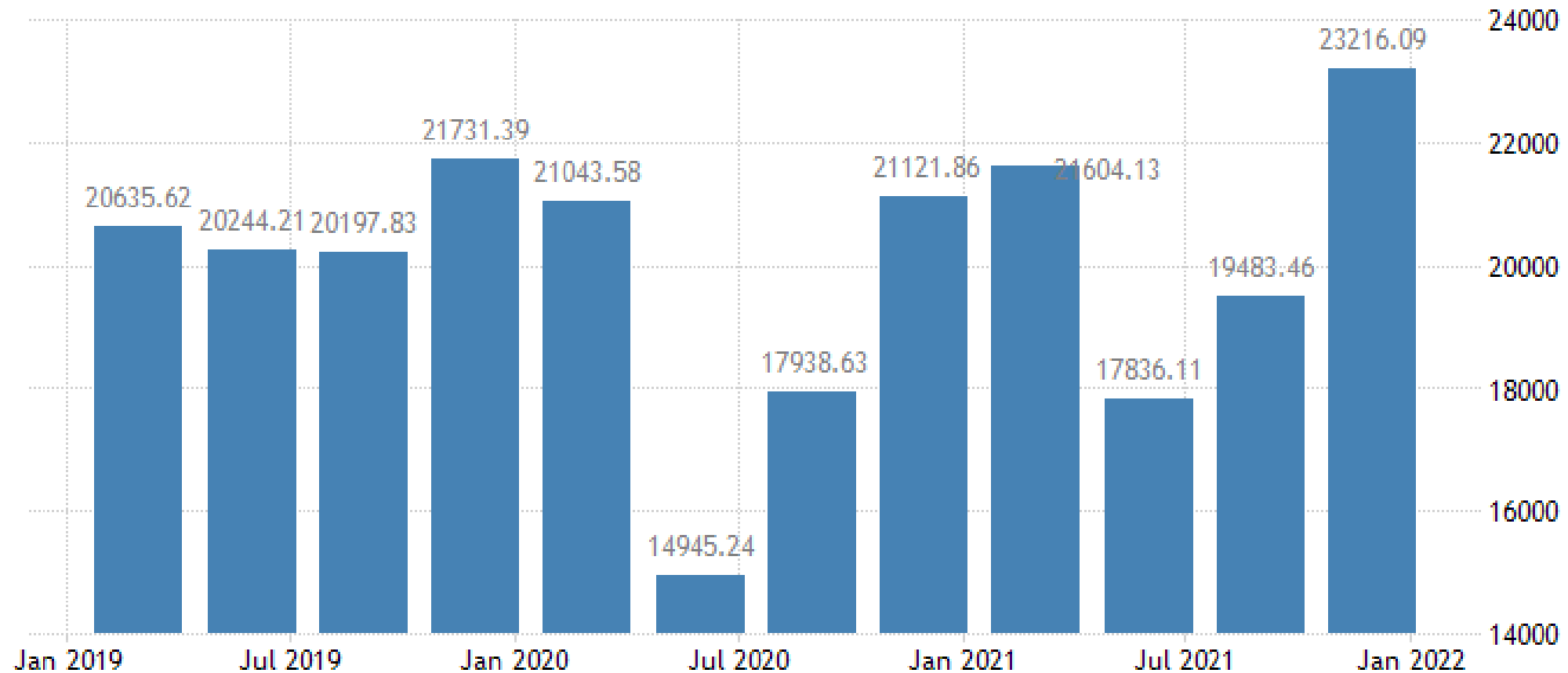
# India's Per Capita Income ( in USD)



TRADINGECONOMICS.COM | WORLD BANK

Source: Ministry of Statistics and Programme Implementation (MOSPI)

# Consumer Spending in India (INR Billion)



TRADINGECONOMICS.COM | MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION (MOSPI)

Source: Ministry of Statistics and Programme Implementation (MOSPI)

# Middle Income Trap hypothesis Explored

Current growth driven by 100 million people in upper and middle class

Phenomenal growth in Automobile, mobile and other items of upper and middle class consumption

Plateau in the demand of this class

Sluggish growth in the base of middle class

Car industry accounting for 7 % of GDP more than housing of 5 %

Real estate producing vacant houses with 11 million vacant houses in urban areas



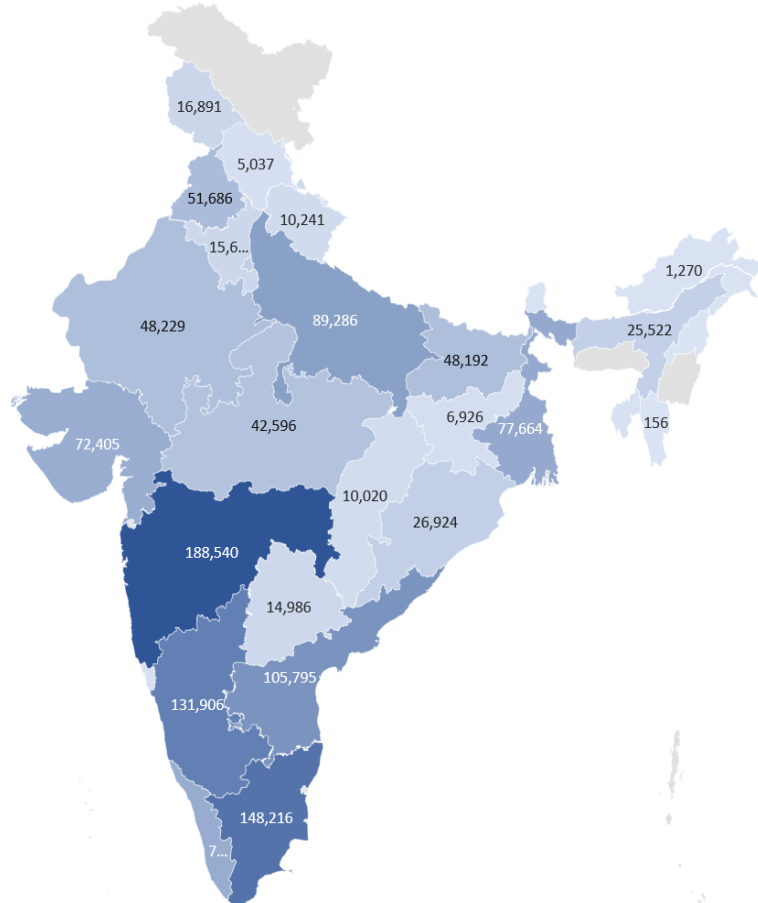
**01**

**HEALTH IN INDIA**

---

# Human Resources in Health Sector

Total Number of Doctors with Recognised Medical Qualifications, by State



Highest State: Maharashtra 188,540) Lowest State: Nagaland (141)

Source: National Health Profile 2022, Central Bureau of Health Intelligence

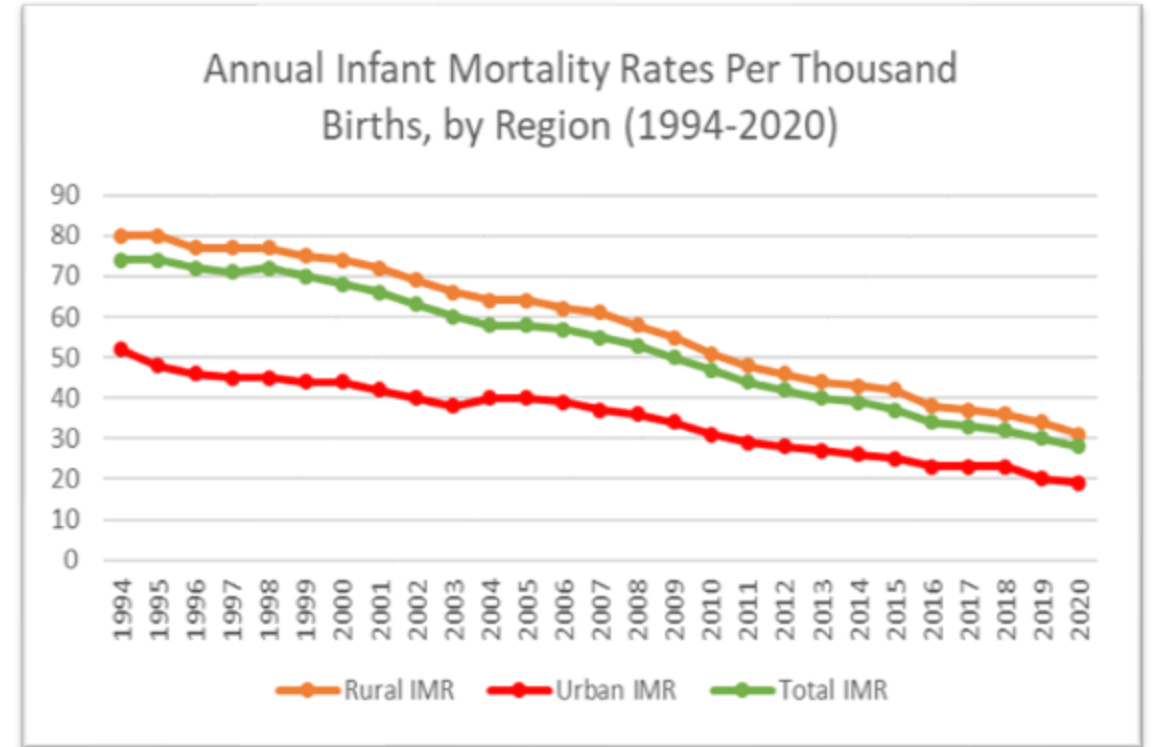
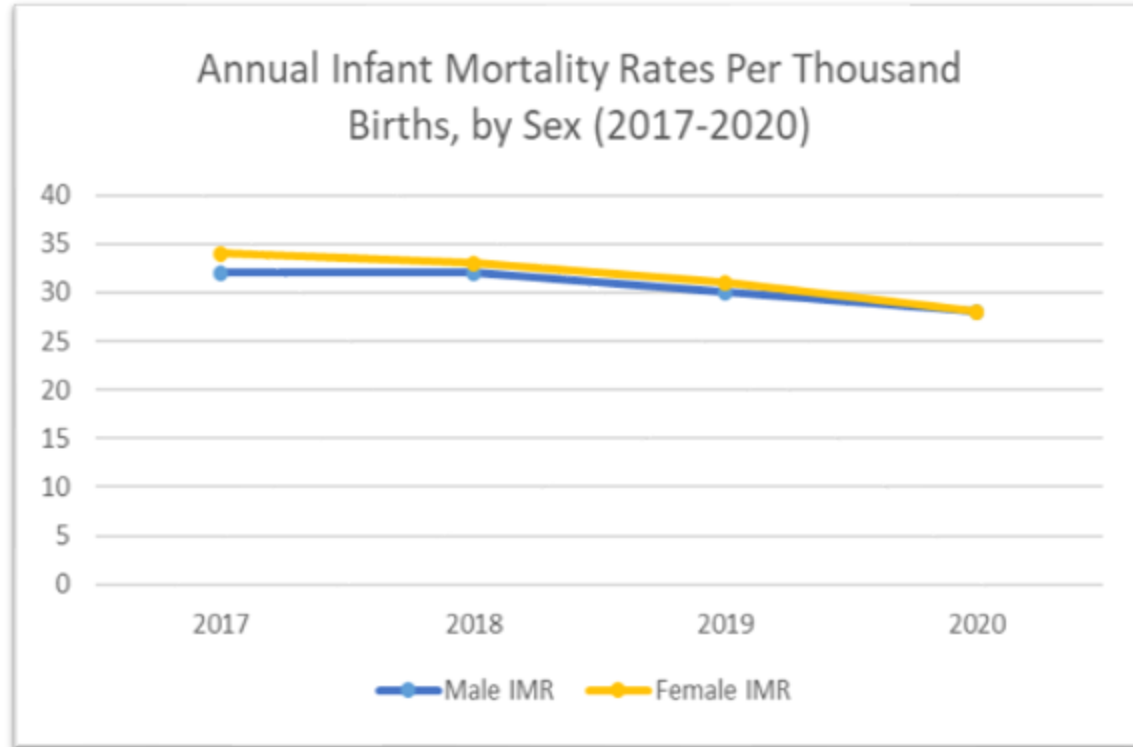
According to the Minister of State for Health and Family Welfare, the doctor-patient ratio in India as of December 2022 is 1:834, which is far better than the WHO-recommended ratio of 1:1000.

This shows a marked improvement over the years, since the ratio in 2018 was 1:11,000.

However, there is still a dire shortage of trained nurses in the country, with a nurse-population ratio of 1:670, against the WHO recommendation of 1:300.

The total number of doctors in the country registered under the National Medical Commission and State Medical Councils is 13,08,009

# Infant Mortality Rates



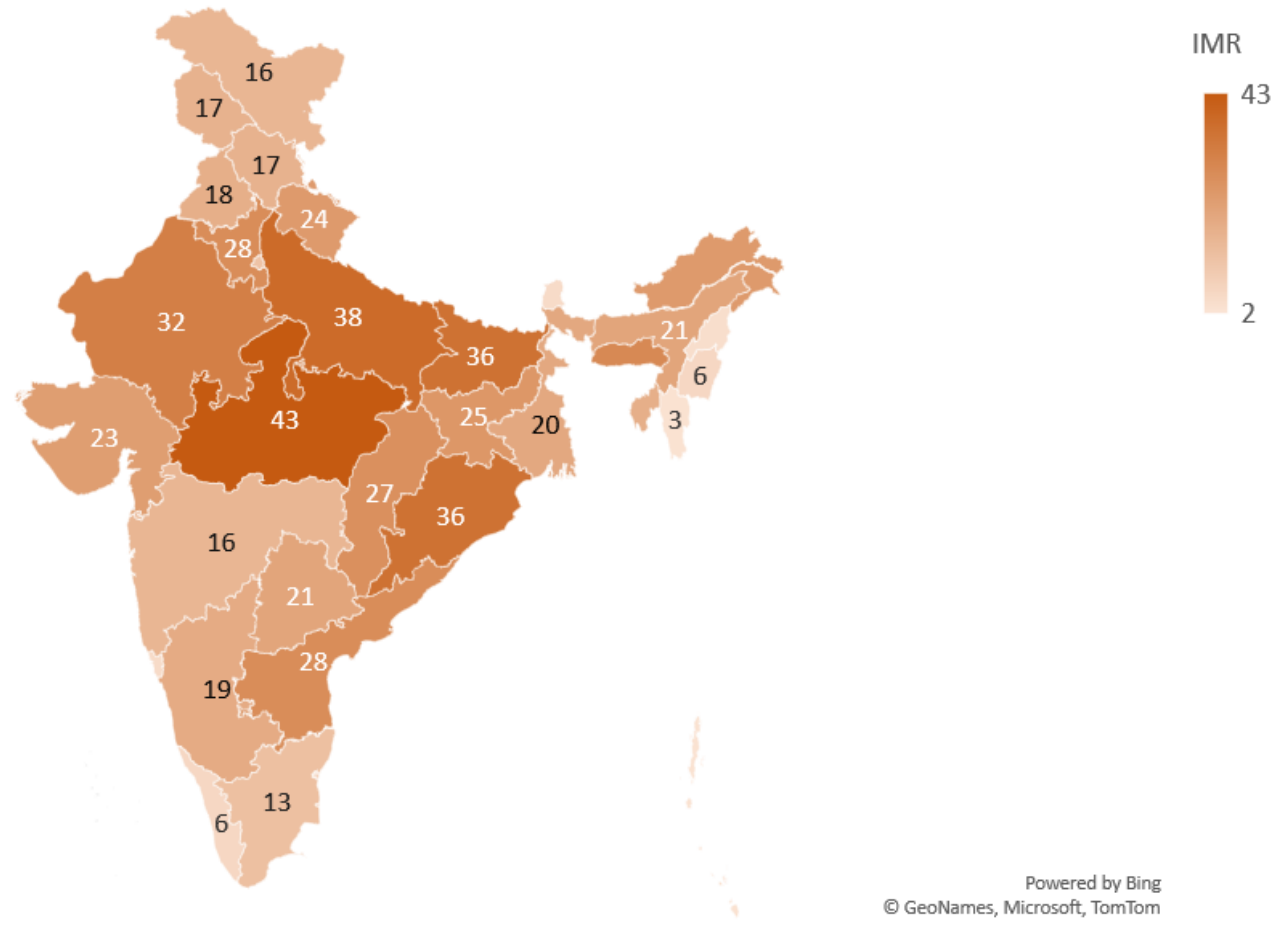
As of 2023, the Infant Mortality Rate in India is 26.6 (per 1000 live births).

While the Infant Mortality Rate has been steadily decreasing over the years, differences persist across sex and region.

*Source: National Health Profile 2022, Central Bureau of Health Intelligence*

# Infant Mortality Rates

Infant Mortality Rates by State, 2020

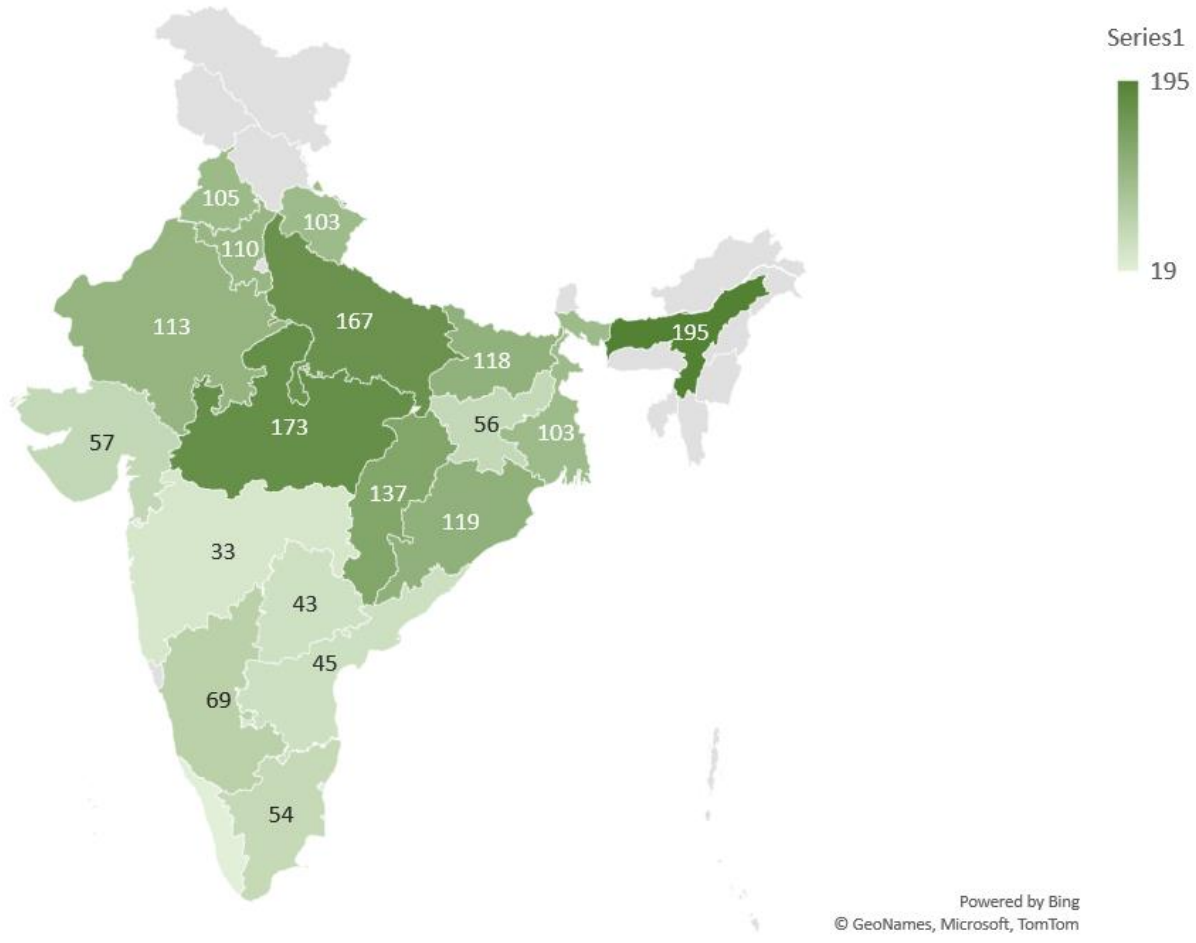


Highest State: Madhya Pradesh (43)  
Lowest State: Mizoram (3)

# Maternal Mortality Rates

The Maternal Mortality Rate for India is 97 per 1000 live births, as of 2018-20.

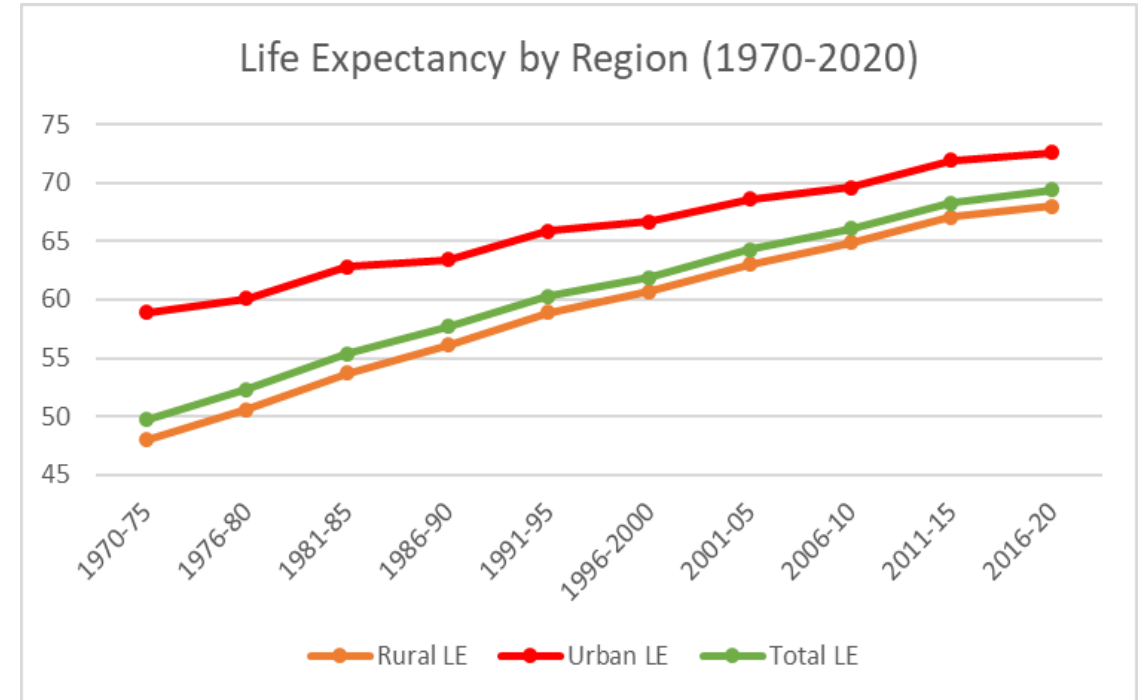
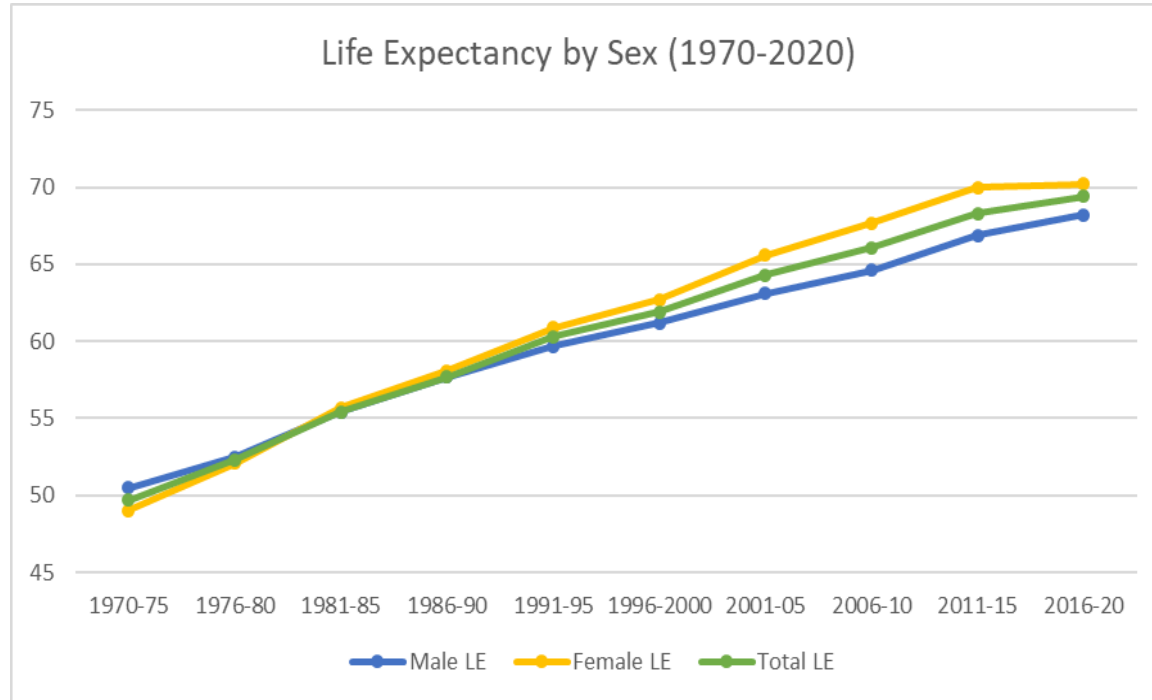
Maternal Mortality Rates Per Thousand Births, by State (2018-20)



**Highest State:  
Assam (195)**  
**Lowest State: Kerala  
(19)**

*Source: National Health Profile 2022, Central Bureau of Health Intelligence*

# Life Expectancy



**As of 2023, the Life Expectancy in India is 70.42 years.**

**Differences are observed across sex and region in life expectancy as well.**

*Source: National Health Profile 2022, Central Bureau of Health Intelligence*

**02**

# **EDUCATION SECTOR OF INDIA**

---

# Spending On Education Down Since 2014

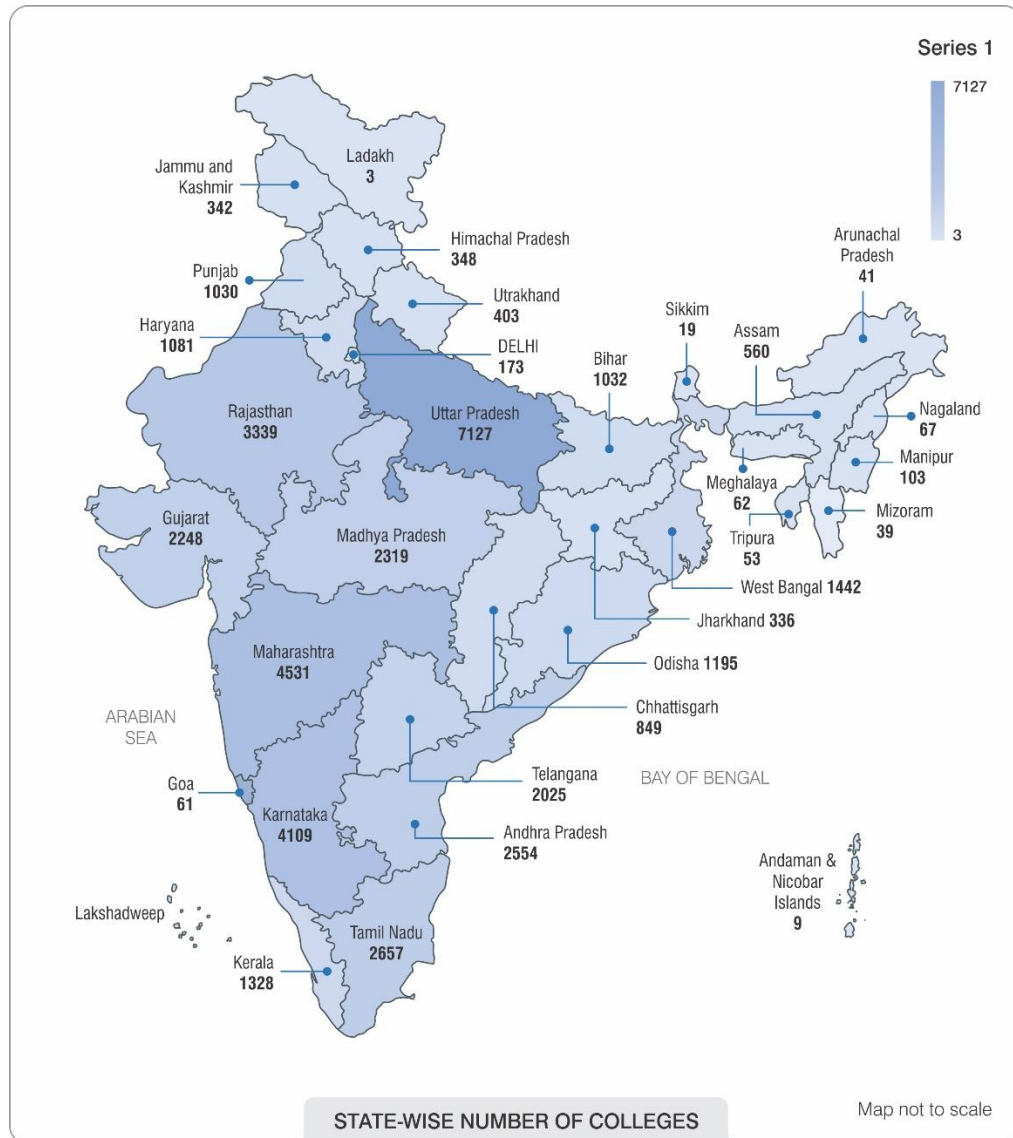


\*Revised Estimates

\*\*Budget Estimates



# State-wise Number of Colleges in Higher Education



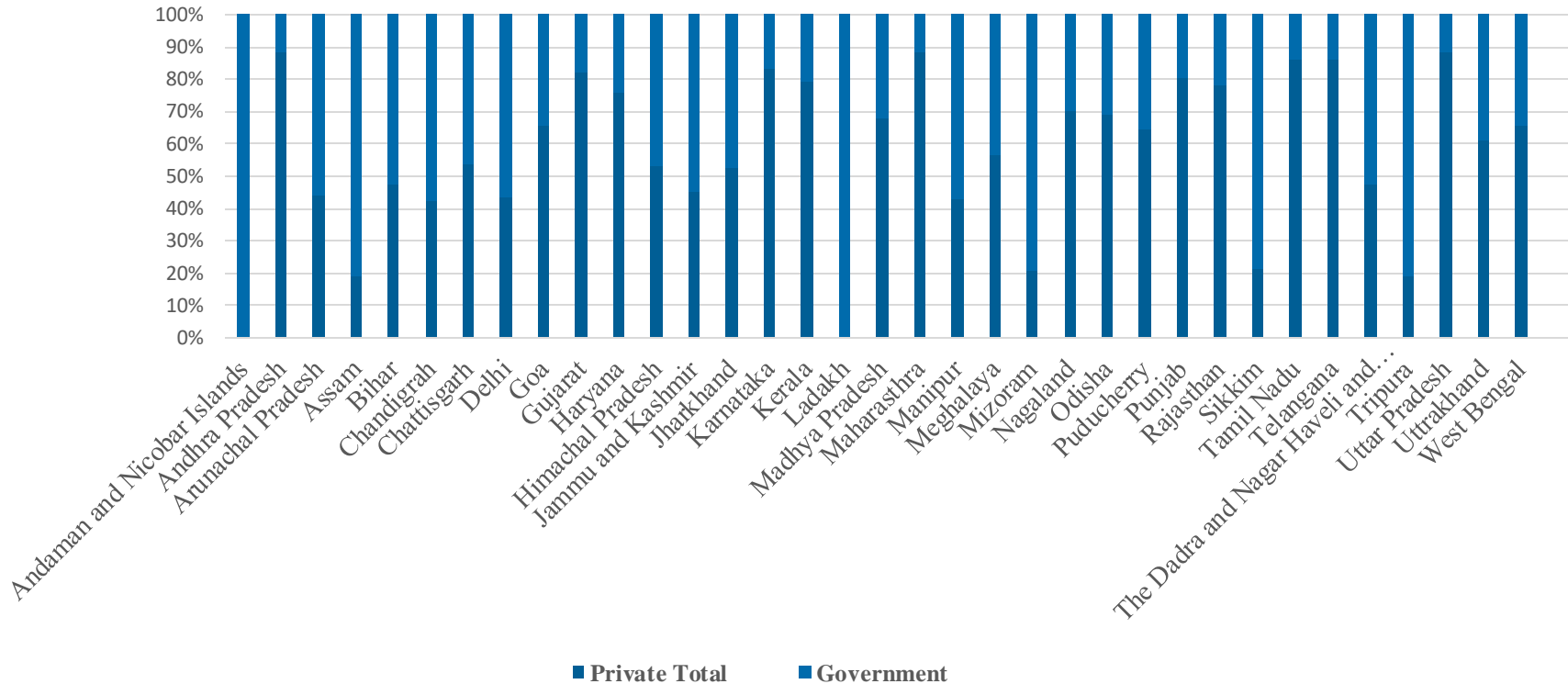
The All India Survey of Higher Education report (2020-21) reports the following data:

Uttar Pradesh, Maharashtra, Karnataka, Rajasthan, Tamil Nadu, Madhya Pradesh, Andhra Pradesh, Gujarat, Telangana and Kerala are top 10 States in terms of number of colleges.

Highest Number of Colleges:  
Source: AISHE (2020-21)  
Uttar Pradesh

# State-Wise Percentage Share of Government and Private Colleges

State-Wise Percentage Share of Private and Government Colleges



Highest No. of Private colleges:  
Uttar Pradesh (6315)

Lowest No. of Private colleges:  
Andaman Nicobar/Ladakh (0)

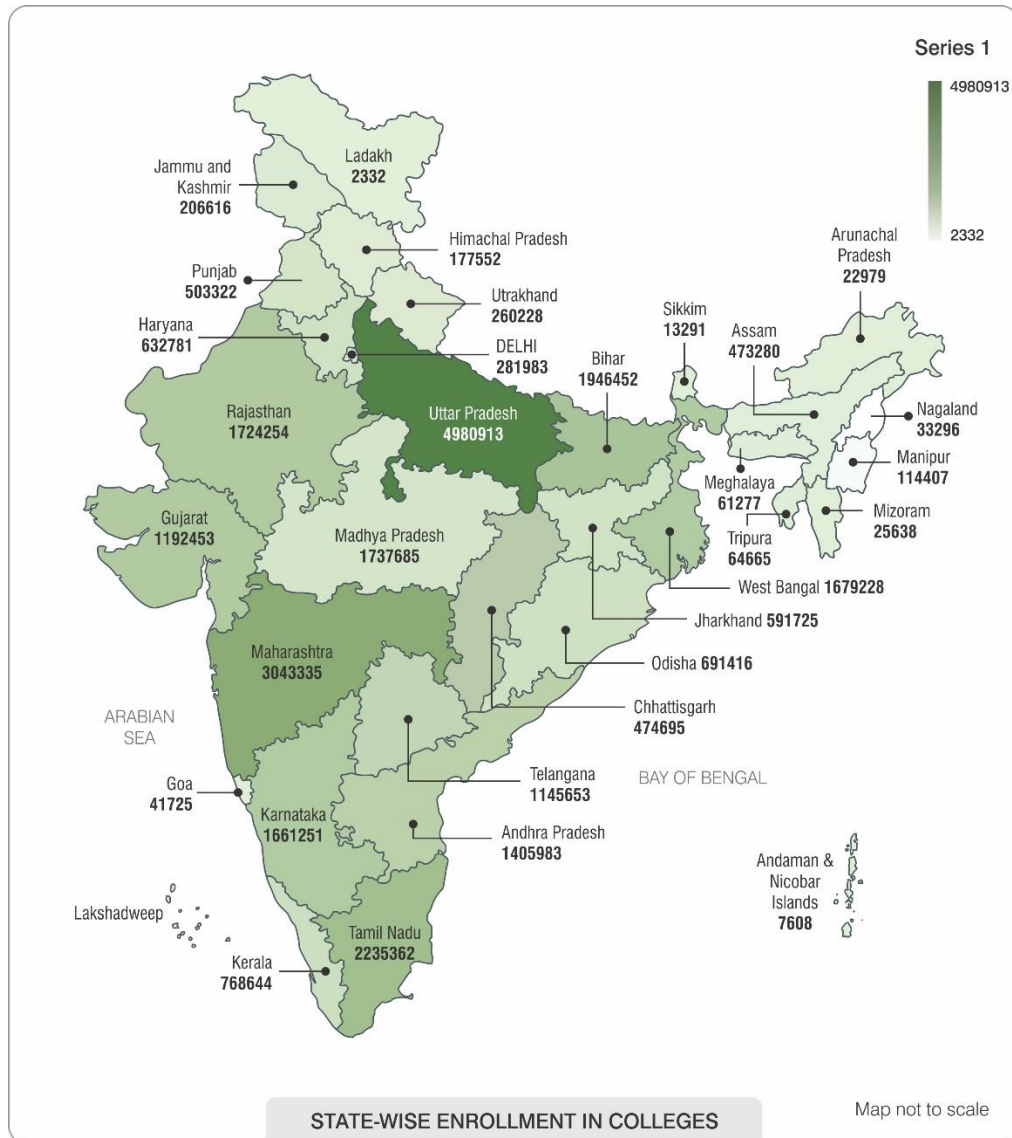
Highest No. of Government  
Colleges: Uttar Pradesh (812)

Lowest No. of Government  
Colleges: Ladakh (3)

Source: AISHE (2020-21)

- Andaman and Nicobar Islands and Ladakh only have government colleges.
- Sikkim, Tripura, Mizoram and Assam and significantly more percent of government colleges than private colleges.
- Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Uttar Pradesh, Tamil Nadu, and Telangana have significantly more percentage of private colleges than government colleges.

# State-Wise Enrolment in Colleges

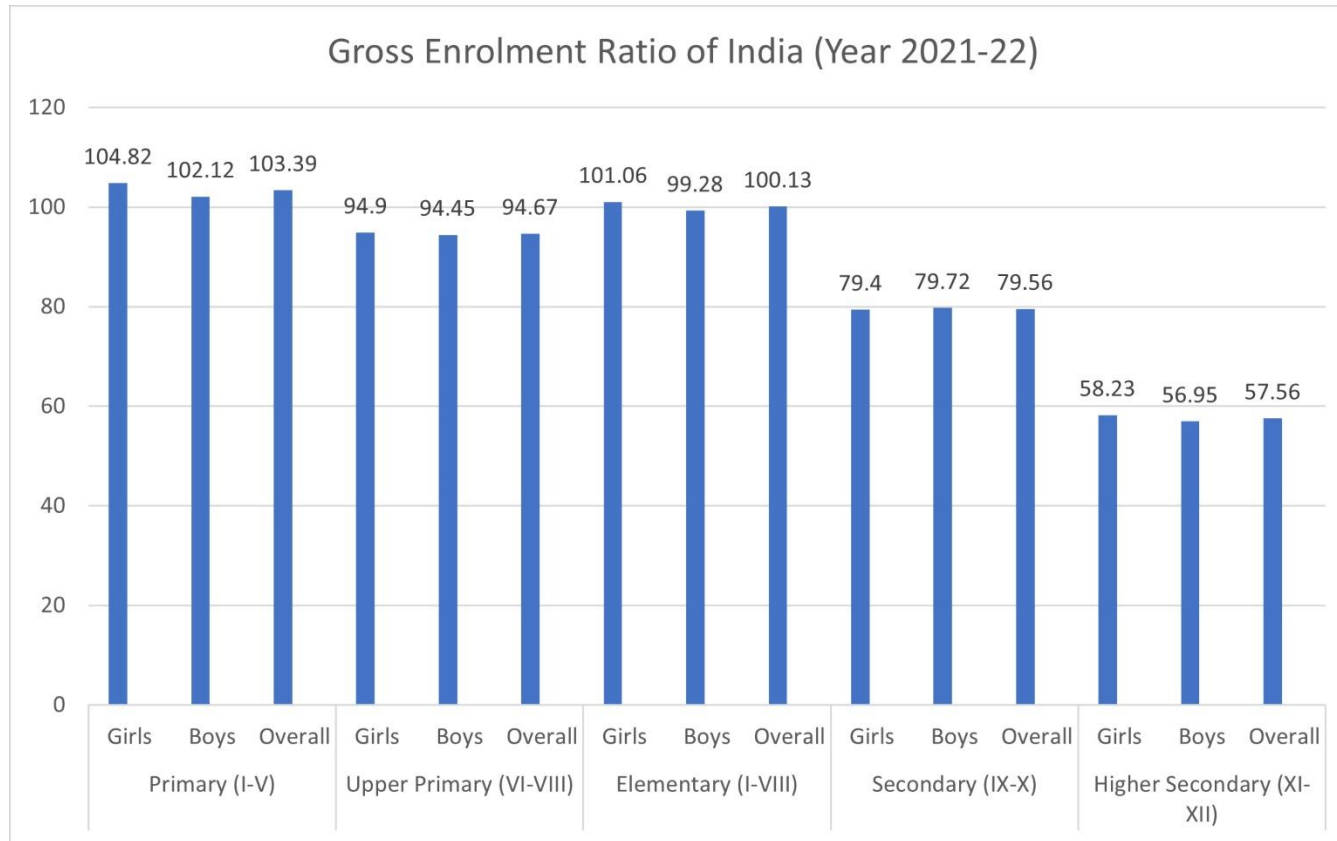


The map shows the number of students enrolled in colleges (both government and private) across the different states of India

- Highest Number of Students Enrolled: Uttar Pradesh
- Lowest Number of Students Enrolled: Ladakh

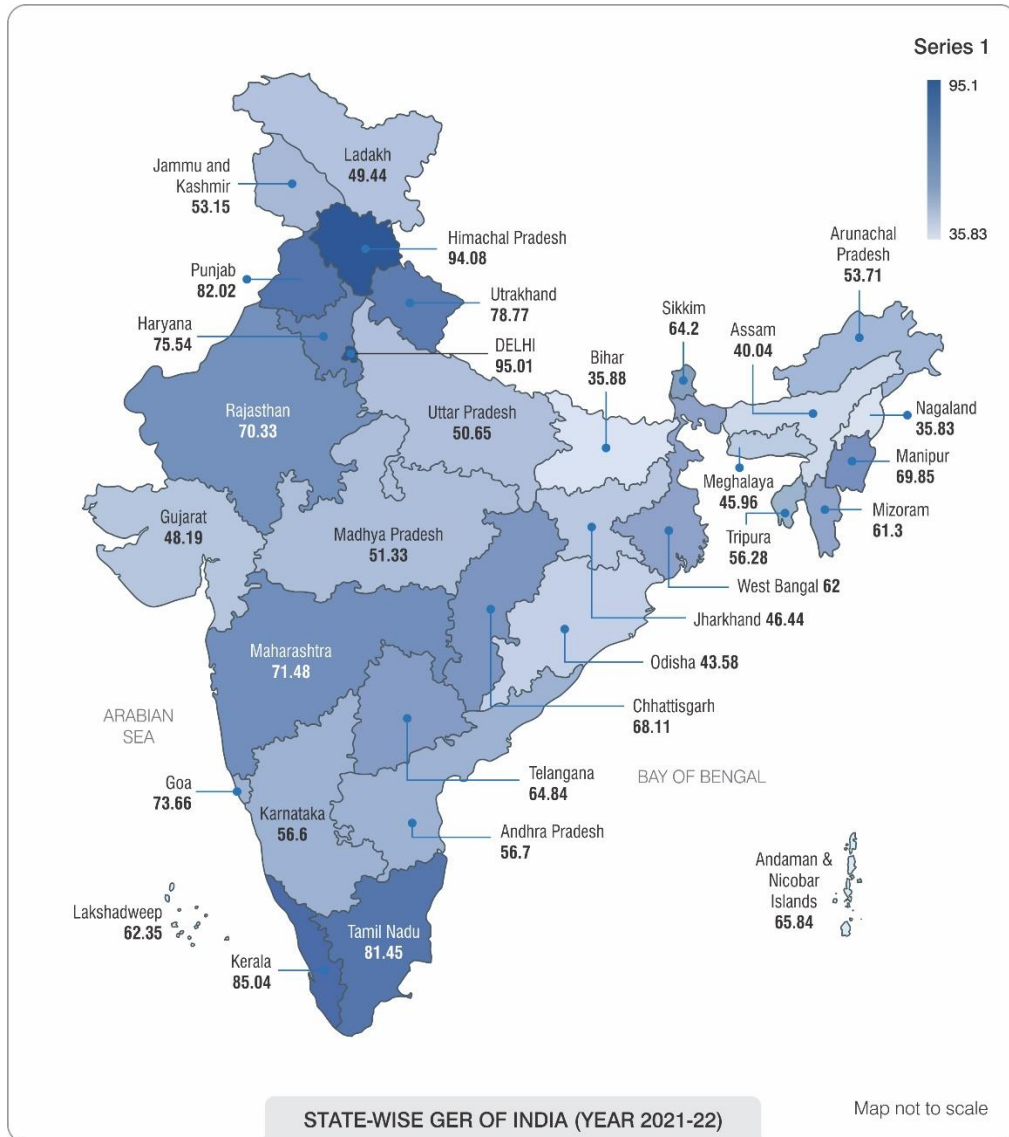
This is self-explanatory since Uttar Pradesh has reported the highest number of institutions, while Ladakh has the lowest number of institutions

# Gross Enrolment Ratio (GER)



- The GER is a crucial educational indicator.
- Represents the percentage of children in a specific age group enrolled in a particular level of education.
- Measures education participation and system effectiveness in a country or region.
- The data helps assess enrollment trends for different education levels.
- Identifies gender-specific disparities in education participation.
- Aids policymakers in improving the effectiveness of the education system.

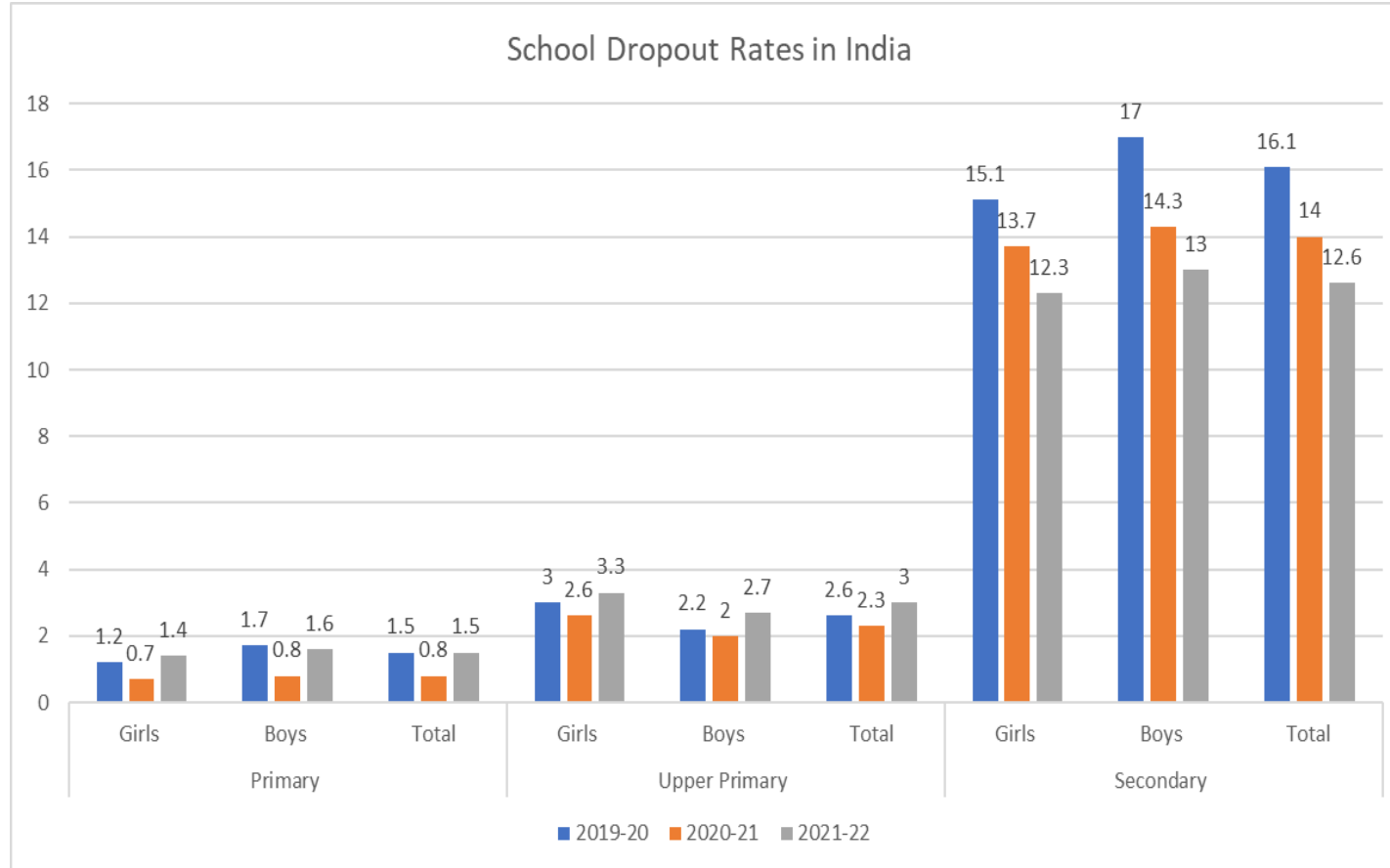
# State-wide GER of India



- The map provides the India's Gross Enrolment Ratio (GER) of Higher Secondary Education (XI-XII) in each State or Union Territory.
- Highest GER: 95.01 in Delhi.
- Lowest GER: 35.83 in Nagaland.

Source: Unified District Information System for Education (UDISE+)

# School Dropout Rates



- The dropout rate is slightly higher for upper primary students (Classes 6-8), with an average of 3 percent.
- The dropout rate for secondary school students (Classes 9-10) is significantly higher at 12.6 percent.
- The data also reveals that boys are likelier to drop out of school than girls in all three categories.

# Retention Rates



## Summary of retention rates by level of education and gender in India:

- Boys have a consistently lower retention rate than girls at all levels of education.
- For primary education (1 to 5), the total retention rate is 95.4 percent.
- In elementary education (1 to 8), the total retention rate is 81.2 percent.
- Secondary education (1 to 10) has a total retention rate of 64.7 percent, with girls having a higher retention rate of 64.5 percent and boys at 64.9 percent.
- Higher secondary education (1 to 12) has the lowest retention rate at 43.6 percent, with girls having a slightly higher retention rate of 44.2 percent and boys at 43.1 percent.

*Source: Unified District Information System for Education (UDISE+)*

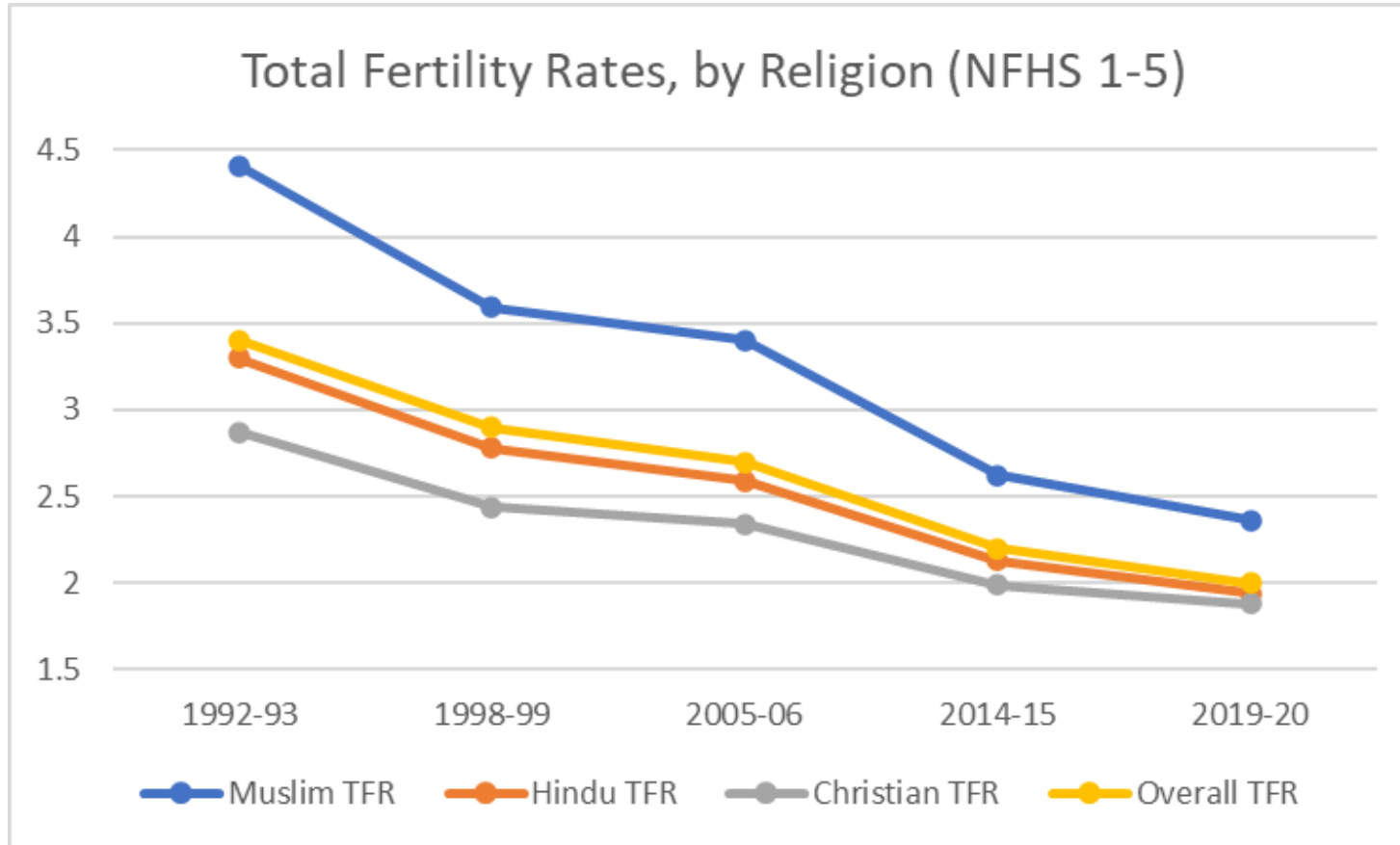
**03**

**AFFECTS OF POPULATION  
DYNAMICS**

---



# Demography and Fertility



According to the 5th edition of the National Family Health Survey (NFHS), the Total Fertility Rate in India is 2.0.

Across religious groups, Muslims in India have the highest TFR, which has been the cause of much political debate and rhetoric. However, this has been fast decreasing, and is likely to converge with the rates for other religious groups soon.

# India's Lok Sabha Seat Allocation Challenge

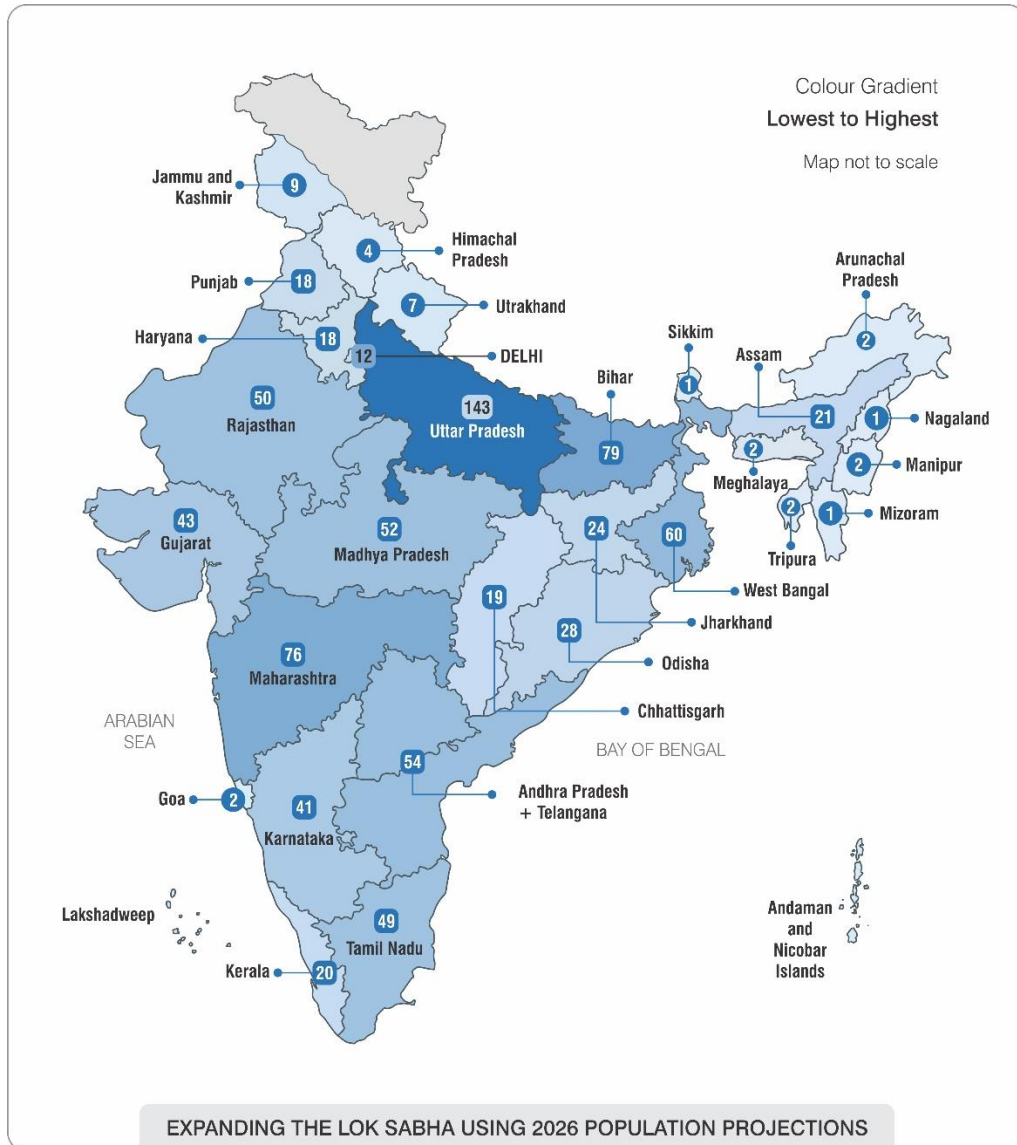
State	Current Seats	Proportional Seats (2011)	Over-and Under-representation (2011)	Proportional Seats (2026)	Over-and Under-representation (2026)
Tamil Nadu	39	32	+7	31	+8
Andhra Pradesh + Telangana	42	37	+5	34	+8
Kerala	20	15	+5	12	+8
Odisha	21	18	+3	18	+3
West Bengal	42	40	+2	38	+4
Karnataka	28	27	+1	26	+2
Himachal Pradesh	4	3	+1	3	+1
Punjab	13	12	+1	12	+1
Uttarakhand	5	4	+1	4	+1
Assam	14	14	0	14	0
Jammu and Kashmir	6	6	0	6	0
Chhattisgarh	11	11	0	12	-1
Delhi	7	7	0	8	-1
Maharashtra	48	49	-1	48	0
Gujarat	26	27	-1	27	-1
Haryana	10	11	-1	11	-1
Jharkhand	14	15	-1	15	-1
Madhya Pradesh	29	32	-3	33	-4
Rajasthan	25	30	-5	31	-6
Bihar	40	46	-6	50	-10
Uttar Pradesh	80	88	-8	91	-11

MALAPPORTIONMENT IN THE LOK SABHA, 2011 (ACTUAL) AND 2026 (PROJECTED)

- Over the past few decades, there has been an **increasing gap in population growth rates between Northern and Southern states** in India, raising questions about overrepresentation and underrepresentation in the Lok Sabha.
- Article 81 of the Indian Constitution maintains a ratio between Lok Sabha seats and state populations.
- The **delimitation process has been frozen since 1976**, leading to malapportionment issues.
- By 2031, the next census, **seat allocation may shift**, with Southern states losing seats to more populous Northern states.

*Source: Election Commission of India, Office of the Registrar General, 2006 and Calculations by Authors from Carnegie Endowment for International Peace*

# India's Lok Sabha Seat Allocation Challenge



- Alistair McMillan, a political scientist, already discovered **representation discrepancies in India's Lok Sabha based on the 2001 Census.**
- Milan Vaishnav and Jamie Hinton updated McMillan's calculations using the 2011 Census data and **found even more severe malapportionment issues.**
- The analysis revealed underrepresentation and overrepresentation of certain states in the revised seat counts.
- Two solutions to address reapportionment shift: **increase Lok Sabha seats and reform Rajya Sabha composition.**
- Tackling malapportionment is crucial for India's democratic federalism.
- **Delaying delimitation after 2026 risks harming India's federal structure.**

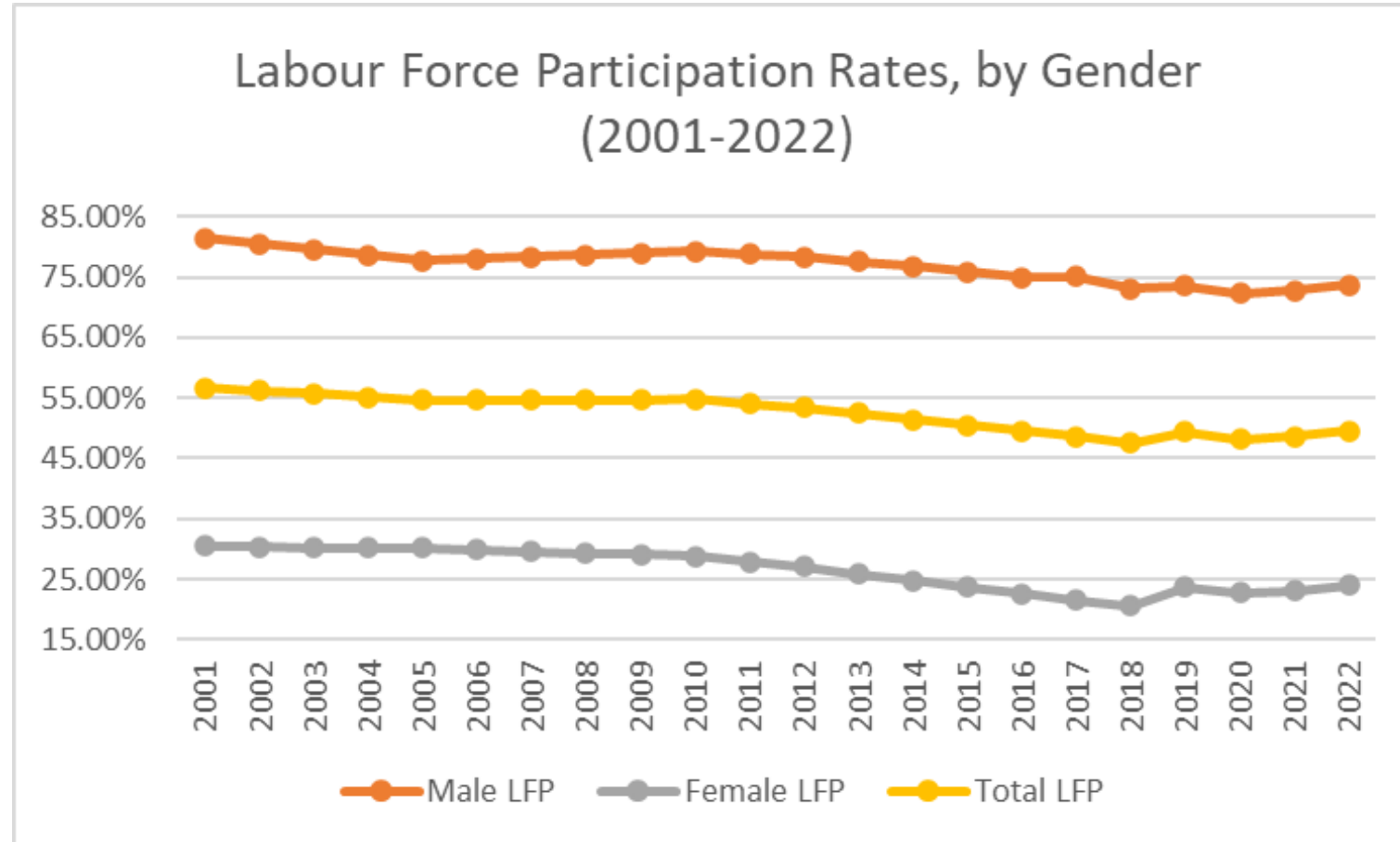
*Source: Election Commission of India, Office of the Registrar General, 2006 and Calculations by Authors from Carnegie Endowment for International Peace*

**04**

**EMPLOYMENT AND  
WORK FORCE IN INDIA**

---

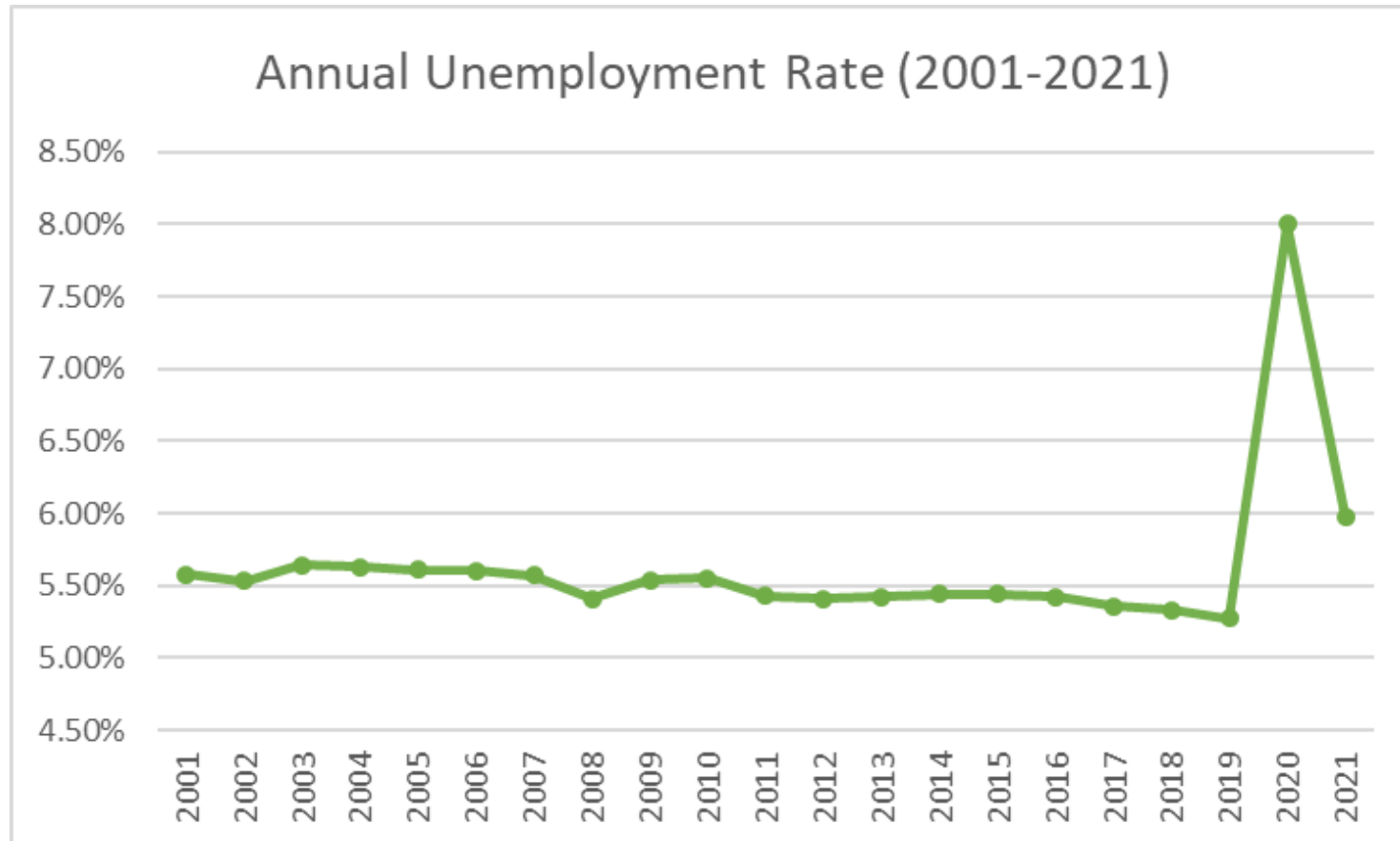
# Labour Force Participation



The current Labour Force Participation rate in India is 39.5%, as of March 2023.

Large disparities are seen in the LFP rate across sexes, with the proportion of women in the labour force being far less than that of men.

# Unemployment



**As of March 2023, the unemployment rate in India is 8.3%. There are 410.1 million employed people in India.**

**While the unemployment rate has largely remained consistent around 5.5% in the 21st century, the COVID-19 pandemic caused large shocks to the labour force, as seen here.**

# Human Development Index, 2020

1. Norway

2. Ireland

2. Switzerland

4. Hong Kong

4. Iceland

131. India

Out of 189  
Countries

by (UNDP)

185. South Sudan

187. Chad

188. Central  
African Republic

189. Niger

# HDI REPORT 2022

Table 3: Inequality-adjusted HDI



Country (HDI rank)	India (#132)	World	China (#79)	Switzerland (#1)
What happens to HDI when adjusted for inequality	Falls by 25%	Falls by 19%	Falls by 15%	Falls by 7%
Income share held by poorest 40% of	20%	18%	17%	20%
Income share held by the richest 1%	22%	17%	14%	12%



# HDI REPORT 2022

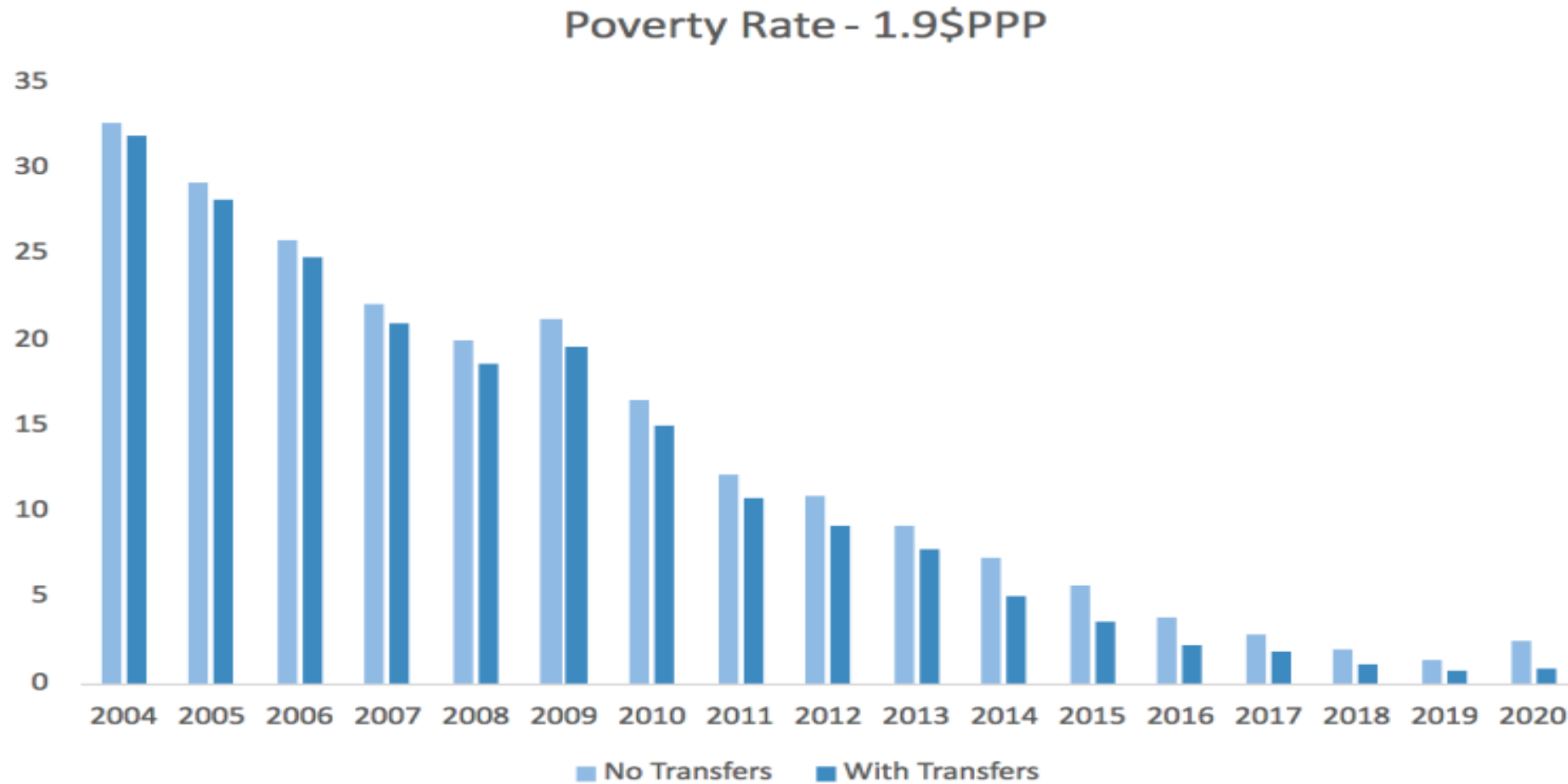
- The study identified the Covid-19 pandemic and Russia-Ukraine war as the two primary reasons behind this fall.
- **Here are a few things to know about the 2021-22 edition of the report:**
  - (1.) A total of 191 countries were analysed under this exercise, which is carried out annually. As always, the matrices were used to used to prepare the report were life expectancy at birth, mean years of schooling, expected years of schooling, and gross national income (per capita).
  - (2.) India, with an HDI score of 0.633, stood at 132, a spot down from its position in the 2020-21 rankings, [when it scored 0.645](#). The study attributed this drop to failing life expectancy in the world's fifth-largest economy (69.7 to 67.2 years).

# HDI REPORT 2022



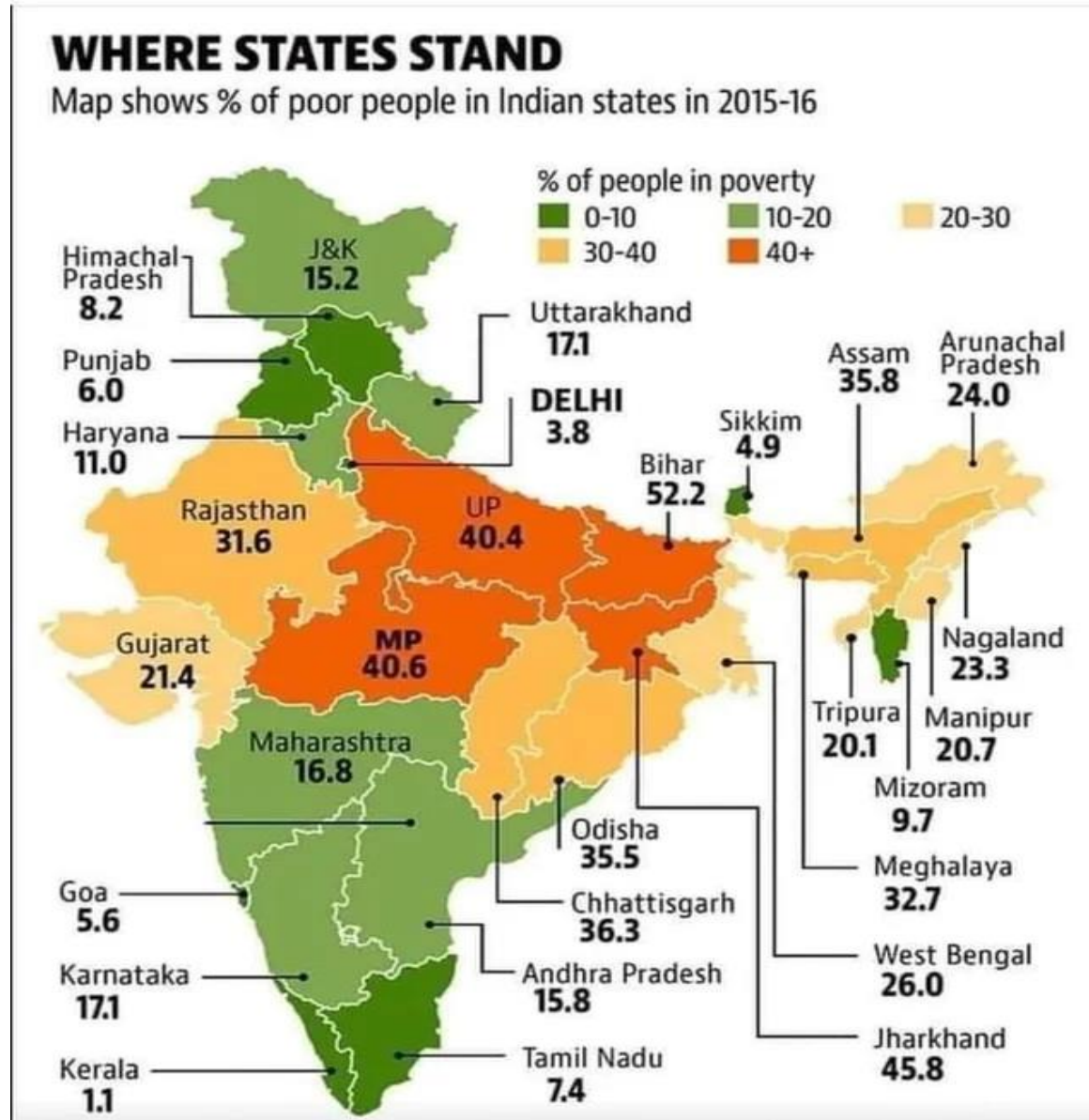
- (3.) At 73 and with index value of 0.782, Sri Lanka emerged as the best performer from the Indian sub-continent. The island nation was followed by China (79 and 0.768), Bhutan (127 and 0.666), Bangladesh (129 and 0.661), India, Nepal (143 and 0.602) and Pakistan (161 and 0.544).
- (4.) European states were among the best overall performers, with as many as 8 in the top 10 of the list. These are Switzerland (1; 0.962), Norway (2; 0.961), Iceland (3; 0.959), Denmark (6; 0.948), Sweden (7; 0.947), Ireland (8; 0.945), Germany (9; 0.942) and Netherlands (10; 0.941).
- (5.) The only two non-European members among the top 10 were Hong Kong and Australia. The former, with an HDI value of 0.952, came fourth, while the latter was fifth with 0.951.

# Poverty Rate in India

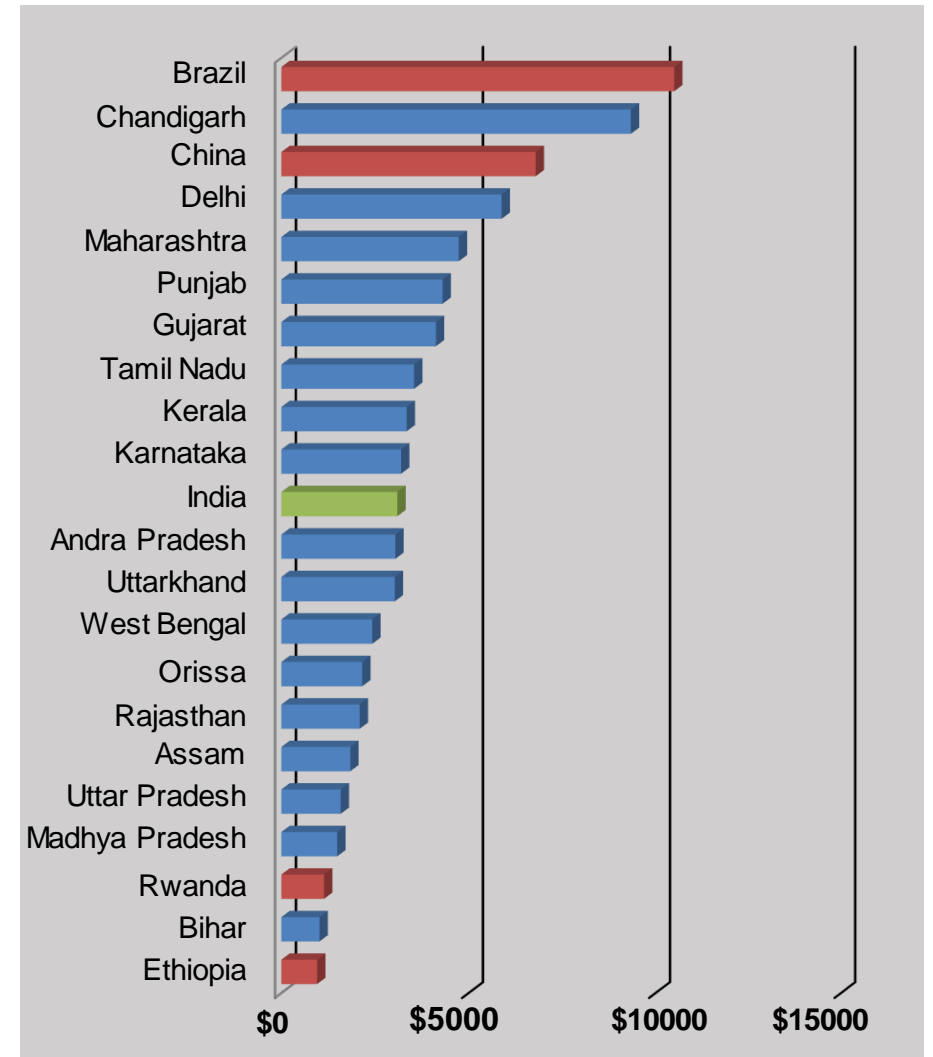


Source: NSS 2011-12 MMRP data; Private Final Consumption Expenditure (PFCE) growth rates for estimates of monthly per capita consumption

# Poverty across Indian states



# Per-Capita Income: A comparative lens on 'pattern'



# The Great Jobs Hunt

*Too few Indians are seeking work and mostly among those working quality of employment isn't great*

Raghuram Rajan, Rohit Lamba  
and Rahul Chauhan

India needs faster GDP growth, of course. But the quality of economic growth matters as much as its quantity. Specifically, growth must translate into good quality jobs. Unfortunately, on that count, we are not doing well.

Timely, reliable jobs data are important, and we have relatively few rich sources in India. The objective of collecting such data is for the government to make more informed policy decisions, not show it in a bad light. At any rate, let's start by triangulating the best data we have.

## The big picture

The two large-scale datasets – the government's quarterly urban Periodic Labour Force Survey (PLFS) and Centre for Monitoring the Indian Economy's Consumer Pyramids Household Survey peg India's unemployment rate at 7.2% and 8% as of September and November 2022 respectively. This means, around 5-3.9 crore Indians of working age population, who are willing and able to search for jobs, aren't able to get one.

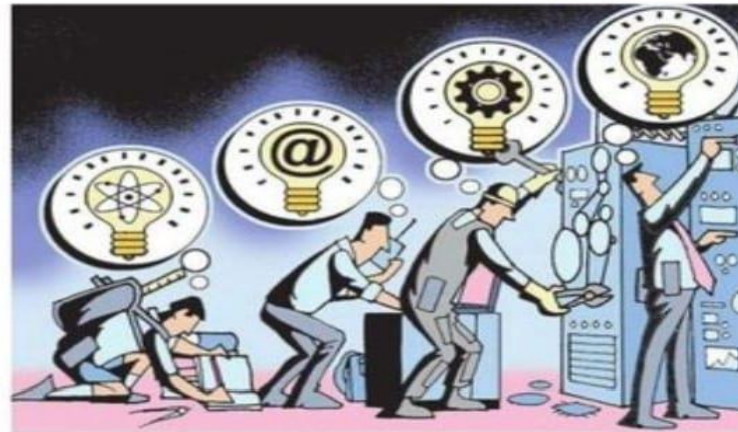
The unemployment rate only counts those who are unemployed and looking for jobs. If you are unemployed but not looking for jobs – for example, a 24-year-old preparing for exams for public-sector jobs or a 35-year-old who has given up looking – you are not counted.

Moreover, this metric is silent on the quality of jobs, and their productivity: or instance, five people manning a mall retail store or tilling a small field, when only two would be sufficient, is disguised unemployment, but it does show up in these numbers.

## Too few look for jobs

Digging deeper, the labour force participation rate in India – the fraction employed or looking for a job – is currently around 46%. So, for every 100 Indians of working age, a staggering 54 are not participating in the labour force.

To put things in a comparative



perspective, the labour force participation rate in 2021:

- In Brazil was 58%,
- In Indonesia 68%,
- In all OECD countries 60%.

## Missing women

The gender breakup is more worrisome still. At 19%, the female labour force participation rate in India is even lower than Saudi Arabia. Prominent thinker Chandra Bhan Prasad has pointed out that it may be a matter of pride for some with rising incomes that females in the family are not required to undertake unsafe manual jobs.

Yet it is equally an indictment of a system that cannot offer women attractive jobs outside the home that they can get to, and do, safely. According to the ILO, the gender discrepancy is enormous even for the well-educated – in 2019, only 30% of Indian females with tertiary education participated in the labour force as compared to 81% for males.

Whatever the reason, a large portion of productive female labour does not work outside the home. Beyond the

chunk of youth from joining the labour force even after getting a college degree.

## Returning to farms

What about the quality of jobs? The PLFS indicates 46.5% of the labour force works in the agriculture sector today as compared to 42.5% in 2019. This increase is not just a pandemic effect. Between 2018-19 and 2019-20, agricultural employment increased by 3.4 crore while industry and services employment only grew by 93 lakh. Regular salaried employees too have dropped from 24% in 2018-19 to 21% in 2020-21.

The most plausible interpretation of these facts is that the quality and number of non-agricultural jobs on offer has regressed. If so, we may be the only developing country that is pushing people back to agriculture, an alarming indictment of our efforts at job creation.

Rajeev Chandrasekhar, minister for IT and skill development, wrote in these pages that 8 lakh jobs will be created over the next five years by the government's flagship Production Linked Incentives scheme. Given that such subsidies are being directed into capital-intensive industries, this is arguably an optimistic number. Furthermore, the estimated cost in government subsidies will be Rs 2 lakh crore, amounting to Rs 25 lakh per job created. By any account, this is an enormous subsidy per job.

Given that 50 million job seekers will come on the labour market over this period, and crores are already looking for jobs, the multiplier effect of each PLI job has to be implausibly large to meet the need. PLI, alone, cannot be the solution.

The spontaneous outburst of our youth in response to the army's Agnipath Scheme reinforces the data suggesting we are falling on job creation. Government, private sector, and civil society must come together to find a sustainable way to create more and better jobs. India should not be a negative outlier among nations in this matter.

Rajan is a professor at the University of Chicago, and Lamba is an assistant professor at Pennsylvania State University and Chauhan is a research scholar.

**A large portion of productive female labour does not work outside the home. Beyond the direct loss in productivity, we are losing out on the new ideas and valuable changes that more diversity in the workplace would bring**

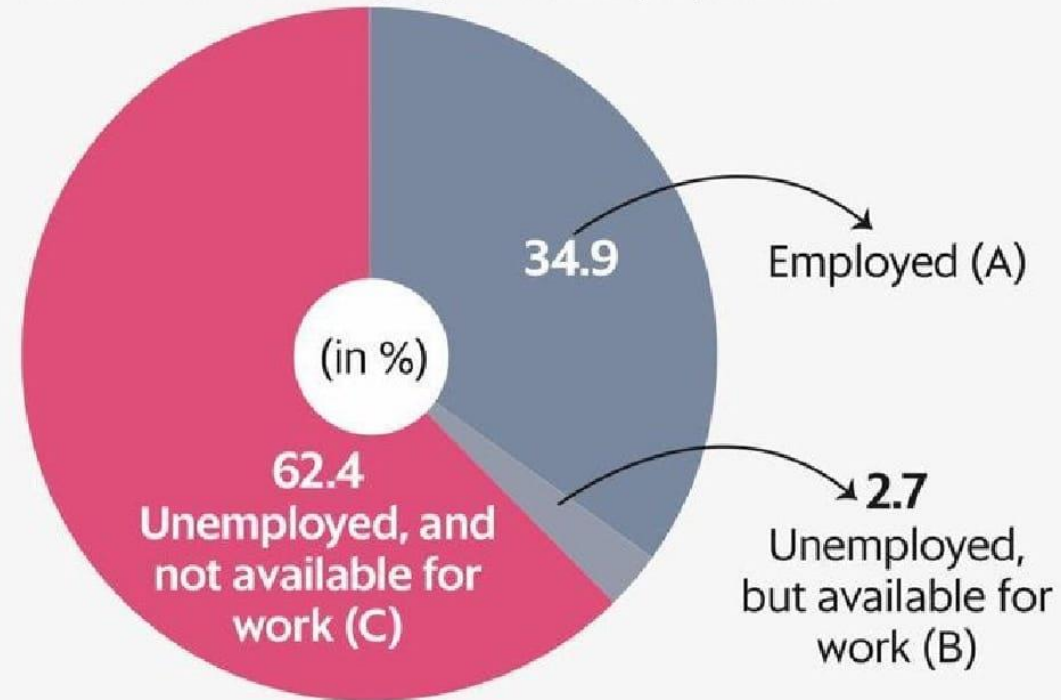
direct loss in productivity, we are losing out on the new ideas and valuable changes that more diversity in the workplace would bring.

Youth unemployment has also been increasing steadily – it stood at 22% in 2019 (and was 28% in 2021) as compared to 18% in 2010. Remember, those still studying or taking exams are not included in these numbers. According to CMIE data, we do see a jump in males participating in the labour force after the age of 25. Something – possibly preparation for exams for public sector jobs that only a lucky few will get – is keeping a sizable

## How does India's labour force look like?

...and what is the unemployment rate?

Share of each category in urban population\*



Unemployment rate =  $B/(A+B) = 7.2\%$

Labour participation rate (A+B) = **37.6%**

\*As of Q2FY23

Source: Periodic Labour Force Survey

# GENDER

## EXCERPTS FROM NFHS SURVEY



### WOMEN'S EMPOWERMENT (WOMEN AGE 15-49 YEARS)

	2020-21	2015-16
Participation of married women in household decisions	92%	73.8%
Women who worked in last 12 months and paid in cash	24.9%	21.1%
Women owning a house and/or land (alone or jointly)	22.7%	34.9%
Women having a bank or savings account that they use	72.5%	64.5%
Women having a mobile phone that they themselves use	73.8%	66.6%

### NUTRITIONAL STATUS OF ADULTS (AGE 15-49 YEARS)

	2020-21	2015-16
Women whose Body Mass Index (BMI) is below normal	10%	14.9%
Men whose Body Mass Index (BMI) is below normal	9.1%	17.7%
Women who are overweight or obese	41.3%	33.5%
Men who are overweight or obese	38%	24.6%
Average out-of-pocket expenditure per delivery in a public health facility (in Rs)	2,548	8,518
Women who have ever used the internet	63.8%	NA
Men who have ever used the internet	85.2%	NA
Households with any usual member covered under a health insurance/financing scheme	25%	15.7%



# Gender ratio

A look at **top five** and **bottom five** States and UTs in terms of their sex ratio at birth, as per the 2020 Civil Registration System report



## Top 5 States/UTs

Ladakh (1,104)

Arunachal Pradesh (1,011)

A&N Islands (984)

Tripura (974)

Kerala (969)

## Bottom 5 States/UTs

Manipur (880)

Dadra and Nagar Haveli  
and Daman and Diu (898)

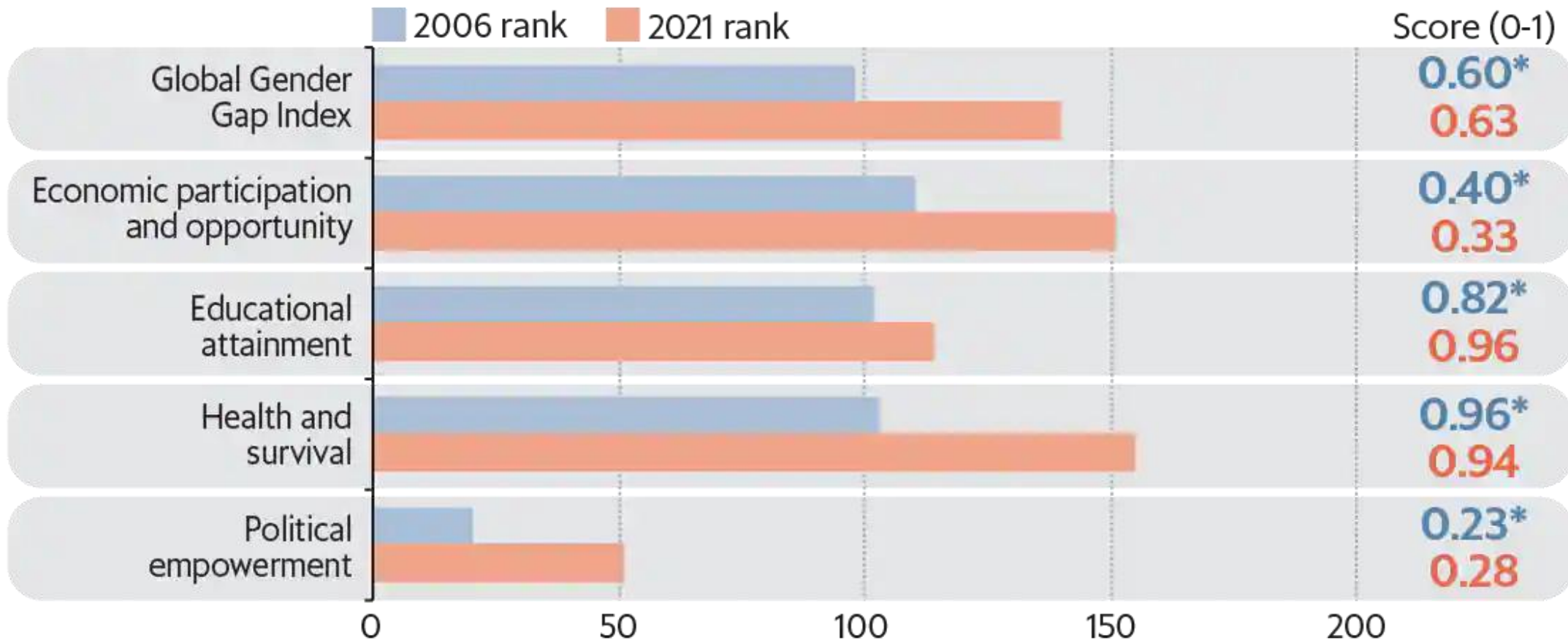
Gujarat (909)

Haryana (916)

Madhya Pradesh (921)

# Mind the gap

India has slipped 28 places in the World Economic Forum's Global Gender Gap Report 2021, and is now one of the worst performers in South Asia. It is now ranked 140th among 156 nations.



\* Figures closer to 1 indicate greater parity between men and women.

Source: World Economic Forum

# Global Gender Gap Report 2022

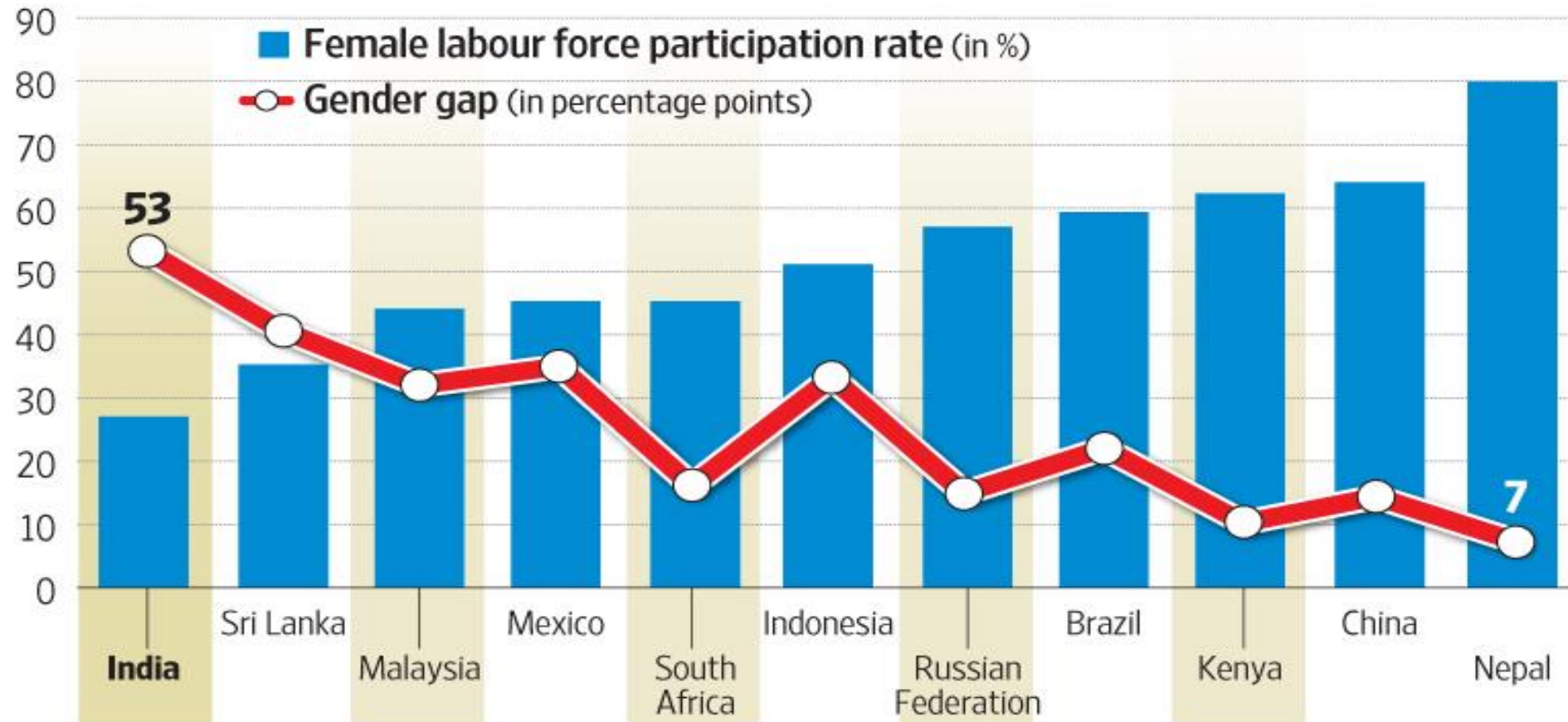
**The gender score** | India ranked 135 in gender parity out of 146 countries, according to the Global Gender Gap Report 2022 released by the World Economic Forum. A look at India's ranking in the four sub-indexes based on which the overall ranking was determined

India	Rank 2022*
<b>Global gender gap index</b>	<b>135</b>
Economic participation and opportunity	143
Educational attainment	107
Health and survival	146
Political empowerment	48

*\*out of 146 countries*



# Missing women



Source: World Development Indicators

Thank You!

