ACCESS (IN)EQUALITY INDEX (AEI) 2024

Measuring (In)Equality of Equality of Access to Basic Opportunities Across India

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Jindal School of Liberal Arts & Humanities
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Abbreviations

AEI	Access Equality Index
ANC	Antenatal Care
ANM	Auxiliary Nurse Midwives
ATM	Automated Teller Machine
BMI	Body Mass Index
ESI	Employees' State Insurance
GDP	Gross Domestic Product
GER	Gross Enrolment Ratio
GIS	Geographic Information System
GPI	Gender Parity Index
GSMA	The Global System of Mobile Association
HLRN	Housing And Land Rights Network
HOI	Human Opportunity Index

ICRIER	Indian Council For Research on International Economic Relations
IRDAI	Insurance Regulatory and Development Authority
LFPR	Labour Force Participation Rate
LHV	Lady Health Visitor
LPG	Liquefied Petroleum Gas
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act MoHFW Ministry of Health And Family Welfare
NAR	Net Attendance Ratio
NCMH	National Commission On Macroeconomics And Health
NCW	National Commission For Women
NFHS	National Family Health Survey
NFSA	National Food Security Act
NSS	National Sample Survey
OBC	Other Backward Class

PDS	Public Distribution System
PLFS	Periodic Labour Force Survey
PMJDY	Pradhan Mantri Jan Dhan Yojana
PNG	Piped Natural Gas
PPE	Personal Protection Equipment
PTR	Pupil Teacher Ratio
PwD	Persons With Disabilities
RMNCHA	Reproductive, Maternal, Newborn, Child And Adolescent Health RMSA Rashtriya Madhyamik Shiksha Abhiyan
RTE	Right to Education
RT-PCR	Reverse Transcription Polymerase Chain Reaction
SC	Scheduled Caste

SDG	Sustainable Development Goal
ST	Scheduled Tribe
TCA	Technical Cooperation Agency
UDISE	Unified District Information System For Education
UN	United Nations
UT	Union Territory
WPR	Worker Population Ratio
NSSO	National Sample Survey Office
IJR	India Justice Report
OOPE	Out-Of-Pocket Expenditure

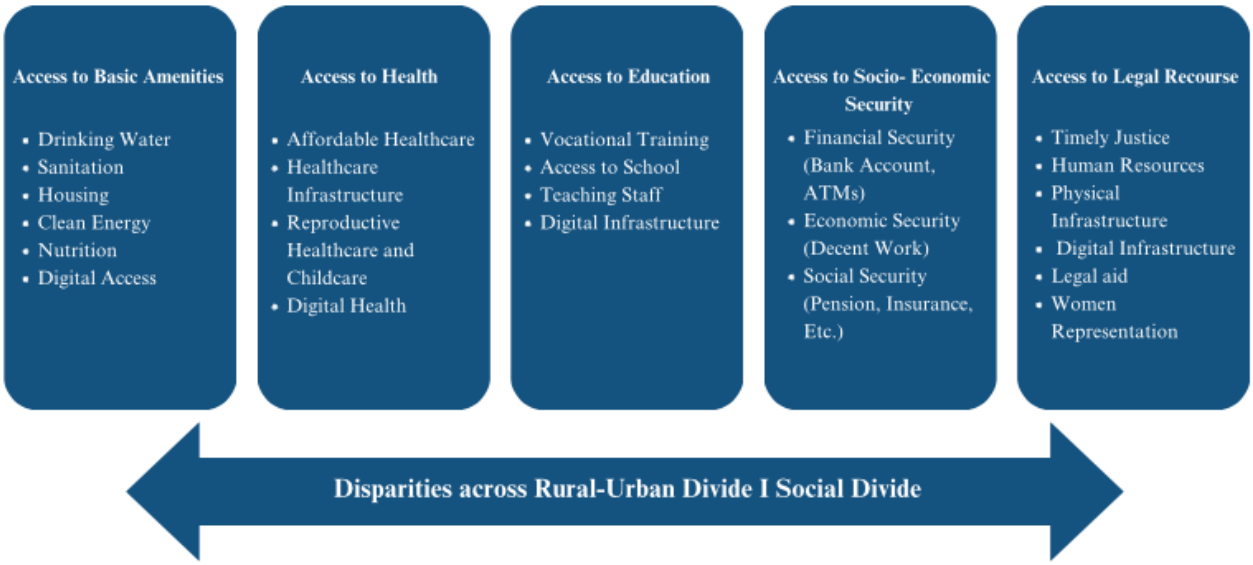
Executive Summary

With the need for international comparisons becoming pressing, income inequality has risen to the top of the development agenda across the globe. Most of the literature on inequality has focused on inequality of outcomes, such as income inequality or wealth inequality arising from various economic, demographic, and social processes which impact distribution of income. However, the discourse around income inequality does not reflect (in)equality of opportunity (basic amenities, healthcare, education, access to justice and socio-economic security), which arises because of the circumstances beyond an individual's control, including gender, family background, ethnicity, place of birth, etc. These documents of evidence while informative are often criticised for not measuring inequalities that are more relevant from a social or moral perspective (Lefranc. A et. al, 2007).

The concept of equality of opportunity is rooted in the Rawlsian philosophical tradition, whereby people are expected to construct the society in a way that they would be happy for their position in the society to be determined by a random draw — Rawls (1971) and Dworkin (1981). He argued that social positions should be formally open to all and that each person should have a fair chance of attaining them. Over the years, with the development of literature, there now exists multiple interpretations of inequality of opportunity that arises because of factors or circumstances beyond an individual's control. These include accessibility and availability of basic resources (Dworkin, 1981), primary goods, such as basic liberties and rights, access to political and other offices (Rawls, 1971), public goods, quality of education or access to labour market opportunities, gender, family background, ethnicity, place of birth, etc.

Against this background, the objective of this report is to create an index to capture inequality among households and individuals by looking at access to various opportunities (capabilities), thus measuring uneven distribution of deprivations across the states and union territories in India. The definition of "Access" in this report is conceptualised to encompass the "4As", namely 1) Availability 2) Affordability 3) Approachability and 4) Appropriateness. These four dimensions of "Access" are not only critical in addressing inequalities in accessing healthcare services but can be expanded to cover various other sectors, including basic amenities, education, justice and address socio-economic inequalities.

The AEI framework illustrated below, therefore, measures five key pillars across 23 broad categories1 crucial to social and human development, each of which relates to an important opportunity for improving the overall quality of life and has been found to be critical in reducing inequality. This multidimensional framework serves as a benchmark in assessing inequity in spatial and non-spatial access to social and economic opportunities across the states.



The composite index as seen in the Table 1A and 1B below is created using equal weights or a simple average aggregation technique where five of the sub-indices are given equal weight and all variables within each sub-index are also assigned equal weight (=1). The final index value for each state/UT is produced by taking the geometric mean of the five sub-indices. States and UTs are ranked on the basis of the final aggregate score. To ensure comparability, all variables are normalised, the details of which are provided in the report.

To ensure comparability across geographical size and governance, AEI 2023 scores and ranks states and UTs separately. Based on the composite index scores range (0.67 - 0.23), the states are grouped into three categories: Aspirants, Achievers, and Front-runners (Table 1).

Front-runners are the states falling in the top one-third score range (score above 0.50) and are the best performing states. The findings from the composite index indicate that 11 states are front runners. Smaller states, such as Goa, Sikkim and Himachal Pradesh have the advantage of better coverage of service geographically and demographically. There has been a concerted focus by these state governments in ensuring improvement of human development, and achieving Sustainable Development Goals (SDGs), which has resulted in better accessibility. Among larger states, Tamil Nadu, Kerala, Telangana, Karnataka, and Andhra Pradesh have performed the best, and, thus, offer better access to critical human development opportunities to their residents.

Rank	States	Composite AEI
	FRONT RUNNERS (>0.51)	
1	Goa	0.69
2	Sikkim	0.63
3	Andhra Pradesh	0.61
4	Kerala	0.59
5	Tamil Nadu	0.56
6	Himachal Pradesh	0.55
7	Haryana	0.53
8	Maharashtra	0.52
	Telangana	0.52
	Karnataka	0.52
	Gujarat	0.52
	ACHIEVERS (>0.41)	
9	Punjab	0.50
10	Uttarakhand	0.49
11	Mizoram	0.47
12	Rajasthan	0.45
13	Tripura	0.44
14	Arunachal Pradesh	0.43
	Chhattisgarh	0.43
15	West Bengal	0.42
	ASPIRANTS (>0.29)	
16	Madhya Pradesh	0.41
	Odisha	0.41
17	Nagaland	0.39
18	Assam	0.37
	Jharkhand	0.37
	Uttar Pradesh	0.37
19	Meghalaya	0.35
	Manipur	0.35
20	Bihar	0.28

Rank	Union Territories	Composite AEI
1	Lakshadweep	0.58
2	Chandigarh	0.57
3	Delhi	0.53
4	Andaman & Nicobar Islands	0.50
7	Ladakh	0.48
9	Puducherry	0.47
5	Dadra and Nagar Haveli	0.45
6	Daman and Diu	0.43
8	Jammu & Kashmir	0.33

UTs to identify problem areas and focus their interventions in these areas, given that the report presents the sub-indices rankings as well.

In the absence of data at the state level, the report also comments on the inequalities spread across Urban – Rural geographies, caste, and social identities for all India level. Spatial inequalities — where people reside (urban or rural) — have an impact on access to opportunities, including basic amenities, such as safe drinking water, housing, clean energy, sanitation, healthcare, education, decent work, and other goals envisioned in the 2030 Agenda (SDGs).

The exclusions and discriminations meted out to various castes (Schedule Caste (SC), Schedule Tribe (ST) and Other Backward Class (OBC)) in India also resulted in high incidences of poverty, deprivation, and low levels of education and awareness, which has hindered their access to opportunities.

The twin approach of ranking states and UTs, accompanied by explanations on the inequalities across region, caste, and gender in this report, presents both aggregated and disaggregated view of the situation. This helps in identifying the challenges faced by individuals and households in accessing various services across Indian states and UTs. There is a need for targeted policies and an action plan to address the bottlenecks, given that the recent pandemic has exacerbated the pre-existing vulnerabilities and deprivations. This is observed not only in the various outcomes matrix but also in accessing various opportunities in the form of affordable, quality education, healthcare and basic infrastructure, which remain unevenly spread both socially and geographically.

Addressing this inequality of access will remove the institutional and structural “barriers”, which create “exclusion” of various sections of populations from the development process. The findings from the report call for promoting equal access by extending coverage of the essential services to more people — irrespective of their caste, gender and region — so that India can achieve inclusive growth.

Background

Significant deficits in the achievement of SDGs remain stagnant in developing countries, including India. One of the major factors behind this shortfall remains underinvestment in human and social capital leading to uneven access to various opportunities, such as education, healthcare, and other basic amenities. This negatively affects economic growth in the long term and traps the country on a path of widening income and wealth inequality (Marrero and Rodríguez, 2013; Bradbury & Triest, 2016; Ferreira et al. 2014; OECD).

Goal 10 of the SDGs directly calls for a progressive reduction of income inequality while also ensuring access to equal opportunities and promoting social, economic, and political inclusion of all — irrespective of age, sex, disability, race, ethnicity, religion, or any other social status. The SDGs target "leaving no one behind" through "universal access" to food, basic amenities, such as sanitation, clean water, healthcare, education, decent work, and other socio-economic opportunities. An assessment of the supply side imbalances in providing these "access" provisions thus becomes important (access to public infrastructure, public goods, service, or institution).

This report — through the AEI framework — holds merit in assessing the progress Indian states and UTs have made in providing universal access to essential goods and services to all. Location/geographical distribution or spatial concentration of opportunities matter in achieving equality. There is evidence which proves that young children (below 13 years of age) who move to lower-poverty areas with better access to opportunities are more likely to attend college and have substantially higher incomes as adults (Chetty, R. et al. 2016), thus, attaining better standards of living. Various inequalities of opportunities arising due to uneven distribution of basic amenities and infrastructure across space scales are often mutually reinforced, creating a vicious trap for households and communities. These circumstances make it particularly hard for them to improve their living standards. Thus, this report aims to highlight the inequalities in opportunities, wherein the problems to which they give rise have a spatial dimension that policymakers cannot afford to ignore.

In recent years, globalisation and digitalisation have been transforming the way economies work, providing new opportunities for growth, but also deepening inequalities7. Accelerated use of digital technologies and automated decision-making tools for basic services, such as health and education, seem to have made access more inequitable in an already unequal society, thereby, hindering people from receiving services they are entitled to8. The pandemic in past as well as now has acted as a source of creative destruction (Schumpeter, 1942) and has changed the well-established dynamics of governance, public service delivery, and economic and social mobility, altering the definition of "accessibility".

This necessitates renewed measurement of inequalities incorporate this dynamism. Thus, along with the physical aspect or the spatial distribution of opportunities, the report tries to capture other nuances of "access" which have been defined in the next section.

About the Index

2.1 Introduction

The empirical literature about 'equality of what' and views of justice consistent with equality of opportunity involves contributions from many key economists and philosophers, beginning with John Rawls (1958, 1971), Amartya Sen (1980), Ronald Dworkin (1981a, 1981b), Richard Arneson (1989), G.A. Cohen (1989), John Roemer (1993, 1998), Fleurbaey (2008), Walter Bossert (1995, 1997), Vito Peragine (2004), Dirk Van de Gaer (1993) and Nussbaum (2011), along with many others. Appendix 1 provides a synopsis of the vast literature on the subject.

The majority of discourse on inequality has been centred around economic inequality, particularly, income or wealth inequality, thus focusing on inequality of outcome (Fields and Fei, 1978; Atkinson, 1970; Deaton, 2013,2021; Milanovic. 2016; Niño-Zarazña, etal. 2017; Goldin and Muggah, 2020; Chateauneuf and Moyes, 2005). There are multiple indices and ratios which have been adopted globally to measure inequality, particularly, income inequality, due to availability of income datasets (Lorenz, Gini coefficient, decile ratios, Atkinson's index, Theil's index).

However, inequality goes beyond income and affects opportunities and capabilities for large parts of society (Roemer, 1998, 2013; Bourguignon, Ferreira, and Walton, 2007; Elbers et al., 2008; Cohen, 1989; Arneson, 1989). Wealth, income, and consumption are generally considered economic outcomes and indicators, such as health status (mortality rates, life expectancy) and literacy rates define social outcomes. These outcomes are the "ends" which have been the result of various "means" or processes which relate to access to basic opportunities, such as water, education, electricity, sanitation, etc. The goal (in terms of inequality) should be to equalize the opportunities people have and not the outcomes people obtain (Drèze and Sen, 2013). Sen defines "capabilities" as freedom or real opportunities one has regarding the life one may lead. Instead of focusing exclusively on economic means or subjective well-being, capability approach focuses on people's capabilities to live the kind of life they have reason to value (Sen, 1979; 1985; 1987; 1992; 1993; 1999; Nussbaum, 2011).

This report draws on the concept of "opportunities" and "capabilities" to assess the uneven distribution of deprivations across the country. As the concept of "opportunities" and "capabilities" is too broad and is subject to much wider deliberations, this report will restrict itself to looking at opportunities (capabilities) through the lens of "access". The link between equality and access to opportunities is important in its own right because (i) access to opportunities acts as a social and personal determinant of aspirations of people, which impacts their investments in human capital for themselves and their children, which will then affect actual mobility and human capital development (Genicot and Ray, 2016; Cojocaru 2019); and because (ii) unequal access to opportunities is associated not only with lower intragenerational mobility, but also intergenerational mobility and stronger redistributive preferences impacting policy decisions (Cojocaru 2019; IMF, 20209; OECD, 2017).

Generally, one-dimensional, income-based measurements do not reflect (in)equality of opportunity that arise because of the factors or circumstances that are beyond an individual's control and for which they cannot be held responsible. These factors include accessibility and availability of basic resources (Dworkin, 1981), primary goods, such as basic liberties and rights, access to political and other offices (Rawls, 1971), public goods, quality of education or access to labour market opportunities, gender, family background, ethnicity, place of birth, etc. It usually includes non-income dimensions, such as health, education, access to basic services and human development measured primarily through intergenerational social mobility10.

The motivation behind this index is analogous to that of the Human Opportunity Index (HOI) of Barros et al. (2009, 2011), which measures the extent to which households have access to "basic opportunities" across various states/UTs. HOI is a synthetic measure of how far a society is from universal access to an essential good or service, and how equitably access is distributed across individuals (circumstance groups). It defines "opportunity" itself as "access to a good or service, which society accepts should be universal".

There is a large body of work on inequality in India, to state some - Banerjee and Piketty (2001); Deaton and Dreze (2002); Sen and Himanshu (2005), Pal and Ghosh (2007). These works present robust evidence on the existence of inequality in India, but they mostly focus on measuring inequality in consumption or income. They also present important factors behind the growing inequality and contribute immensely to enrichment of poverty and inequality estimation in India. The AEI report builds on these works of evidence indicating the persistence of 'relative' poverty and inequality in India and attempts to perform an in-depth assessment of each Indian state's performance in terms of provision of access to various opportunities to its citizens towards the maximization of the well-being and reduction of income inequality and poverty of the citizens.

2.2 Objectives of the study

Recent analysis of global income inequality trends underlines the importance of being clear about how inequality is understood and measured. Inequality of what (means versus end, opportunity versus outcome), inequality among whom and at what level (between countries, regions, castes, gender, etc.) is determined by the definition of inequality. Thus, the report aims at the following:

a) To update the existing multidimensional Index to capture (In)equality of what or (In)equality in access to key opportunities including individual/household access to public infrastructure, resources and public service delivery indicators and generate scores and rankings for all states and UTs based on pillar-wise performance and overall performance.

b) To look at inequality of whom or horizontal inequality - inequality between groups of individuals or households classified according to gender, caste, and region.

c) This report also compares the previous AEI with the new AEI to understand trends and changes in access inequality.

2.3 Salient features

1. The AEI Index measures 5 key pillars crucial to social and human development, each of which relates to an important opportunity for overall quality of life and has been found to be critical in reducing inequality. These are: basic amenities, healthcare, education, social and economic security and justice. The index measures the set of opportunities represented by these pillars. The report, thus, provides a multidimensional framework to construct an "Access to (In)Equality Index" which would serve as a benchmark in assessing inequity and spatial access to social and economic opportunities across the states by the means of ranking. The five pillars include 23 broad categories. These 23 broad categories have in total 60 indicators that are included in the creation of index. The details of the indicators are provided in Appendix 2.
2. The definition of 'Access' in this report is derived from the theory developed by Penchansky and Thomas (1981) and others (Levesque et al. 2013; Haddad & Mohindra, 2002; Peters et al. 2008; Di McIntyre et al.) in healthcare policy literature. Though "Access" in general means a way of approaching, reaching or entering a place, as the right or opportunity to reach, use or visit11, it is here broadly conceptualized to encompass the "4As" as provided in figure 2.2 below. These four dimensions of "Access" are not only critical in addressing inequalities in accessing healthcare services but can be expanded to cover various other sectors including basic amenities, education, justice and for addressing socio-economic inequalities.

   a. Availability: This measures **physical access** or, in other words, presence, demographic coverage, and volume of service or institutions or opportunities available to the population (household and individuals).

   b. Approachability: This measures **geographical access** or, in other words, the ability of households/individuals to access the services.12

   c. Affordability: This measures **financial access** or, in other words, the relationship between the prices of the services and providers to the household or individuals' income and their ability to pay for accessing the services.

   d. Appropriateness: This measures the **adequacy of the services** by assessing the balance between the need and service provision in terms of content, effectiveness, timeliness, and quality.

3. To assess the 4As, we primarily look at the **household level data** or access granted to individuals across states and UTs collected from various national sources as provided in Appendix 2. The data for some of the indicators are as old as 2016. However, for most of the

indicators we have tried to capture the latest possible data available. We have also tried to map and cover the four dimensions of "Access" across all the indicators to the extent possible.

4. The report presents the findings from the Composite Index for states and UTs, and also provides pillar-wise rankings for states and UTs.
5. The report provides brief commentary on:

   a) Urban - Rural disparities in accessing the opportunities in terms of basic amenities, health, education, socio-economic security and justice.

   b) Disparities across various social identities groups in accessing various opportunities at an all-India level.

2.4 Rationale

Each pillar has been selected on the basis that disparities in each — access to health, education, basic services, social-economic security and justice — are markers of inequality of opportunity and are associated with deprivation of multiple 'means' essential for well-being. Uneven access to these services constrains human capabilities, the quality of human capital, impact lifetime income and restrict intergenerational mobility.

It should be the priority of the government to provide people with basic infrastructure, education, health and socio-economic security. However, not all citizens can avail of these opportunities equally due to various circumstances. For example, many children in India are unable to attend school due to their inability to travel kilometres on foot daily; many girls drop out due to no access to clean water and sanitary toilets in the school.

Each indicator tries to capture such crucial circumstances or socio-economic and demographic characteristics outside the individual's control, related to the four dimensions of 'access' defined in this table:

Sr. No.	Rationale
1.	Universal access to basic amenities and public infrastructure, such as drinking water, sanitation, electricity, decent housing, food and nutrition is imperative to ensure a decent quality of life, healthier lives, improved job opportunities and, subsequently, higher economic growth. • Access to piped water and sanitation is critical in reducing the child mortality substantially (Zwane et.al., 2007). The distance and time spent fetching water from the source significantly affects the health of children under five (Pickering and Davis, 2012; Zayatri et. al., 2013) and increase the risk of illness (Xia and Hunter, 2010). Close to 54 per cent of rural women — as well as some adolescent girls — spend an estimated 35 minutes fetching water every day, equivalent to the loss of 27 days of wages over a year. Access to good-quality affordable housing is important for achieving a number of social policy objectives, including poverty reduction, equality of opportunity and social inclusion. • Increasingly, access to mobile and internet has also become fundamental as a means for inclusive growth and act as a node for access to information and diversifying livelihood opportunities. • Access to clean cooking energy has the transformative potential to curb the health risks posed by traditional cookstoves while also reducing the time spent by women on unpaid domestic work. • One of the key channels of food security in India is the distribution of food grains through the government-controlled Public Distribution System (PDS).
2.	Health and human capital are strongly related and better health early on is a determinant for future outcomes.16 Universal access to healthcare is instrumental to achieving equality of opportunities. Monitoring Universal Health Coverage requires measuring health service coverage and financial protection (SDG 3). According to a study, increasing the density of health facilities and providers in rural areas may improve maternal and neonatal care.17 Proximity and access to healthcare are important determinants of health outcomes. • Due to lack of GIS–based data on location of healthcare infrastructure, the study aims to use other indicators available, such as availability of beds, doctors, nurses/ANMs etc. While urban populations have access to private healthcare networks, rural populations rely heavily on the public

	health system, thus, requiring special attention. • Moreover, COVID-19 has not been an equal opportunity virus. It disproportionately affects the poor and the least developed economies with poorer health conditions, health systems that are less prepared to deal with the pandemic, and people living in conditions that make them more vulnerable to contagion.18 Thus, looking at accessibility of health-care services, the public health system becomes indispensable. • The study also looks at the public spending on health which is crucial as it is an important means itself to achieve universal healthcare.
3.	Education is fundamental to human and social progress, developing an equitable and just society, and promoting national development. India aims to achieve Goal 4 of SDG which is to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" by 2030. The broader objective of the education and skill-related interventions is to reduce the inequality of opportunities among the population so that in the medium and long run, the inequality of outcomes will be eliminated. The report, specifically, takes into account secondary education as India has achieved considerable success in ensuring universal access to elementary education with the implementation of the RTE Act in the past few years and, hence, the focus should now move to universal secondary education as the basic necessity. • While distance to school is an important factor and captures geographical access, the report adopts an expanded view of education access to go beyond the indicators of enrollment and include the dropout rate and actual attendance, since these reflect various socio-economic reasons acting as hindrances to access to schooling indirectly. "Increasing attendance cannot be an end in itself. Rather, it should be a means to improving learning outcomes and the employability and competence of the workforce".20 • The appropriateness of education at secondary level depends on various factors, such as pupil-teacher ratio and teaching of vocational courses etc. • The study looks at how much a state spends per child (population aged 13-15) for secondary education, as it denotes the inputs or means to ensure universal access to quality and affordable education. • The study also looks at computer and internet access in schools to

	capture availability of school-level infrastructure for digital education.
4.	Equal access to and control over economic and financial resources is critical for the achievement of equitable and sustainable economic growth and development. It has positive multiplier effects for a range of key development goals, including poverty reduction and increased welfare at both the household and macro level. ● According to Dreze and Sen (1995), "Social security is an essential requirement of social justice". Social security is a set of means that influences human development by addressing deprivation and improving living standards and access to entitlements21. • Financial inclusion and access to better financial infrastructure act as stepping stones for better economic stability. • The International Labour Organisation (ILO) describes three decent work dimensions: 'employment opportunity', 'social security benefits' and 'social dialogue'. The report captures the first two for access to decent work. • Access to work has been captured through Worker Population Ratio (WPR) as it provides information on actual workers/employed population against Labour Force Participation Rate (LFPR), which provides information on available labour supply. Mahatma Gandhi National Employment Guarantee Act (MGNREGA) has been a crucial source of providing Social Protection and Economic Empowerment to rural unskilled youth and, thus, has been considered to measure access to decent work in rural areas.
5.	Access to opportunities to live in a safe environment with a fair legal support system is essential not only for human development at an individual level, but for the economic and social development of the country as a whole. Heterogeneity and a complex hierarchical social structure in India make the right to justice an even more vital factor for achieving equality. An effectively functioning justice system comprises of four major pillars — Police, Judiciary, Prisons & Legal Aid. Strengthening the state capacities in all these areas requires urgent attention to provide people with the best possible justice delivery. • Despite the progressive measures, the 'access to justice' in India has been costly and beyond the reach of poor citizens, worsened by the delays

	in disposal of cases and arrears in the system. • In the recent years, the government has introduced a slew of measures to improve access to justice and justice delivery like services provided by state's citizen portals, which in light of the recent pandemic, have also received a major thrust. • Judiciary remains one of the least diverse areas, especially, for representation of women and looking at the inequality within, it is important to bring out the difference in the same across states.

2.5 Data Collection and Methodology

The indicators included in all the pillars have gone through several omission and commissions based on the availability of data across the states and UTs. The choice of indicators is also based on the 4As of the 'Access' identified in the report and is accounted for across all the indicators to the extent possible. Indicators have been selected on the basis of their importance and availability of reliable data from existing data sources, such as National Family Health survey (NFHS), National Sample Survey (NSS) reports, India Sustainable Development Goals (SDG) reports, India Justice Report, Ministry of Health and Family Welfare (MoHFW), Ministry of Rural Development (MoRD), etc. We have tried to create the index as per the latest data available. The five pillars include a total of 60 indicators. Across these 60 indicators, the data is available for all the states and UTs. For better representation, we have ranked states and UTs separately.

The index is constructed through successive aggregation of scores. Scores for individual indicators are aggregated to create the five sub-indices: Access to Basic Amenities, Access to Health Care, Access to Education, Access to Socio-economic Security and Access to Legal Recourse. The sub-indices are further aggregated to arrive at the final composite index score. States and UTs are ranked on the basis of the final aggregate score. To ensure comparability, all variables are normalised (See Appendix 2 for more details).

Building the Composite Index and Method of Aggregation

The index is created using equal weights or a simple average aggregation technique where five sub-indices are given equal weight and all variables within each sub-index are also assigned equal weight (=1). This method of aggregation is used when there is limited or no information to judge whether some variables in the index are more important than others or when all variables are considered equally important.

There are two steps to calculating AEI values.

The first step involves calculating indicator value:

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 zeros" and "aspirational targets", respectively, from which component indicators are standardized.

Having defined the minimum and maximum values, the variables are normalized using the following formula.

The basic formula for converting an indicator value (V) into an index score (I) is:

I = V-minimum value/maximum value-minimum value, where minimum value is the minimum admissible value (lower bound) and maximum value is the maximum admissible value (upper bound).

In a few cases, indicator and criteria point in opposite directions. In these cases, the following alternative formula is used. For instance, in case of availability of judge per 1000 population. The lower the population load on a high court the better the state's ranking is. In such cases, the formula presented below is used.

I = maximum value-V/maximum value-minimum value

Again, actual indicator values are replaced with lower or upper bounds, if necessary.

The equation 1 is first applied to each of the indicators of the pillars, and then the arithmetic means of the indicators resulting indices is taken. For instance, to arrive at the sub-index value for basic amenities, we have first normalized all the 10 indicators (see appendix 1 for information on the indicators) using equation 1 and then used arithmetic mean to arrive at the basic amenities sub-index. We use same methodology for all the other four pillars, including education, health, social security and legal recourse.

The second step involves developing composite index. This is produced by taking the geometric mean of the five sub-indices.

AEI = (IBasic amenities * IHealth * IEducation * ISocial Security *ILegal Recourse)

The use of geometric mean reduces the level of substitutability between the sub-indices and smoothens the intrinsic differences across them and is most suitable for this index. Additive aggregation methods imply full compensability across variables. For example, if the score for the two sub-indices is 5 and 10, respectively, the arithmetic mean would give a composite score of 7.5 while the geometric mean would give a score of 7.07.

The advantage of using the geometric mean24 is that it implies only partial compensability, i.e., poor performance in one sub-index cannot be fully compensated by good performance in another (in this case 5 for the poor performing sub-index and 10 for the good performing sub-index).

Second, it balances the uneven performance between dimensions. Third, it encourages improvements in the weak dimensions, i.e., the lower the performance in a particular sub–index, the more urgent it becomes to improve that particular dimension. In case of aggregation within the sub-index, the variables are much more homogeneous and, therefore, allowances can be made for partial substitutability. Using the arithmetic mean for aggregating within a sub-index does not run the risk of overcompensating a bad performing parameter by a good performing parameter. There are several other methods of aggregation, such as the harmonic mean, penalty for bottleneck, summation of ranks, etc. which are more suited to other contexts and can sometimes be overly complex. The Human Development Index and the Sustainable Society Index are some popular examples that use the geometric mean for aggregation.

1. Findings from index

3.1 Composite Index - Measuring Equality of "What"?

The AEI scores of the states of India range between the minimum value of 0.28 for Bihar to 0.69 for Goa. The mean value of the score is 0.47, whereas the median is 0.46. Twenty-five per cent of the states lie above the score of 0.53 and25% of the states lie below the score value of 0.40. The standard deviation of the scores is 0.096. The states are well distributed over the index scores.

Table 1

Rank	States	Composite AEI
	FRONT RUNNERS (>0.51)	
1	Goa	0.69
2	Sikkim	0.63
3	Andhra Pradesh	0.61
4	Kerala	0.59
5	Tamil Nadu	0.56
6	Himachal Pradesh	0.55
7	Haryana	0.53
8	Maharashtra	0.52
	Telangana	0.52
	Karnataka	0.52
	Gujarat	0.52
	ACHIEVERS (>0.41)	
9	Punjab	0.50

10	Uttarakhand	0.49
11	Mizoram	0.47
12	Rajasthan	0.45
13	Tripura	0.44
14	Arunachal Pradesh	0.43
	Chhattisgarh	0.43
15	West Bengal	0.42
	ASPIRANTS (>0.29)	
16	Madhya Pradesh	0.41
	Odisha	0.41
17	Nagaland	0.39
18	Assam	0.37
	Jharkhand	0.37
	Uttar Pradesh	0.37
19	Meghalaya	0.35
	Manipur	0.35
20	Bihar	0.28

The states of India are ranked into three categories based on their index score. The first category of states is Front Runners, states whose AEI score ranges from 0.52-0.69 **(Table 1).** These states are doing well in terms of inequality providing better equality of opportunity to their residents. Goa is the best performing state with a score of 0.69. In sub-indexes too, Goa does the best in basic amenities and health. Some of the larger states in the Front Runners category are Maharashtra, Karnataka, Andhra Pradesh, Tamil Nadu, Gujarat, and Telangana. The rest of the states are comparatively smaller in size. As can be seen from **Figure 1,** six of these states are in the south, two in the west, two in the north, and one in the northeast. All the southern states make it to the group and the western states Maharashtra and Gujarat, which are front runners are closest to the south. Surprisingly, no state in central or eastern India makes it to the Front Runners list. It would be interesting to understand why this is the case. Factors like government inefficiency, institutional failures, corruption, and lack of private sector investment would play a part in this.

Figure 1: Front runner states

The states with AEI score in the range of 0.41-0.51 are the Achievers states. These are the states with decent opportunities to their residents but who can make improvements. As per **Figure 2**, one state Rajasthan lies in the west of India whereas Punjab and Uttarakhand lie in the north. Chhattisgarh lies in the centre whereas West Bengal lies in the east. Rest is made of few northeastern states. Two states Rajasthan and West Bengal are among the richest states in India (in the top 10 by GSDP). It is interesting to note that even with high GSDP's, these states do not provide equality of opportunity as good as the states in the Front Runners category.

The states with AEI score in the range of 0.29-0.40 are the Aspirants. These are the states which fall behind in providing equality of opportunity to their residents and have to take necessary steps to get a better score implying better opportunities for their residents.

As per **Figure 3**, three of the eastern states, namely Bihar, Jharkhand, and Odisha are aspirants. This means that except West Bengal, the eastern states of the India are the worst performing in the equality of opportunity. The highest populated state of India, Uttar Pradesh, located in the north, is an aspirant. The second largest state of India in terms of area, Madhya Pradesh, located in the centre, is also an aspirant. The second largest state of north-eastern India, Assam, is an aspirant. This implies that a big part of population of India lies in the Aspirant states. None of the states of western or southern India lie in this category. This would imply that the policymakers of India have to pay special attention to the east and central states to improve the standard of living and create better opportunities.

Figure 2: Achiever states

Figure 3: Aspirant states

In figure 4 below, the AEI score of states is mapped with respect to the GSDP per capita. The two outliers on the top right are Sikkim and Goa, the states with the highest per capita incomes and AEI scores. The bottom left is Bihar with the lowest per capita income and AEI. Most of the other states lie in the middle. As is evident from the graph, it is not necessary that a state with higher per capita GDP will have a high AEI score. Andhra Pradesh, which is the 14th largest state in terms of per capita income has an AEI score of 0.61, which is only behind Sikkim and Goa. Similarly, Arunachal Pradesh, which is the 11th largest state in terms of per capita income stands at the 17th position in terms of AEI score. This shows the greater income does not always bring greater equality of opportunity and states can give better quality of lives to their residents if they improve their institutional mechanism and if they have less corruption and greater political will.

Figure 4

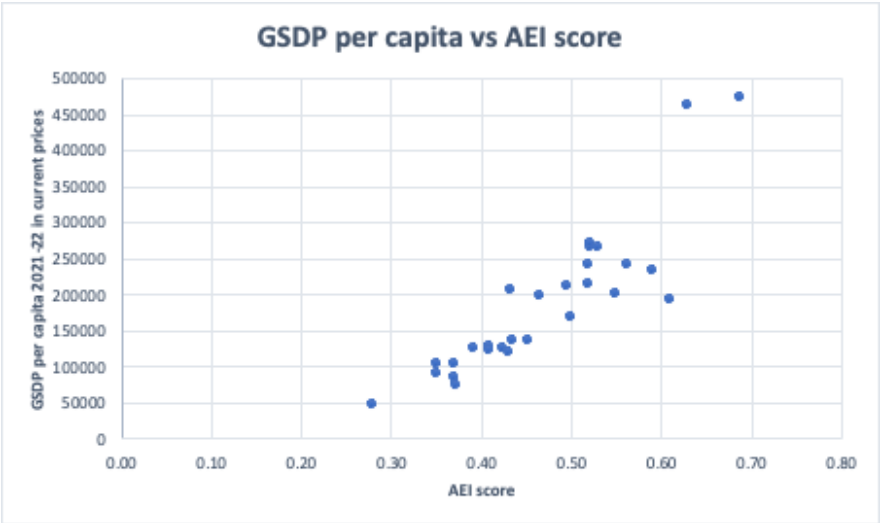


Table 2 ranks the Union territories of India as per their AEI scores. The best performer is Lakshadweep with a score of 0.58, and the worst performer is Jammu and Kashmir with a score of 0.33. It is interesting to note that Lakshadweep does better than Delhi and Chandigarh whose per capita income is among the top five of states and Union Territories in India. The Ladakh region which was recently carved out of Jammu and Kashmir does better than its parent Union Territory with a score of 0.47.

Table 2

Rank	Union Territories	Composite AEI
1	Lakshadweep	0.58
2	Chandigarh	0.57
3	Delhi	0.53
4	Andaman & Nicobar Islands	0.50
7	Ladakh	0.48
9	Puducherry	0.47
5	Dadra and Nagar Haveli	0.45
6	Daman and Diu	0.43
8	Jammu & Kashmir	0.33

Table 3 gives a summary of the sub-indices and the standard deviation. As can be seen from the differences between the highest and the lowest scores, a vast inequality exists between the scores of states in India. For example, in socio-economic security, the highest score is 0.70, whereas the lowest score is only 0.18 for the state of Bihar, which has lowest scores in three pillars. The variance in data is highest in the basic amenities pillar whereas it is lowest in the justice pillar.

Table 3

	Basic amenities	Education	Socio economic security	Health	Justice
Highest score	0.97 (Goa)	0.72(Sikkim)	0.70(Andhra Pradesh)	0.70 (Goa)	0.67 (Nagaland)
Lowest score	0.31 (Jharkhand)	0.22 (Meghalaya)	0.18(Bihar)	0.30 (Bihar)	0.36(Bihar)
Standard deviation	0.16	0.12	0.12	0.097	0.087

Sub-index rankings:

This section discusses the sub-indexes or pillars of the AEI Index and the performance of states in these sub-indexes. It will give a grainier picture of the states' performances in each pillar and help us understand the determinants of the inequality better.

A. Basic amenities

Figure 5 shows the ranking of states on the pillar of basic amenities. Goa does best with a score of 0.97 with Punjab coming second with a score of 0.85. The worst performing state is Jharkhand with a score of 0.31. The two eastern states, Bihar and Odisha, are the next worst performers with a score of 0.38 and 0.39, respectively. It is interesting to note that the only other southern state in the top five states is Kerala. The median score for the sub-index is 0.56.

Figure 6 shows the ranking of UTs in the pillar of basic amenities. Chandigarh does best with a score of 0.82 whereas Delhi is close second with a score of 0.80. Both these regions lie in the north of India. The worst performing UT is Jammu and Kashmir, also in the north of India, with a score of 0.37. The median score for UTs is 0.56 which is the same as those of the states.

Figure 5

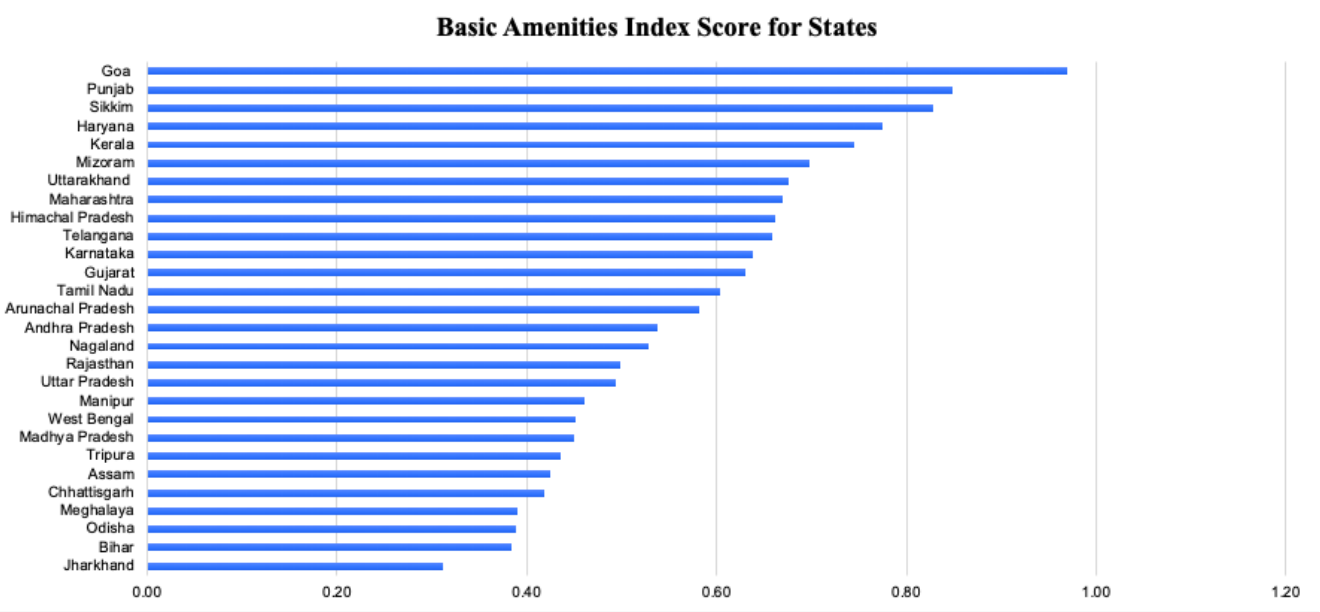
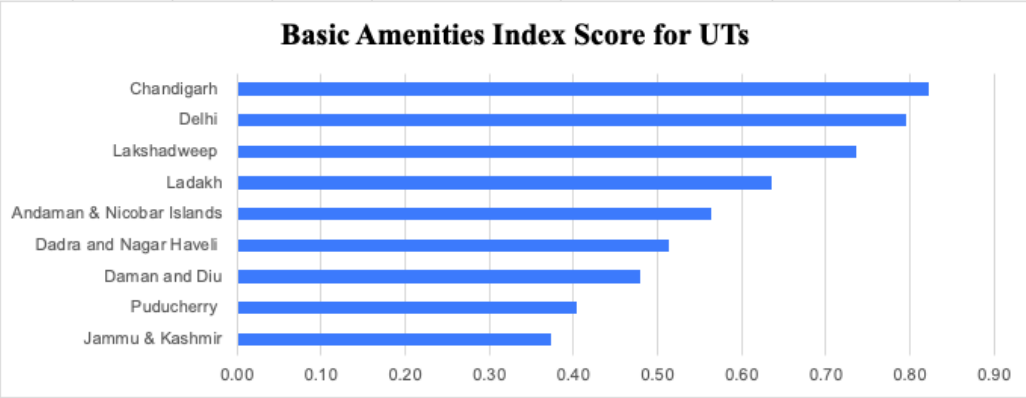


Figure 6



Housing: The percentage of people living in pucca houses in each state indicates the extent to which people have quality housing. Pucca houses have a greater resistance to extreme weather events and are more comfortable for their residents in many respects. Goa is the best performing state in this respect with 90% of its residents having pucca houses. Manipur is the worst performing state with only 22.6% of its residents having pucca houses. The median is 56.7. The standard deviation of the scores is 21.3. Figure 7 gives a pie chart of the percentage of states providing a range of housing services. Seven per cent of states have less than 25% of pucca houses whereas 43% of states have a coverage between 75-100%. It is important to note that in more than half the states, less than 75% of residents live in pucca houses. Schemes like Indira Aawas Yojana and Pradhan Mantri Aawas Yojna need to cover a large population of the country to be able to provide pucca houses to the entire population.

Clean cooking fuel: Percentage of people in a state using clean cooking fuels indicates people who are using fuels like LPG instead of cow dung or agricultural residue. Goa is the best performing state with 82.8% of its residents using clean cooking fuel. Nagaland is the worst performing state with only 6.7% of its residents using clean cooking fuel. In UTs, Chandigarh is the best performing (98.3%) whereas Daman and Diu is the worst (25.8%). The median for this sub indicator for states is 28.1, which is clearly very low. The standard deviation for states is 18.9. As can be seen in Figure 8, 50% of states have a coverage of less than 25%. This is abysmally low performance given that biofuels are associated with indoor air pollution and health hazards. Increasing the coverage of clean cooking fuel will lead to better health indicators, especially, for women of the household. It would also save time, which is spent in collecting the biofuels, sometimes from great distances. Only 4% of states have coverage of more than 75%.

Water: The sub indicator for water consists of two parts — households with piped water and households with primary source of water within the dwelling or premises. The former is a part of the latter, however, having them separately gives us a better picture of the state of clean drinking water in different states. For piped water, the best performing state is Goa with a coverage of 91.9% and the worst performing state is Assam with a coverage of 5.8%. For the primary source of water within dwelling or premises, the best performing state is again Goa with a coverage of 94.8% but the worst performing state is Odisha with a coverage of only 33.1%. The median coverage of piped drinking water is 39.15% which is clearly low. The standard deviation for piped drinking water is 26.3 whereas for water in dwelling or premise is 19.7. The inequality is greater in piped drinking water which should be a right for all the

households. As can be seen from figure 9 (which is for primary source of water within dwelling or premise), 25% of states are below the coverage of 50%. This implies that in these states more than 50% of households fetch water from outside their states. This work, primarily done by the women of the house can be highly time consuming (for some villages in Rajasthan this could be hours based on the availability of nearest fresh water) and can also lead to spread of water borne diseases in case of contaminated water. Water is a necessity and must be provided in the house itself. The Jal Jeevan Mission scheme, which aims to provide every rural household with piped water by 2024, needs to be successful to narrow the widening gap between states.

Sanitation: The sub indicator for sanitation consists of two parts — households reporting access to latrines and persons reporting access to improved latrine. They are similar, however, keeping them both provides a clearer picture of access to latrines in different states. The states are performing considerably well in this sub indicator owing to the Swachh Bharat Mission by the Government of India which helps rural and urban poor construct latrines in their households to end the practice of open defecation.

The best performing states for household latrines are Mizoram and Arunachal Pradesh with a coverage of 100%. The worst performing state is Jharkhand with a coverage of 66.1%. For persons reporting access to improved latrines, the best performing state is Telangana (100%) whereas the worst performing state is Jharkhand (90.3%). Figure 10 which graphs the data for households with latrine shows that 50% of states have a coverage of more than 95% which is impressive figures. The claim that India has become open defecation free seems to be substantiated with data. However, we also need to consider the usage of these latrines constructed and whether people, especially, in rural areas have made the behavioural shift from open defecation to using latrines.

Food security: This sub indicator is measured by the percentage of people accepted under the National Food Security Act. This is the best performing sub indicator as far as the Indian states are concerned. Many states have a coverage of 100% including one of the worst performing states (overall) Bihar. The worst performing state in this sub indicator is Himachal Pradesh with a coverage of 77.8%. The median is 99.95%. As can be seen in Figure 11, 75% of states have a coverage of more than 95%. India has done well in feeding its poor population through the Public Distribution system. However, pilferage and corruption in the PDS remain a problem.

Digital Access: This sub indicator is composed of three components — percentage of male internet users, percentage of female internet users, and percentage of mobile users. The best performing state for female internet users is Sikkim (76.7%), for male internet users is Punjab (78.2%), and for mobile users is Odisha (73%). The worst performing state for female internet users is Bihar (20.6%), for male internet users is again Bihar (35.4%), and mobile users is Telangana (46.9%). As can be seen from Figure 12, more than 20 states have a female internet users' range in 20-50%. The highest number of states for male internet users fall in the 50-60% range, these are 11 states. For mobile users, the highest number of states fall into the range of 60-70%, these are 12 states. Clearly, the penetration of mobile is greater than internet owing to less capital costs and infrastructural requirements. The gender divide is also visible in internet

users with less coverage of female users perhaps due to lesser economic independence, social barriers, and less education.

Figure 7 (Year 2021)

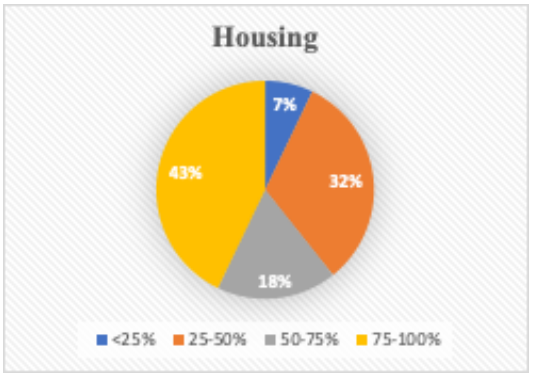


Figure 8 (Year 2020)

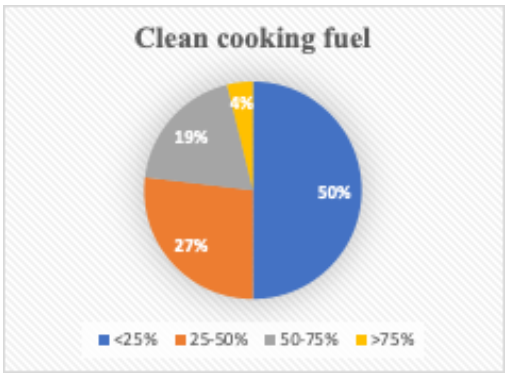


Figure 9 (Year 2020)

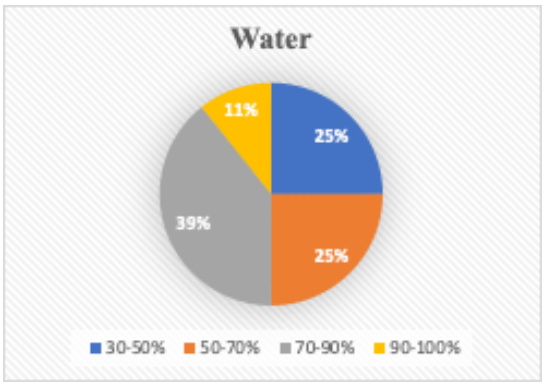


Figure 10 (2020)

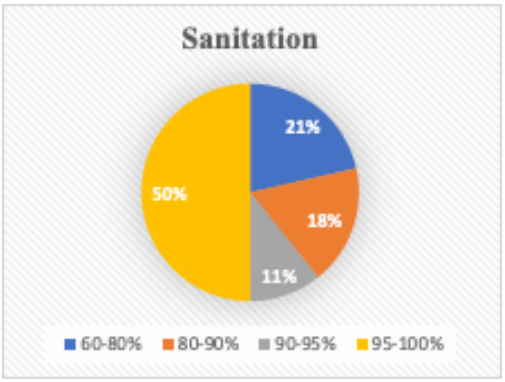


Figure 11 (Year 2022)

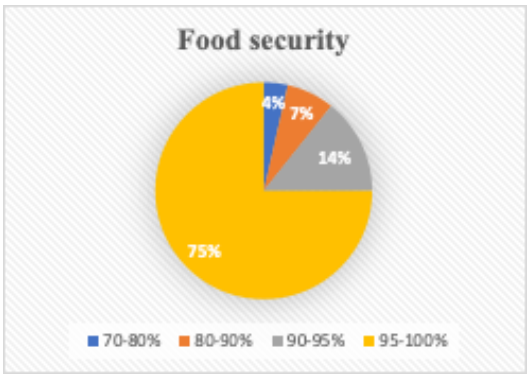
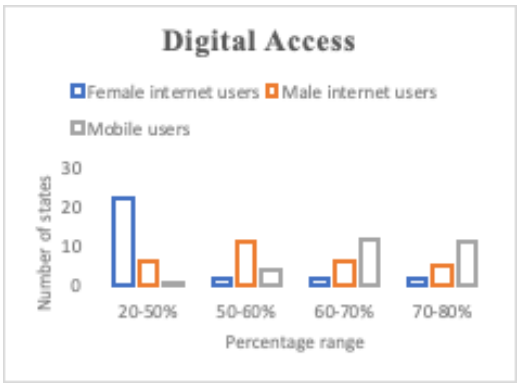


Figure 12 (Year 2021)



B. Health

Figure 13 shows the ranking of states on the pillar of health. Goa does best with a score of 0.71 with Andhra Pradesh coming second with a score of 0.66. The worst performing state is Bihar with a score of 0.34. The Standard deviation is 0.089.

Figure 14 shows the ranking of UTs in the pillar of health. Lakshadweep does best with a score of 0.81 whereas Dadra Nagar Haveli is second with a score of 0.62. The worst performing UT is Chandigarh with a score of 0.27.

Figure 13

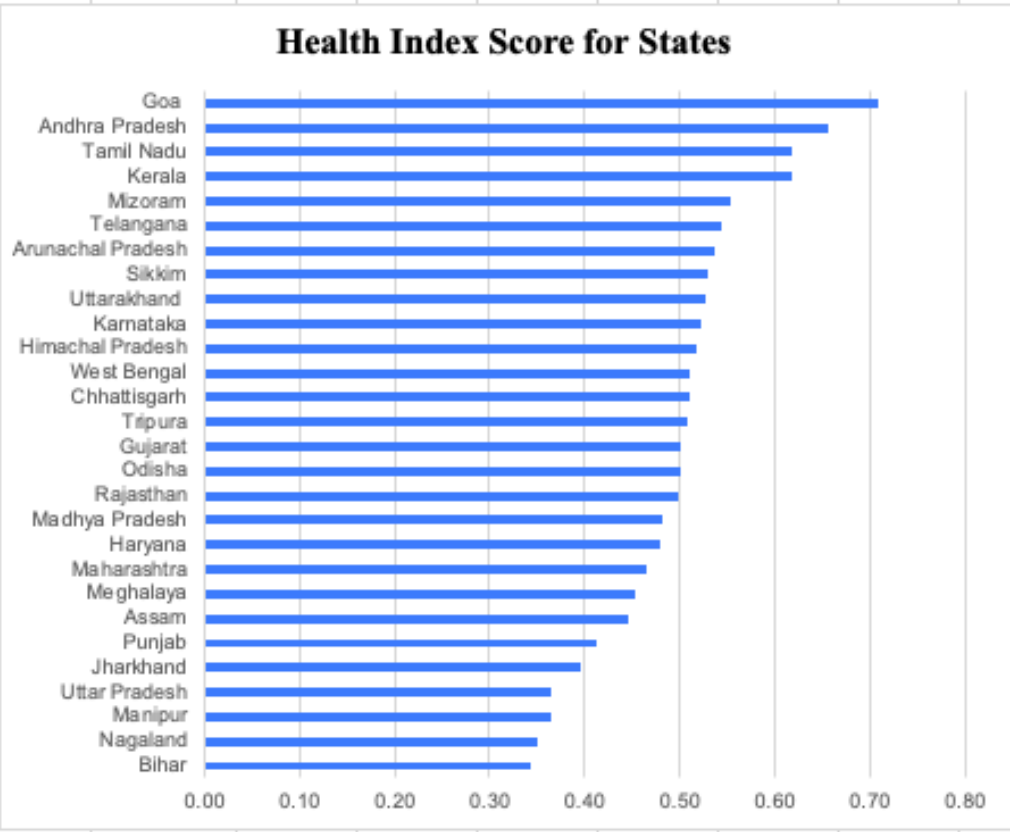
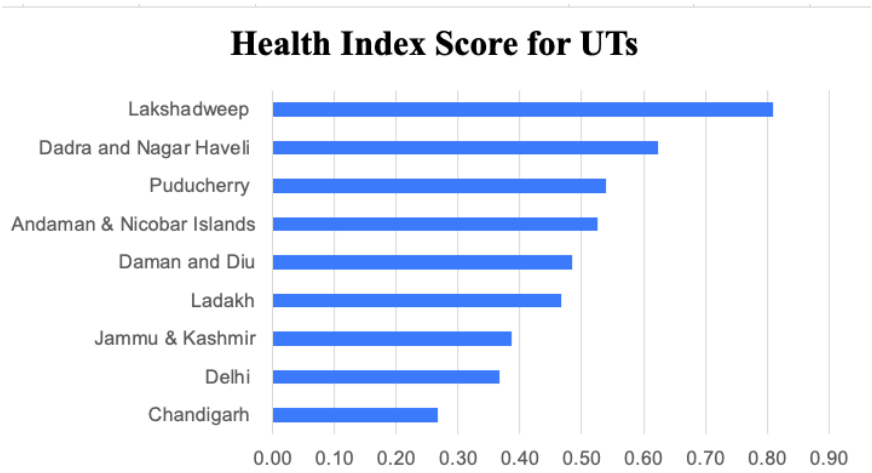


Figure 14



Public expenditure: Public expenditure in health by states and UTs (Rs. in 000) (per 1000 population) is an indicator reflecting the financial commitment to healthcare, showcasing annual spending on healthcare per thousand people. Higher values imply substantial investment in public health infrastructure and services, potentially resulting in enhanced health outcomes and improved accessibility. Notably, Goa attains the highest rank in this category with an average spending of around RS. 1238 per 1000 of its population, indicating commendable investment in state health. Conversely, Bihar ranks lowest with an average spending of RS. 115 per 1000 of its population, suggesting a need for increased focus and improvement in healthcare initiatives to address health-related challenges within the state. Figure 15 gives a percentage breakup of states with respect to public expenditure per 1000 population.

Mothers who had at least 4 antenatal care visits (%): It represents the percentage of pregnant women attending a minimum of four essential antenatal care sessions. Adequate antenatal care is critical for monitoring and enhancing maternal and foetal health, leading to a healthier pregnancy and childbirth. Goa (93%) and Tamil Nadu (89.9) emerge as top performers in this category, showcasing robust medical support for women's health. Conversely, Nagaland (20.7%), ranking the lowest, indicates a considerable gap and underscores the need for substantial improvements in providing antenatal care to ensure the well-being of pregnant women within the region. Figure 16 gives a percentage breakup of states on this indicator.

The percentage of mothers receiving postnatal care within two days of delivery: It is a key metric reflecting the timely provision of healthcare after childbirth. Goa (95.4%) and Kerala (93.3%) lead in this category, showcasing their commitment to maternal well-being and new-born health. Conversely, Meghalaya (43.9%) trails as the least performing state, raising concerns about accessibility and effectiveness of postnatal care. Timely interventions are critical to reducing complications. Addressing gaps in awareness, accessibility, and service

quality in Meghalaya is imperative to enhance maternal healthcare and ensure a healthier start for both mothers and new-borns in the crucial postpartum period.

The average out-of-pocket expenditure per delivery: It in a public health facility, excluding government aid, serves as a crucial metric reflecting the financial burden on individuals for childbirth expenses. It provides insights into the accessibility of affordable maternal healthcare. Haryana and Madhya Pradesh emerge as leading states with average out-of-pocket expenditure of Rs. 1666 and Rs. 1619, respectively, exemplifying efficient and cost-effective public health facilities that alleviate financial strain on individuals during childbirth. In contrast, Manipur lags with average out-of-pocket expenditure of Rs. 14518, indicating potential challenges in ensuring affordable maternal healthcare in public facilities. Addressing disparities in out-of-pocket expenses is essential to promote equitable access to quality maternity services and relieve financial stress on individuals seeking public health support.

The institutional births percentage: It is a crucial indicator reflecting the prevalence of childbirth within healthcare institutions, emphasizing safer deliveries with access to skilled professionals and essential resources. Kerala (99.8%) and Goa (99.7) stand out as top-performing states in promoting healthcare facility-based deliveries, showcasing a commitment to maternal and new-born well-being. In contrast, Nagaland (45.7%) experiences a significant gap, indicating challenges in encouraging institutional births. Addressing this disparity is vital to ensure that more expectant mothers in Nagaland have access to the safety and expertise provided by healthcare facilities during childbirth, ultimately contributing to improved maternal and infant health outcomes in the region. Figure 17 gives a percentage breakup of states with respect to this indicator.

The percentage of fully immunized children: It is a pivotal metric, reflecting the extent to which recommended vaccines are administered to ensure comprehensive protection against various diseases. Gujarat (100%) and Telangana (100%) emerge as exemplary states with high rates of fully immunized children, showcasing a robust commitment to child health and disease prevention. Conversely, Nagaland (57.4%) and Sikkim (64%) lag, indicating potential challenges in achieving optimal immunization coverage. Closing this gap is imperative to enhance the health and well-being of children in Nagaland and Sikkim, ensuring that they receive the necessary immunizations to safeguard against preventable diseases and promote a healthier future for the younger population in these states. Figure 18 gives a percentage breakup of this indicator with respect to different states.

The average radial distance covered by subcentres: It is a critical metric assessing the accessibility of primary healthcare services to communities. Lower values in this context signify a more efficient geographic reach, indicating that subcentres can serve populations within a shorter distance. Kerala and West Bengal stand out as top-performing states with average radial distance covered by subcentres as 1.42 and 1.6 km, respectively, demonstrating an effective and widespread coverage of subcentres. In contrast, Mizoram and Manipur face challenges with a comparatively higher average radial distance of 4.66 and 4.23 km,

respectively, suggesting potential accessibility issues in these regions. Addressing these disparities is crucial to ensure that primary healthcare services are easily accessible to communities in Mizoram and Manipur, promoting overall health and well-being. Figure 19 shows the percentage breakup of states for this indicator.

The number of government hospital beds per '000 population: It is a pivotal indicator offering insights into the healthcare capacity and infrastructure. Mizoram and Arunachal Pradesh emerge as top-performing states with 1 and 0.76 beds per 1000 of its population, demonstrating a higher density of government hospital beds per thousand people, indicative of a robust healthcare infrastructure with better accommodation potential for patients. Conversely, Bihar and Gujarat are identified as bottom-performing states 0.032 and 0.045 beds per 1000 of its population, suggesting a relatively lower density of government hospital beds. Addressing this disparity is essential to strengthen healthcare infrastructure in Bihar and Gujarat, ensure improved access to hospital beds and enhance the overall capacity to provide healthcare services to their residents.

The number of government hospitals, including subcentres, PHCs, and CHCs, per '000 population: It serves as a crucial indicator of healthcare availability. Andhra Pradesh and Himachal Pradesh lead the way with 1 and 0.374 subcentres, PHCs, and CHCs, per '000 population respectively, indicating a higher density of government healthcare facilities per thousand people. This suggests a more extensive network of primary and community healthcare services in these states, contributing to improved healthcare accessibility. In contrast, Bihar and Uttar Pradesh rank lower with 0.167 and 0.107 subcentres, PHCs, and CHCs, per ‘000 population respectively, highlighting potential gaps in healthcare infrastructure. Addressing this disparity is essential to enhance the availability of government healthcare facilities, ensuring comprehensive coverage and improved access to essential healthcare services in Bihar and Uttar Pradesh. Figure 20 gives the percentage breakup of this indicator for different states of India.

The number of government hospitals, encompassing District, Sub-District, and Medical Colleges, per '000 population: It is a vital measure of higher-level healthcare infrastructure. Himachal Pradesh and Arunachal Pradesh excel in this regard with 0.013 and 0.012 District, Sub-District, and Medical Colleges, per ‘000 population respectively, showcasing a higher density of government hospitals at various tiers per thousand people. This suggests a robust and comprehensive network of specialized healthcare services in these states, contributing to better access to advanced medical care. Conversely, Bihar and Uttar Pradesh score lower with 0.0007 and 0.0008 District, Sub-District, and Medical Colleges, per '000 population respectively, indicating potential challenges in offering specialized healthcare services. Addressing these disparities is crucial to strengthen the higher-level healthcare infrastructure in Bihar and Uttar Pradesh, ensuring equitable access to advanced medical facilities.

The count of beneficiaries under the National Health Mission (NHM) utilizing tele-consultation at Ayushman Bharat Health and Wellness Centres per '000 population: Itis a pivotal metric gauging the adoption of telehealth services. Uttarakhand emerges as a top-performing state with 3.4 beneficiaries per '000 population, indicating a higher utilization of telehealth services and effective integration into healthcare delivery. On the contrary, Punjab and West Bengal lag as the lowest scorers with 0.081 and 0.056, suggesting potential challenges in the widespread acceptance and utilization of tele-consultation services in these states. Addressing these variations is essential to enhance the accessibility and efficiency of telehealth services, promoting equitable healthcare access in Punjab and West Bengal.

The average rural population covered by a subcentre: It is a significant metric portraying the reach and coverage of primary healthcare services in rural areas. Goa and Mizoram stand out as top-performing states with a population coverage of 1781 and 1850, respectively, reflecting a lower average number of rural residents served by each subcentre. This suggests a more extensive and efficient coverage of primary healthcare services in rural regions of Goa and Mizoram. Conversely, Bihar and Uttarakhand rank as bottom performers with population coverage of 11753 and 8569, respectively, indicating potential challenges in achieving widespread coverage and accessibility of primary healthcare services in their rural areas. Addressing these disparities is crucial for ensuring equitable access to essential healthcare in Bihar and Uttarakhand.

The average medical expenditure incurred for non-childbirth-related hospitalizations in public hospitals, reflecting rural healthcare costs: It is a critical metric indicating the financial burden on rural residents seeking medical treatment. Tamil Nadu and Gujarat emerge as top-performing states with average medical expenditure incurred for non-childbirth-related hospitalizations of Rs. 520 and Rs. 1151 in rural area, respectively, showcasing lower average medical expenditure per case, suggesting a relatively more affordable healthcare landscape for rural populations. In contrast, Punjab and Himachal Pradesh rank as bottom scorers with average medical expenditure incurred for non-childbirth-related hospitalizations of Rs. 15093 and Rs. 12797 in rural area, respectively, pointing to potential financial challenges faced by rural residents during hospitalization. Addressing these disparities is essential to ensure that rural healthcare remains financially accessible and does not pose a significant economic burden on individuals in Punjab and Himachal Pradesh.

The average medical expenditure incurred for non-childbirth-related hospitalizations in public hospitals, focusing on urban healthcare costs: It is a crucial metric indicating the financial implications for urban residents seeking medical treatment. Tamil Nadu and Andhra Pradesh emerge as top-performing states with average medical expenditure incurred for non-childbirth-related hospitalizations of Rs. 433 and Rs. 1208 in urban, respectively, displaying lower average medical expenditure per hospitalization case, suggesting a relatively more economically accessible urban healthcare landscape. In contrast, Uttar Pradesh and Jharkhand rank as bottom performers with average medical expenditure incurred for non-childbirth-

related hospitalizations of Rs. 22376 and Rs. 15699 in urban area, respectively, pointing to potential financial burdens faced by urban residents during hospitalization. Addressing these variations is essential to ensure equitable access to affordable urban healthcare, particularly in states like Uttar Pradesh and Jharkhand, where financial constraints may affect healthcare accessibility.

Child mortality: It reflecting child health outcomes, denotes the number of deaths under the age of five per 1,000 live births. Kerala (5.2%) and Goa (10.6%) stand out as top-performing states, showcasing lower child mortality rates and demonstrating effective healthcare interventions for children. Their success points to comprehensive health strategies and healthcare infrastructure that contribute to better child survival rates. On the other hand, Uttar Pradesh (59.9%) and Bihar (56.4%) are identified as bottom states, suggesting challenges in child health and healthcare effectiveness. Addressing these disparities is crucial to improve child health outcomes, especially in states where child mortality rates remain higher, ensuring a healthier future for the younger population. Figure 21 gives a percentage breakup of the states with respect to child mortality.

The percentage of households with at least one usual member covered by any health insurance/financing scheme: It is a critical metric indicating the level of health insurance coverage within households. Rajasthan (87.8%) and Andhra Pradesh (80.2%) emerge as top-performing states, showcasing a higher percentage of households with health insurance coverage. This suggests enhanced financial protection against healthcare costs, contributing to improved accessibility and affordability of healthcare services for residents. Conversely, Himachal Pradesh (13.8%) and Uttar Pradesh (15.9%) rank as bottom states, signifying potential challenges in achieving widespread health insurance coverage. Addressing these disparities is essential to ensure equitable access to financial protection and healthcare services in Himachal Pradesh and Uttar Pradesh. Figure 22 shows the percentage breakup for states in this indicator.

Figure 15 (Year 2022)

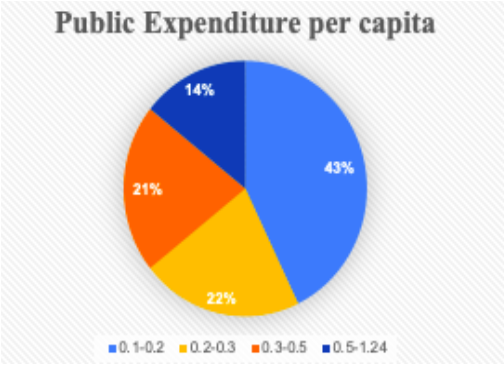


Figure 16 (Year 2021)

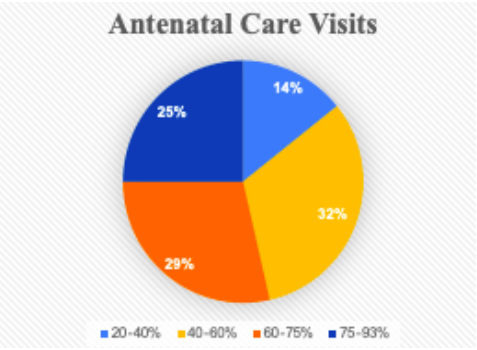


Figure 17 (Year 2021)

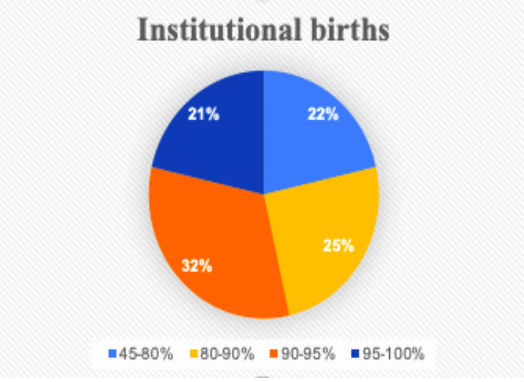


Figure 18 (Year 2021)

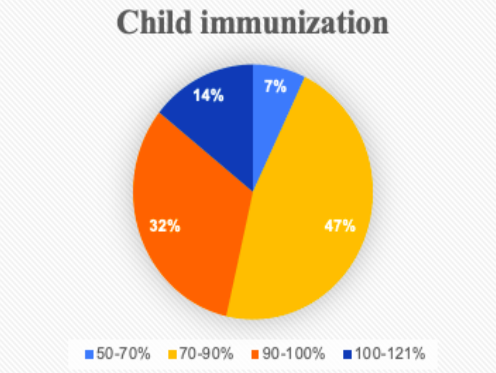


Figure 19 (Year 2022)

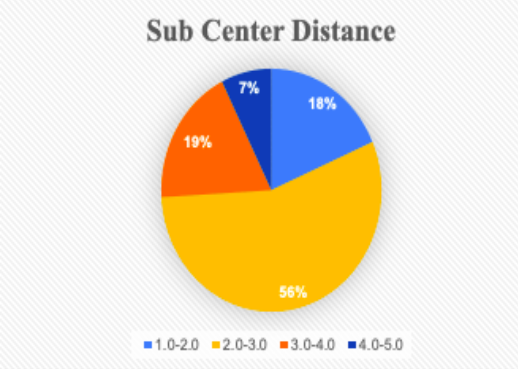


Figure 20 (Year 2022)

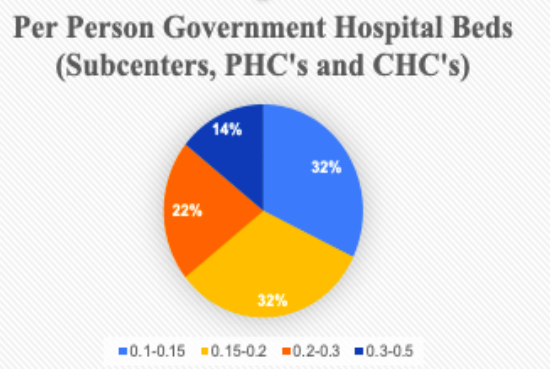


Figure 21 (Year 2021)

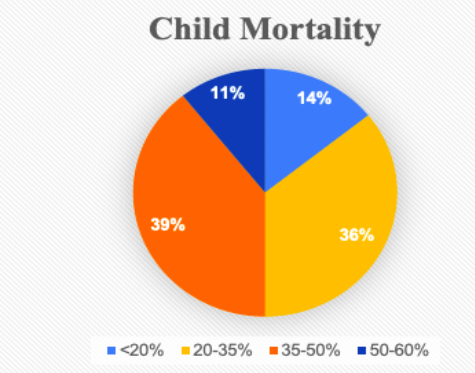
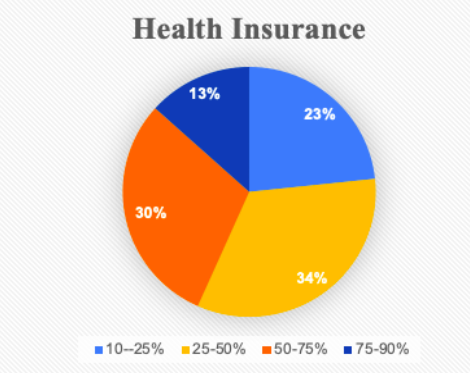


Figure 22 (Year 2021)



C. Education

Figure 23 shows the rankings of the states based on their score on educational attainment. Sikkim is the best performing state with a score of 0.72. The next best state is Kerala with a score of 0.61. The worst performing state is Meghalaya with a score of 0.22. The standard deviation of scores is 0.12. The median score is 0.47. Two southern states are in top five, including Goa. Two northern states, Himachal Pradesh and Haryana, are in the top 5. Three north-eastern states are in the bottom five, including Arunachal Pradesh and Nagaland. Rest of the bottom states include two eastern states of Bihar and Odisha. It is interesting to note that the scores for education are lower than scores for basic amenities except for states of Chhattisgarh, Jharkhand, and Tripura, where they are higher.

Figure 24 shows the ranking of UTs in the scores of education. Lakshadweep is the best performer with a score of 0.68. The next two best performers are the northern regions of Chandigarh and Delhi with scores of 0.65 and 0.58, respectively. Jammu and Kashmir is the worst performer with a score of 0.24. The median score is 0.50, which is higher than that of the states. Even for UTs, the scores of basic amenities are higher than that of education except for the region of Puducherry which performs better in education.

Figure 23

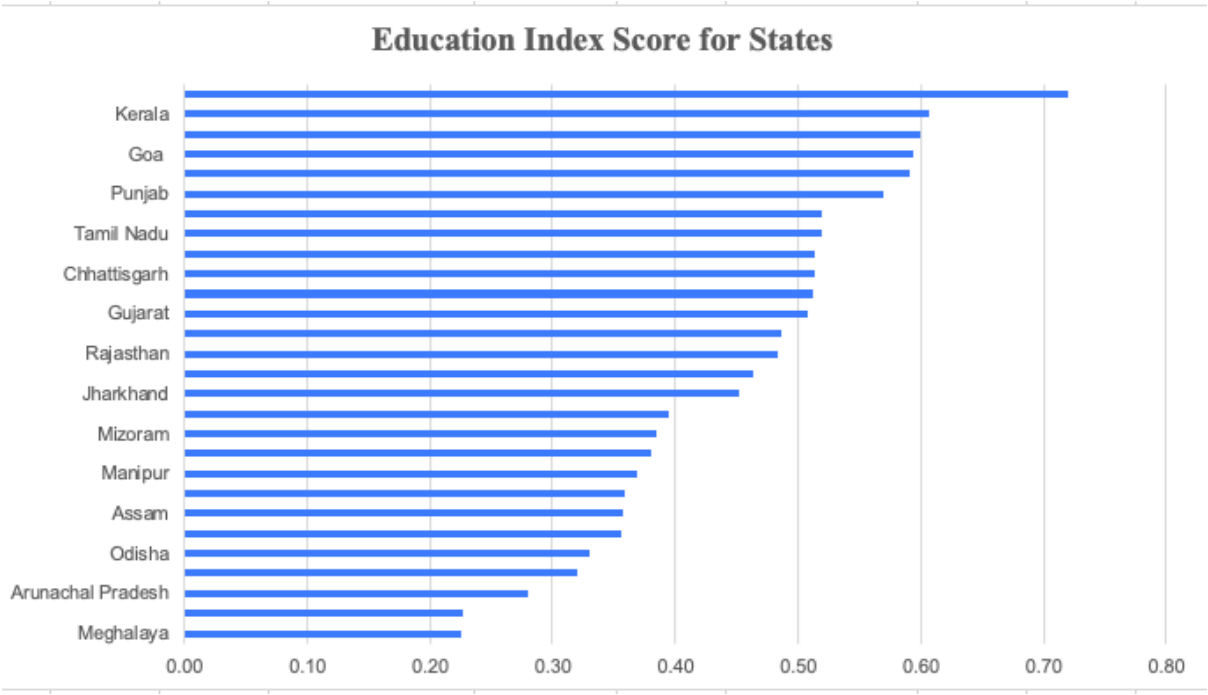
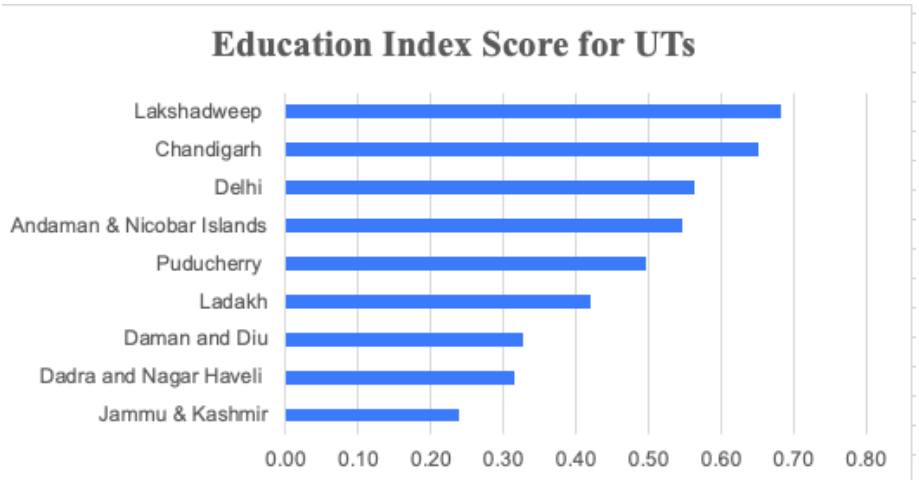


Figure 24



Average annual drop-out rate: The annual drop-out rate measures the number of students dropping out of the school annually. The highest drop-out rate is in Odisha which is 27.3. The lowest drop-out rate is in Manipur which is 1.3. The median drop-out rate is 11.2. Four states have a drop-out rate of greater than 20%, which means that one-fifth of students which join school dropout. These states, other than Odisha, are Meghalaya, Bihar, and Assam. As can be seen in Figure 25, 43% of the states have a drop-out rate between 10-20%. Only 14% of states report number between 1-5%. Such high rates of drop-out inhibit human capital formation, a necessary factor for economic growth. It also shows that children are most probably put into jobs in their school-going age leading to child labour. Poor financial condition of the family added to lack of proper school facilities at close distance would lead to such figures.

Pupil-teacher ratio: Pupil-teacher ratio measures number of students per teacher in a school. The higher the number, greater the number of students a teacher has to teach. This leads to lower focus per child and, hence, poor performance. The highest pupil teacher ratio is in Bihar which is 47. The lowest is 10 in Sikkim. The SDG target for India is 30:1. As per Figure 26, 18% of the state's report number higher than the target. Fifty per cent of the states have a ratio between 20-30 which is close to the target. The median ratio is 23. In states like Bihar, where the ratio is high, more teachers need to be employed for teaching purposes. It is also important that salaries are paid on time so that the youth is attracted to the profession.

Net enrolment rate: This parameter measures the percentage of school-going age students enrolled in school to the total number of school-going age students in the population. It is highest in West Bengal with a rate of 69.4% and lowest in Uttar Pradesh with a rate of 33.8%. The median rate is 51.05%. As per Figure 27, 15% of states have a rate between 30-40% whereas 32% states have a rate between 40-50%. This means that around half of these states have a rate below 50%. More than 50% of school-going age children in these states are not enrolled. Interestingly, India has a Right to Education Act which aims to provide free and compulsory education to children aged between 6-14. Despite more than 20 years of passing this act, the net enrolment ratios are well below those required to teach the young children of the country.

Schools with female toilets: This indicator measures the percentage of schools which have female toilets. It has been shown through research that many girls miss out on education because schools do not have functional toilets. The Supreme court of India has recently asked the central government to provide a national model for providing female toilets in schools commensurate with the number of girl students. The central government through its Sarva Siksha Abhiyan has provided funds for the construction of toilets. The state of Goa has the best performance with a 100% completion of female toilets. The worst performance is of the state of Arunachal Pradesh with only 68.8% of school toilets having girl toilets. As can be seen in Figure 28, 57% of the states have a completion rate between 95-100%. However, 21% of the states have a completion rate less than 80%. The median is 96.85%. It is important that the constructed female toilets are usable and washed regularly. Lack of maintenance could lead to collection of sludge making the toilet unusable.

Schools with functional computers: Knowledge of computers is essential in today's world. Earlier this knowledge is provided, the better the learning is likely to be. Hence, it is important for schools to have functional computers for their students to learn. Some states of India are doing excellent in this parameter. Punjab is the best performer with almost 100% coverage. Gujarat, Kerala, and Haryana are also doing well. Some states, however, have considerably poor performance. The worst performing state is Meghalaya with only 11% of schools having functional computers. As per Figure 29, 29% of states have coverage of less than 30%. More than half the states have less than 50% of their schools with functional computers and only 25% of states have a coverage of more than 75%.

Schools with functional internet: This indicator measures percentage of schools with functional internet. Two states, which perform outstandingly in this parameter, are Kerala with a coverage of 95% and Gujarat with a coverage of 92%. The worst performing state is Mizoram with a coverage of only 8%. As per Figure 20, 25% of states have a coverage less than 20% while 43% of states have a coverage between 20-40%. All states, except Kerala and Gujarat, have a coverage of less than 60%. The Kerala government has launched its own internet service provider leading to good results.[1]

Per capita public expenditure: This indicator measures the public expenditure per 1000 population. Higher public expenditure leads to better schools and better teaching facilities leading to better outcomes. The best performing state is Sikkim with a per capita expenditure of Rs 8681. The worst performing state is Bihar with a per capita expenditure of Rs 296. The median per capita expenditure is Rs. 1637. As per Figure 31, 14% of states have expenditure less than Rs 1000, i.e., they spend less than Rs 1 per capita on education. Thirty-nine per cent of states have expenditure between Rs. 1000-2000. Only 22% of states have per capita public expenditure on education greater than Rs. 3000. Spending on education leads to a greater human capital formation leading to higher outputs. The central government spent 4.6% of GDP on education in 2021[2], which is low in India where large number of students are not educated and employable.

Pradhan Mantri Gramin Digital Saksharta Abhiyan: This scheme was launched by the central government to empower at least one person per household with crucial digital literacy skills by 2020.

[1] https://economictimes.indiatimes.com/industry/telecom/telecom-news/this-indian-state-became-the-first-to-launch-its-own-internet-serviceslk-fon-or-kerala-fibre-optic-network/slideshow/100850942.cms?from=mdr [2] https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS?locations=IN

This parameter measures the number of people trained under the scheme in a state per 1000 population. The best performing state is Chhattisgarh with around 72 people

trained per 1000 population. The worst performing state is Kerala with only one person trained under this scheme per 1000 population. A caveat needs to be inserted here that the low figures for a state need not mean that the digital literacy is low. For a state like Kerala, digital literacy can be attained through other avenues other than the central government scheme, hence, these low values. However, for many states where digital literacy is low, this scheme provides an important information on the spread of digital literacy. As can be seen in Figure 32, 25% of the states have a reach of less than 20 people for this scheme. Only 14% of states have a reach of more than 60 people per thousand population.

Figure 25 (Year 2022)

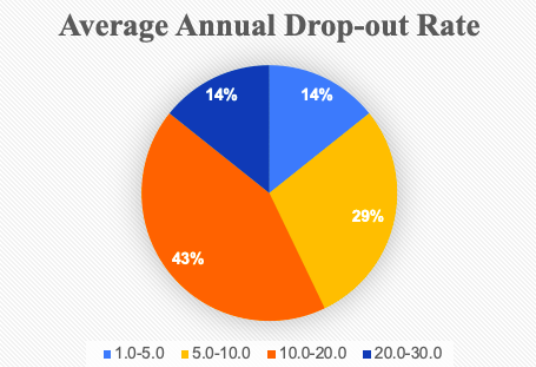


Figure 26 (Year 2022)

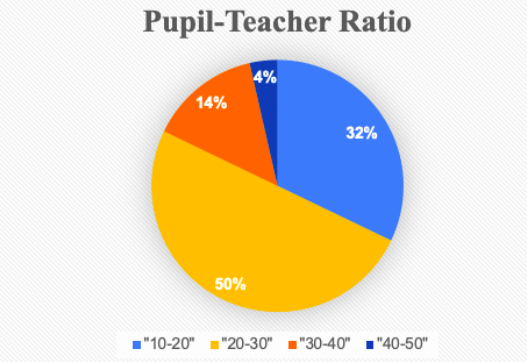


Figure 27 (Year 2022)

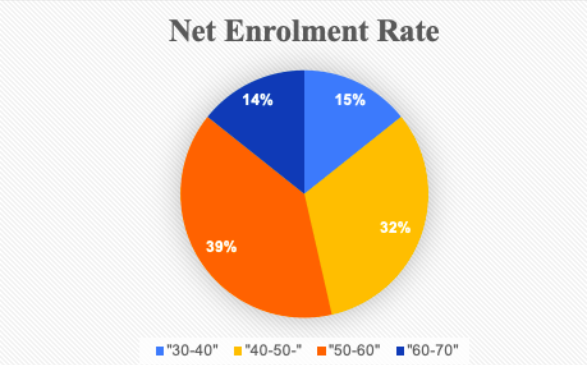


Figure 28 (Year 2022)

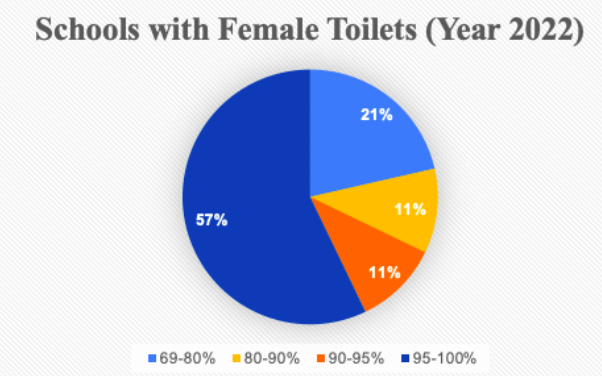


Figure 29 (Year 2022)

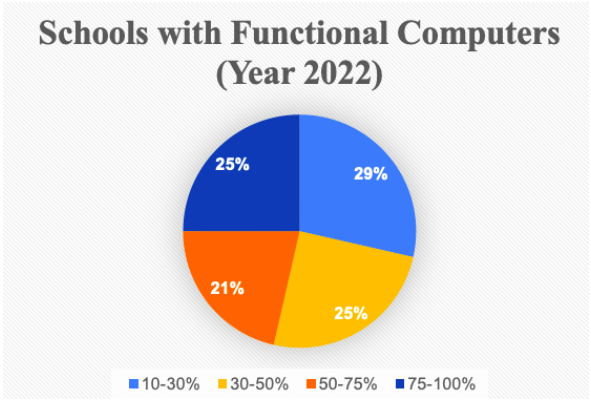


Figure 30 (Year 2022)

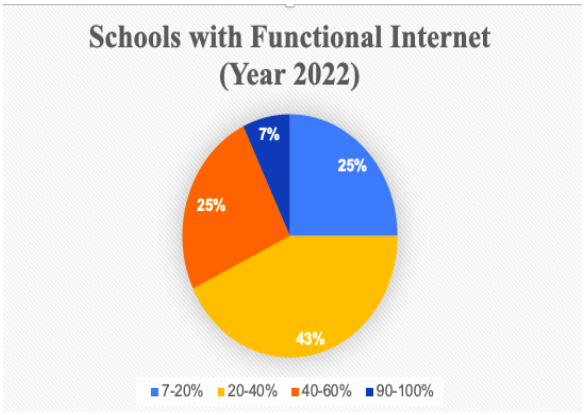


Figure 31 (Year 2020)

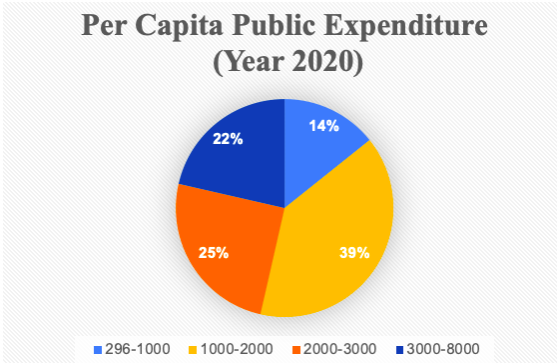
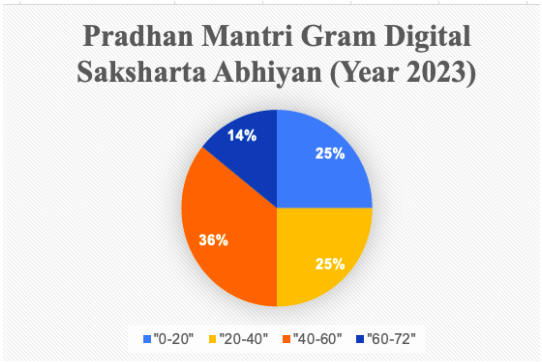


Figure 32 (Year 2023)



D. Socio-Economic Security

Figure 33 shows the ranking of states on the pillar of Socioeconomic Security Index Score. Andhra Pradesh does the best with a score of 0.7 with Goa coming second with a score of 0.60. The worst-performing state is Bihar with a score of 0.18. The two north-eastern states, Assam and Manipur, are the next worst performers with a score of 0.21. It is interesting to note that the top 8 performing states comprise all the 5 southern states and the bottom-most performing states are the north-eastern states. The median score for the sub-index is 0.34.

Figure 34 shows the ranking of UTs in the pillar of Socioeconomic Security. Chandigarh does best with a score of 0.75 whereas Daman & Diu is second with a score of 0.69. The worst-performing UT is Lakshadweep, with a score of 0.38. The islands have performed relatively poorly than other UTs. The median score for UTs is 0.56 which is the same as those of the states.

Figure 33

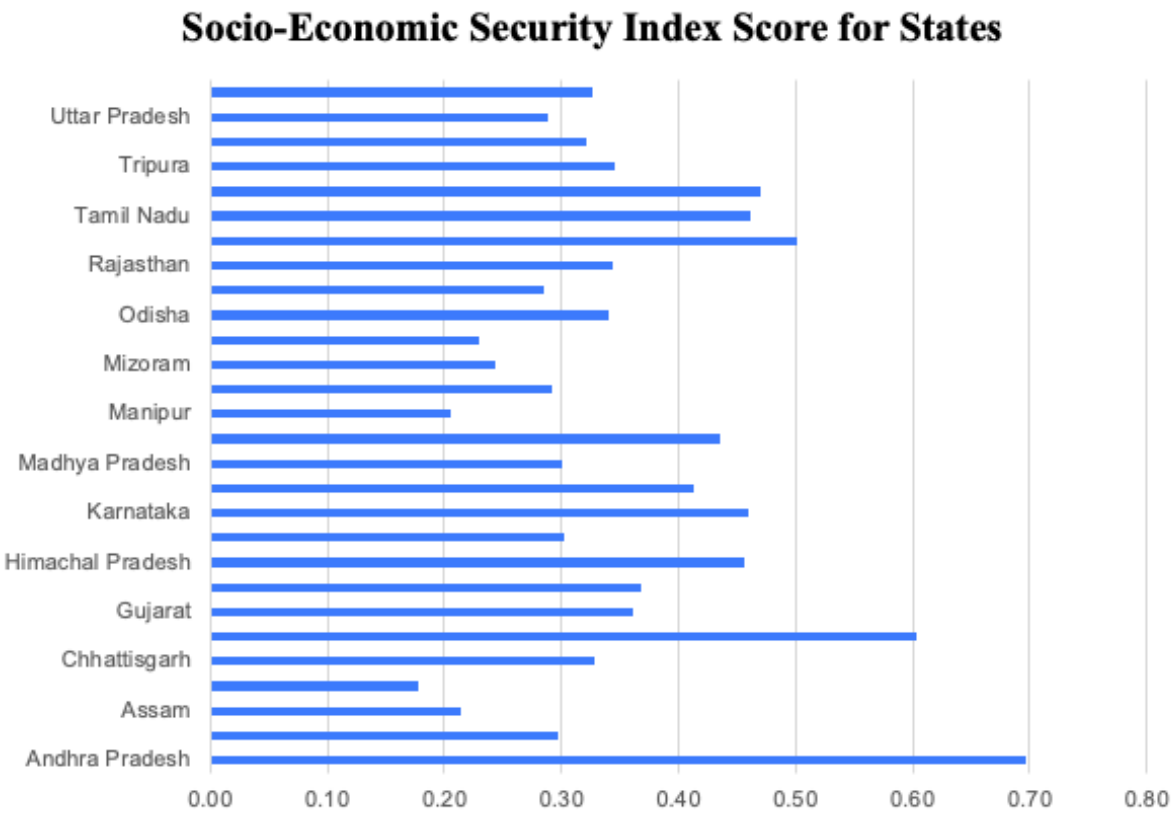
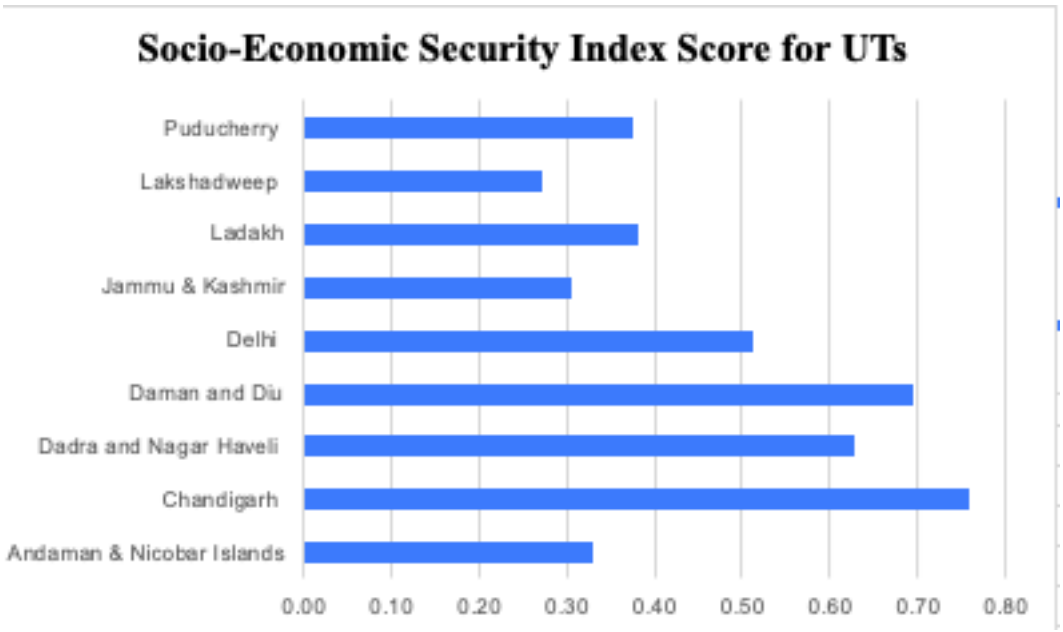


Figure 34



ATMs, CRMs, WLAs: The given statistics in Figure 34 reveal significant disparities in the availability of ATMs, CRMs, and WLAs across different states in India. About 51% of states have less than 25% availability of ATMs, CRMs, and WLAs, indicating a widespread issue of insufficient financial infrastructure. Only 11% of states fall in the 50-75% range, emphasizing the overall scarcity of these facilities. Bihar stands out as the worst-performer with only 10.7% availability, underscoring a critical need for increased financial infrastructure in the state. Goa, on the other hand, leads with 67.3% availability, showcasing a positive example for other states to emulate. UTs dominate the top positions, with 5 out of the top 7 spots. This is primarily due to a higher number of machines relative to the population in UTs. Chandigarh, Ladakh, and Daman & Diu are the top-performing UTs, emphasizing the correlation between machine availability and population density. The data suggests that southern and northern states generally fare better than their eastern and western counterparts. This could be attributed to varying levels of economic development and infrastructure investments. Despite some regional variations, the overall analysis indicates low financial inclusion levels in India. This could hinder economic growth and limit access to banking services for a significant portion of the population. States with low availability, such as Bihar, require targeted investment in expanding the network of ATMs, CRMs, and WLAs. Government and financial institutions should collaborate to address this issue. The adoption of digital banking technologies to complement physical infrastructure is encouraged. This includes promoting mobile banking, online transactions, and digital wallets to enhance overall financial accessibility.

Digital payments: Figure 36 offer insights into the frequency of digital transactions across different states in India. Approximately 35.5% of states have low digital transaction activity, with users transacting less than 2 times a day. Another 35.5% fall in the 2-4 times a day range, indicating a moderate level of digital engagement. Around 6% of states have a higher digital transaction frequency, transacting 4-6 times a day. Almost 23.5% of people in states transact digitally for more than 6 times a day, reflecting a significant adoption of digital payment methods. The data suggests that southern and northern states generally outperform their eastern and western counterparts in terms of digital transaction frequency. This could be attributed to varying levels of digital infrastructure, awareness, and economic development. Chandigarh emerges as the top-performing region with 38.48 transactions a day, showcasing a high level of digital engagement. Chhattisgarh is the bottom-performer with just 0.419 transactions a day, indicating a need for substantial improvement in digital transaction adoption. Four out of the top-performing regions are UTs (Chandigarh, Delhi, Daman & Diu, Dadra and Nagar Haveli), highlighting the correlation between administrative efficiency, smaller populations, and higher digital transaction rates. The data indicates a positive overall trend with good digital transaction penetration throughout India. This is a promising sign for the digital economy and financial inclusion.

Worker Population Ratio: The presented statistics in Figure 37 shed light on the distribution of the worker population ratio (WPR) across states in India. Approximately 21.62% of states exhibit a concerning trend with less than 50% WPR, signifying potential challenges in

workforce participation. A significant portion, around 46%, falls within the 50-60% WPR range, suggesting a moderate level of employment engagement. Conversely, around 32.5% of states boast a higher than 60% WPR, showcasing regions with robust workforce participation. Sikkim emerges as the top performer with an impressive 74% WPR, while Lakshadweep lags with just 35.5% WPR, indicating a need for employment enhancement in the latter. Notably, UTs occupy four of the eight bottom-most positions, highlighting a surprising underperformance in terms of workforce engagement. Delhi's 45.8% WPR contrasts with Chhattisgarh's 70% WPR, challenging preconceived notions about the correlation between urbanization and workforce participation. The western states outshine others, while northern and southern states demonstrate mediocre progress. Interestingly, some north-eastern states exhibit high WPRs with Arunachal Pradesh at 64.9%, Meghalaya at 65.8%, and Nagaland at 69.4%, while others lag. To address disparities, policymakers should focus on initiatives promoting employment opportunities, skill development programs, and targeted interventions in regions with lower WPRs. Collaboration between the government, private sector, and educational institutions can contribute to fostering a more balanced and inclusive workforce participation landscape across the country.

MGNREGA: The varied implementation of MGNREGA across states, as reflected in the statistics, highlights uneven effectiveness in addressing rural unemployment. While 27.27% of states providing employment to over 75% of seekers indicates strong administration in these areas, the 33.33% of states fulfilling under 25% of the demand points to significant challenges in program delivery. This disparity suggests issues like bureaucratic inefficiencies or lack of awareness. The full employment in Mizoram and Ladakh exemplifies optimal execution, possibly aided by smaller populations and effective local governance. Conversely, the zero per cent fulfilment in Andaman & Nicobar and Punjab is concerning, signalling urgent need for intervention. These figures underscore the necessity for tailored strategies to improve MGNREGA's reach and impact across different regions.

Workers without social benefit in non-agriculture sector: These statistics reveal a concerning trend in social security coverage for non-agricultural workers across India. With approximately 43% of states having over 75% of such workers without benefits, there is a significant gap in the social safety net. This gap exposes a large portion of the workforce to risks like healthcare emergencies and income instability. The high numbers in Delhi and Punjab indicate an urgent need for policy intervention in more urbanized or industrialized regions. Conversely, Ladakh's lower figures suggest better coverage or a smaller workforce, pointing towards the effectiveness of localized or sector-specific strategies. Overall, these numbers underscore the critical need for expanding and tailoring social security schemes to protect a broader segment of the workforce.

Bank credit of Scheduled Commercial Banks: The distribution of state-wise bank credit from Scheduled Commercial Banks reveals significant regional disparities in financial access across India. With almost 64% of states having less than 25% bank credit, there's a clear

indication of underbanked regions, predominantly in economically lagging areas like Bihar. This low penetration of bank credit can hinder economic growth and the development of small businesses and industries. In contrast, states like Maharashtra, with high credit availability, likely benefit from enhanced economic activities and growth opportunities. The nearly equal proportion of states in the 25-75% and above 75% brackets suggests that while some regions are well-served, a substantial portion still struggles with inadequate financial services, highlighting the need for targeted policy interventions to bridge this gap.

Figure 35 (Year 2023)

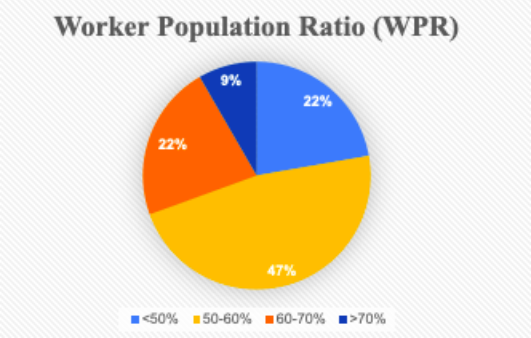


Figure 36 (Year 2023)

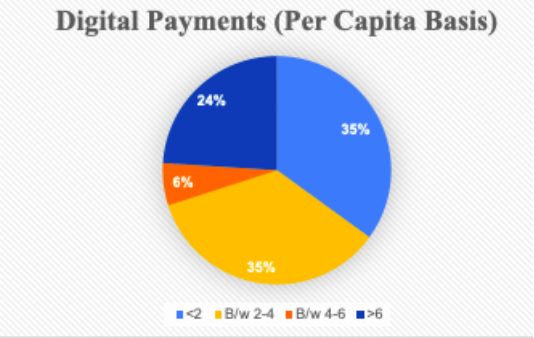


Figure 37 (Year 2023)

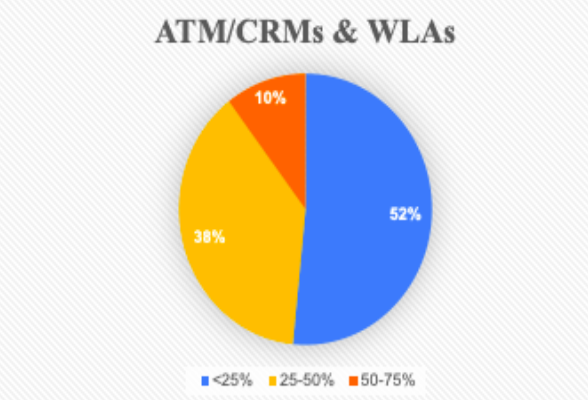


Figure 38 (Year 2021)

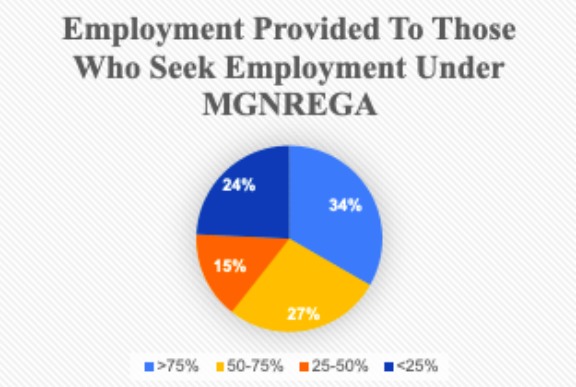


Figure 39 (Year 2022)

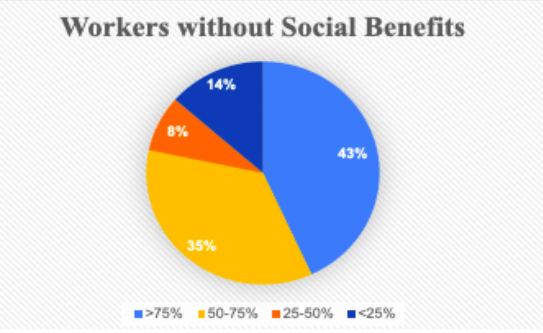
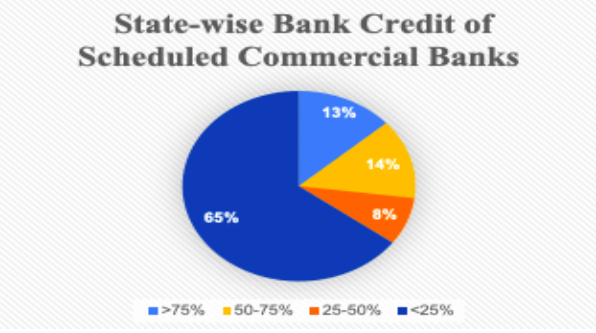


Figure 40 (Year 2022)



E. Legal Recourse

Access to legal recourse is important to provide justice to the citizens of India. Owing to the increasing population of the country, the Indian courts and police are under stress to tackle the increasing number of cases of law and order in different states. This pillar is accessed by 15 sub-indices covering police, the pending cases, high courts, legal service clinics, state citizens portal, prisons, and gender variability.

The best performing state in this pillar is surprisingly Nagaland, which is overall an aspirant state. It has a score of 0.67. The second-best performing state is Andhra Pradesh with a score of 0.66. The worst performing state in this pillar is Bihar with a score of 0.36. Uttar Pradesh with a score of 0.39 is the second worst-performing state. A chart showing the AEI score of sheets is shown in Figure 41. Figure 42 shows the chart for UTs. The best-performer is Lakshadweep with a score of 0.61. The worst-performer is Daman and Diu with a score of with a score of 0.29.

Figure 41

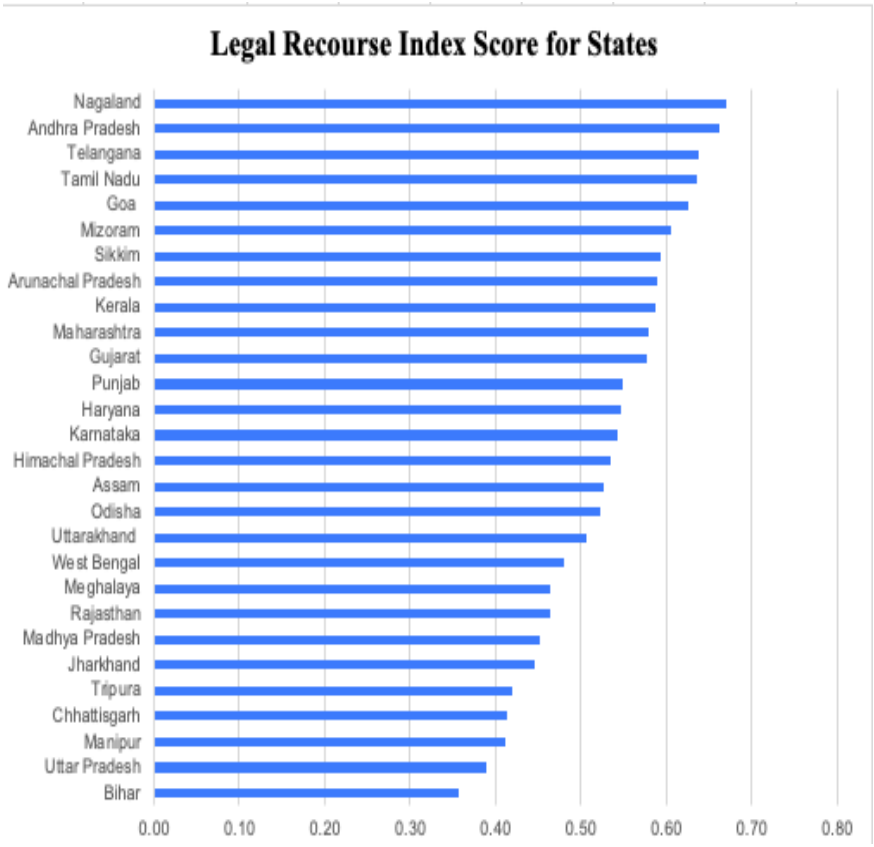
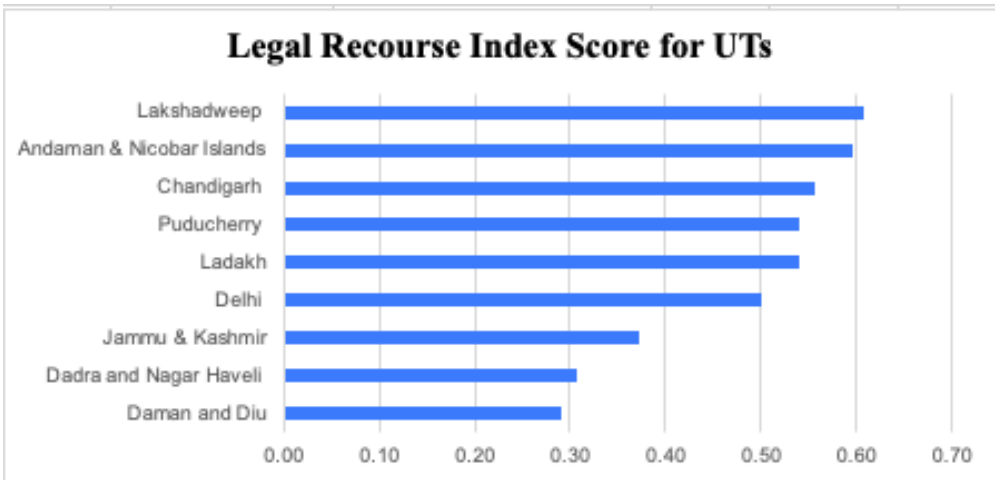


Figure 42



Police: The indicators which measure police performance are population per civil police stations, total police stations per population, inmates per police officer, and state police officer vacancy. For population per civil police stations, the best performer is Manipur with value of 211 and the worst performer is Bihar with a value of 1695. For total police stations per population, the worst-performer is Uttar Pradesh and the best-performer is Uttarakhand. For inmates per police officer, the best-performer is Nagaland with a value of 14 whereas the worst-performer is Uttarakhand with a value of 532. For state police officer vacancy, the best-performer is Sikkim with a score of -4.2 whereas the worst-performer is Bihar with a score of 53.8. Figure 43, Figure 44, Figure 45, and Figure 46 show the percentage-wise breakup of these four measurement parameters for different states.

Pending cases: This indicator is measured by two parameters: proportion of pending cases (0-1 years) and the percentage of total pending cases as a percentage of total cases for investigation. In the former parameter, Bihar is the best-performer with a value of 20.2, and Sikkim is the worst-performer with a value of 76.8. In the latter parameter, Gujarat is the best-performer with a value of 6.9, whereas Manipur is the worst-performer with a value of 92.7. Figure 48 shows the percentage breakup of these parameter as per the states.

High courts: This indicator is measured by court hall shortfall, population per high court judge, high court judge vacancy, and number of functional e-courts per population. For court hall shortfall, the best-performing state is Maharashtra with a value of -7.3, whereas the worst-performing state is Meghalaya with a value of 46.5. For population per high court judge, the best-performer is Sikkim with a value of 227667, and the worst-performer is Bihar with a value of 3674088. For high court judge vacancy, the best-performer are Sikkim, Nagaland, Mizoram,

Assam, and Arunachal Pradesh with a value of 0. The worst-performer is Rajasthan. For number of functional e-courts per population, the best-performer is Mizoram whereas the worst-performer is West Bengal. Figures 45, 47 and 49 show the percentage breakup of these parameters within states.

Legal service clinic and citizens portal: This indicator is measured by average villages per legal service centre, and services provided by state citizens portal. For the former, the best-performing state is Kerala with a value of 2.8. The worst-performing state is Chhattisgarh with a value of 19567. For the latter, the best-performing state is Gujarat with a value of 91 and there are two worst-performing states with a score of 0: Manipur and Mizoram. Figure 46 and Figure 48 show the percentage breakup of states in these two parameters.

Prison occupancy: This indicator measures the percentage occupancy of prisons in the state. Surprisingly, many states have occupancy higher than 100% which indicates cramping up in prisons and lack of proper infrastructure to cater to the prisoners. The best-performing state in this indicator is Nagaland with a rate of 34.5%. The worst-performing state is Uttar Pradesh with a rate of 185%. Figure 50 shows the percentage breakup of states with respect of prison occupancy. Fifty-seven per cent of states have a rate of more than 100%. Efforts need to be made to increase the number of prisons in these states. The fast judgement of courts specially in case of undertrials would also help reduce the prison occupancy.

Gender: This indicator is measured by share of women judges and women in police. For the former, the best-performing state is Sikkim with a percentage of 33.3. A number of states, which are worst performing in this area with a score of 0, include Bihar, Uttarakhand, Manipur, Meghalaya, and Tripura. For the latter, the best-performing state is Andhra Pradesh with a score of 21.8. The worst-performing state is Tripura with a score of 5.8. Figure 52 and 53 show a percentage breakup of the states on these two parameters.

Figure 43 (Year 2022)

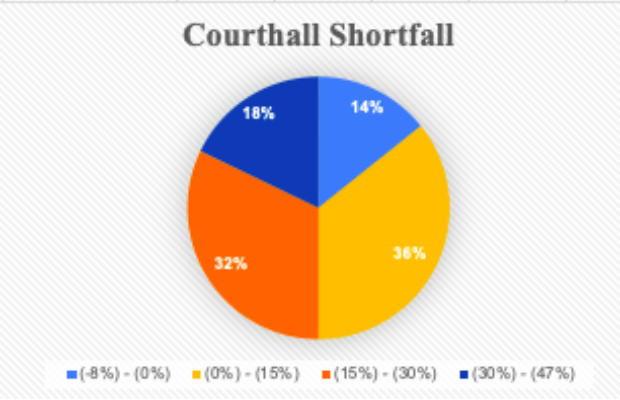


Figure 44 (Year 2022)

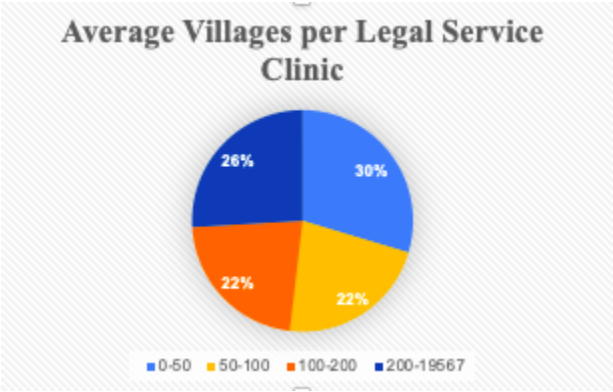


Figure 45 (Year 2022)

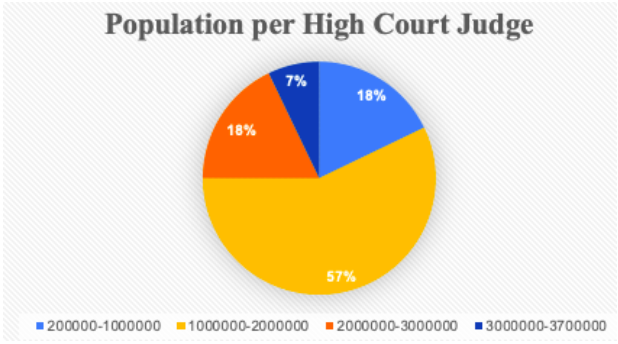


Figure 46 (Year 2022)

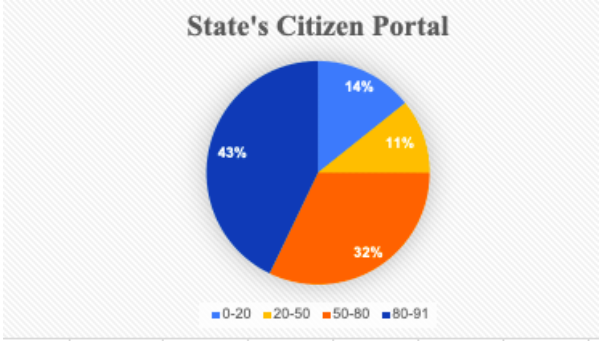


Figure 47 (Year 2022)

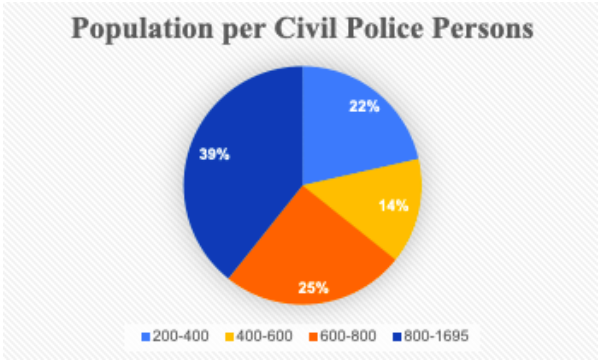


Figure 48 (Year 2023)

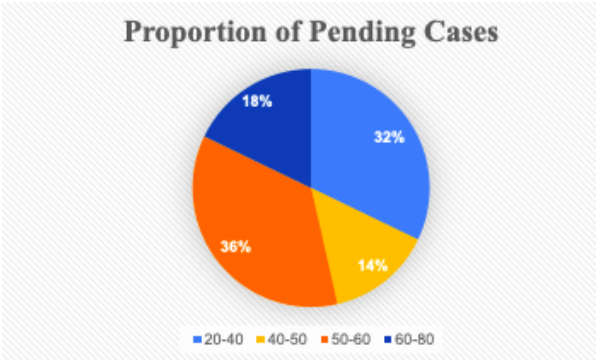


Figure 48 (Year 2022)

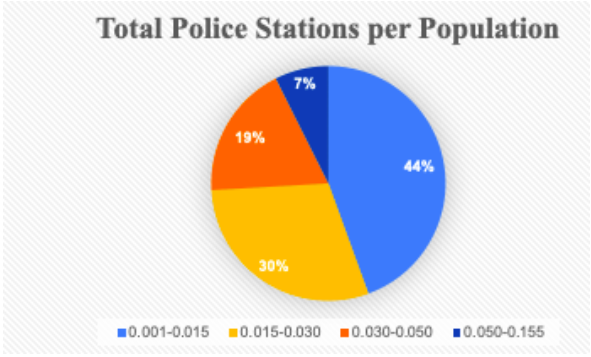


Figure 49 (Year 2022)

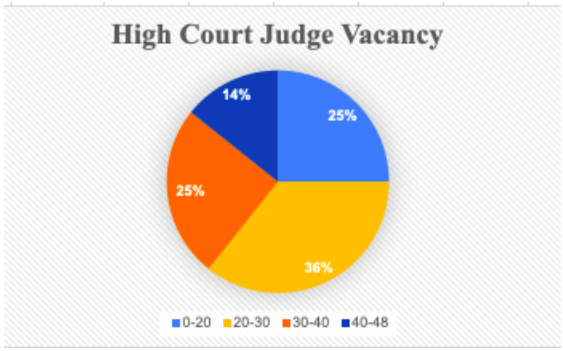


Figure 50 (Year 2021)

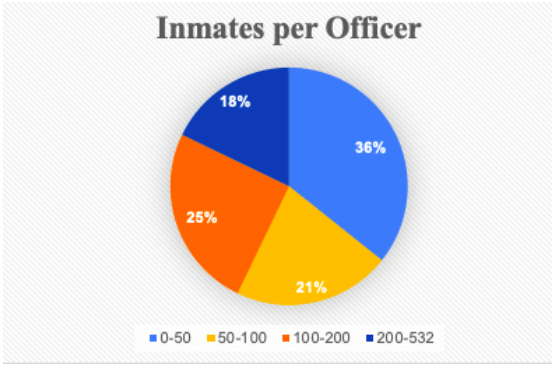


Figure 51 (Year 2022)

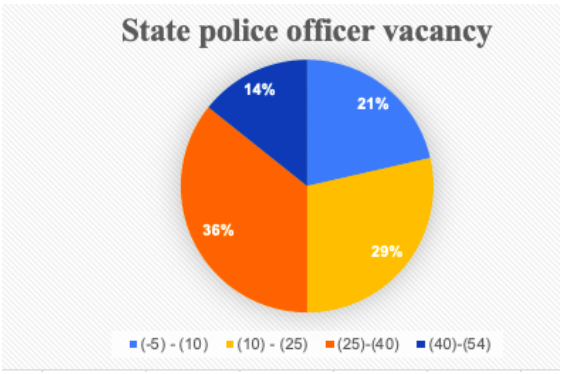


Figure 52 (Year 2021)

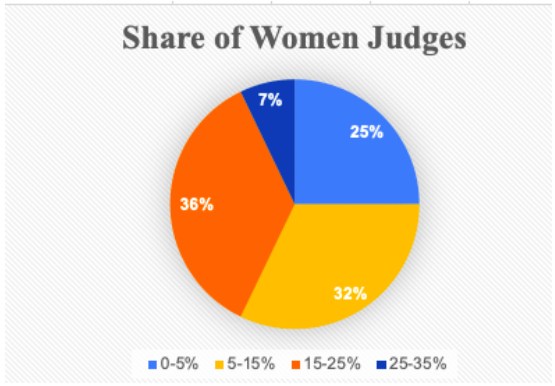


Figure 53(Year 2022)

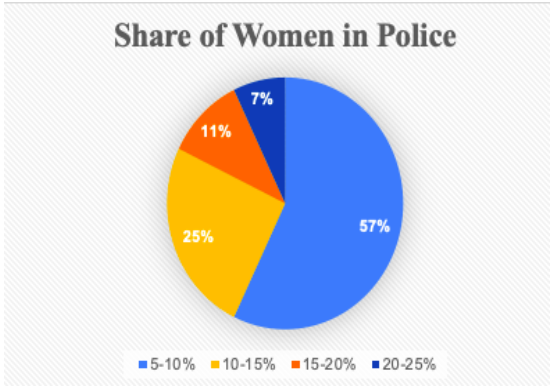


Figure 54 (Year 2022)

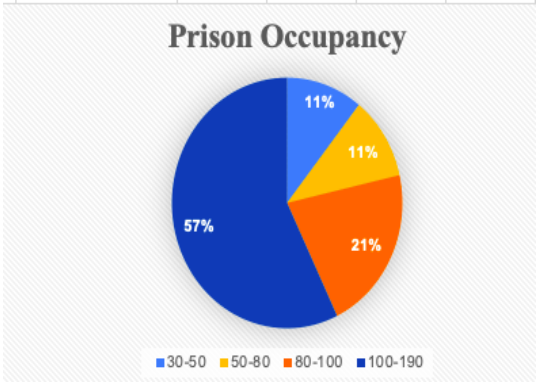


Figure 55 (Year 2022)

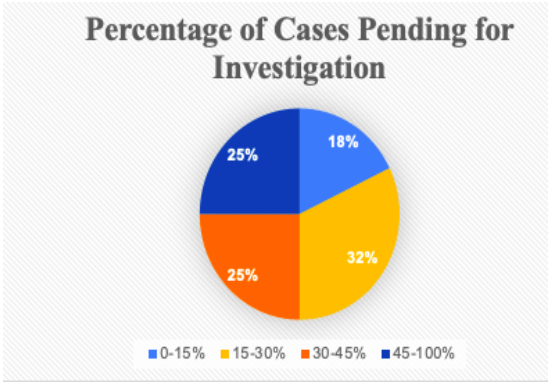
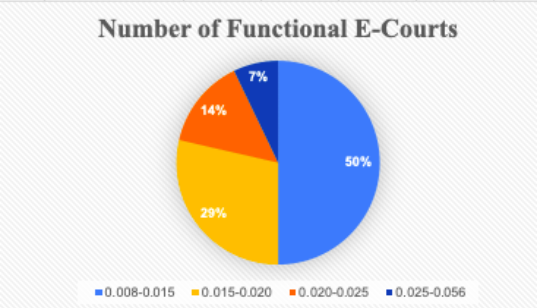


Figure 56 (Year 2023)

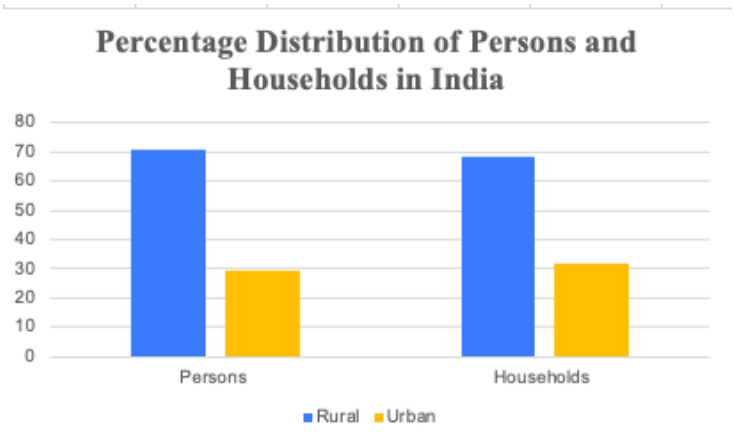


4. Equality of Whom?

The power dynamics stemming from regional disparities between rural and urban areas shape economic, political, and social landscapes. Economic opportunities, resource access, and political influence often favour urban centres, leading to a significant rural-urban divide. Examining livelihoods through this spatial lens is imperative for implementing inclusive policies. It highlights the unequal distribution of resources, employment challenges, and disparities in access to justice. By acknowledging and addressing these disparities, policymakers can foster a comprehensive approach to development, ensuring that both rural and urban communities receive the attention and support needed for sustainable and equitable growth.

Approximately 70% of the population, constituting 68% of households, resides in rural areas, whereas 29.2% of the population, comprising 32% of households, resides in urban areas.

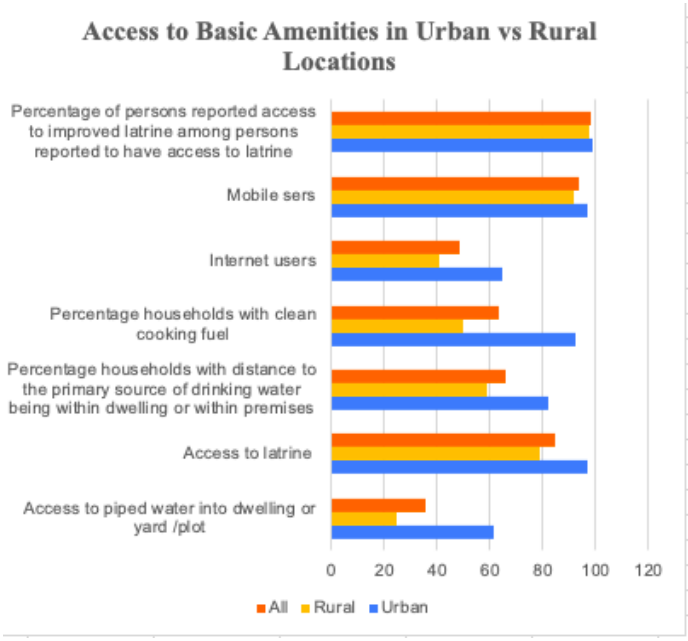
Figure 57



A. Basic Amenities

There exists a gap between the rural and urban populations in terms of access to all basic amenities considered in this report, with the rural population being in the disadvantaged position.

Figure 58



Access to drinking water: The provision of safe drinking water is an important non-food factor influencing health and nutrition. On average, a mere 22.5% of rural households have access to piped water within their plot or yard throughout the year, while a significantly higher 58.9% of the urban population enjoys such access. This implies that many in rural India rely on groundwater and untreated surface water. This raises questions about the reach of the Jal Jeevan Mission Scheme, which aims to provide safe and adequate drinking water to all households in rural India by 2024.

Access to sanitation: There has been noteworthy progress in the percentage of households with access to latrines, evident in both rural and urban areas. Urban regions demonstrate a significantly better 80.8% of households with access to latrines, whereas rural areas exhibit a lower but still substantial figure of 68.8%.

However, it's essential to acknowledge the challenges in attaining latrine access in rural areas. Factors, such as limited infrastructure development, geographical constraints, and economic disparities contribute to the difficulties faced by rural communities in securing latrine facilities. These obstacles emphasize the need for targeted interventions and infrastructure investments to address the disparities in sanitation access between urban and rural settings.

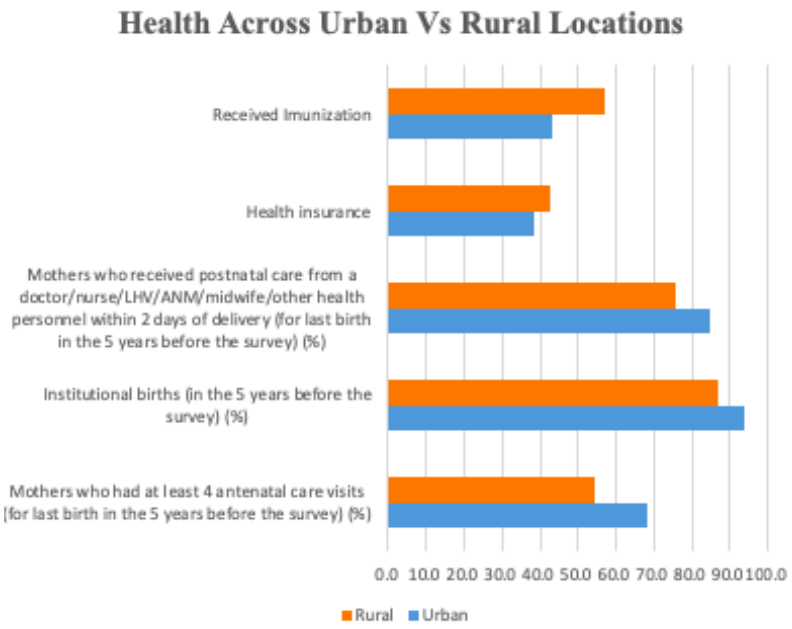
Access to clean cooking fuel: Access to clean cooking fuel exhibits a notable contrast between urban and rural households. Approximately 92% of urban households utilize clean cooking fuel, whereas only 49.8% of rural households have adopted this cleaner energy source. Despite advancements in overall energy access with 95% of the rural population availing electricity at home, the transition to clean cooking fuel has not experienced a proportional increase.

Access to digital services: While the disparity in mobile usage is minimal, with rates of 93.3% in rural and 96.6% in urban areas, a notable gap exists in internet adoption. In rural regions, a mere 41% of the population has availed internet services, whereas in urban areas, the adoption rate is higher but still stands at 64.6%. This substantial contrast emphasizes the need for focused initiatives to bridge the digital divide, particularly in enhancing internet accessibility in rural communities.

B. Health

The presented percentages offer a comprehensive view of healthcare utilization and coverage, unveiling critical insights into maternal and child health indicators, access to healthcare services, and disparities among diverse social groups and between urban and rural areas. These figures not only underscore the existing disparities but also serve as pivotal metrics for targeted interventions and policy formulation. In essence, these percentages collectively form a comprehensive mosaic of healthcare utilization and coverage, offering a nuanced understanding of the health landscape among different social groups and between urban and rural areas. This data is invaluable for shaping evidence-based policies aimed at reducing disparities, enhancing healthcare access, and ultimately, improving the overall health outcomes for mothers and children across diverse communities.

Figure 59



Antenatal care disparity: The urban advantage in antenatal care (68.1%) over rural areas (54.2%) may result from better healthcare accessibility and awareness. Urban settings often boast more healthcare facilities and information dissemination, encouraging pregnant mothers to seek and receive adequate antenatal care, vital for monitoring the health of both mother and child during pregnancy.

Postnatal care disparity: Urban areas (84.6%) surpass rural (75.4%) in postnatal care, indicating improved healthcare access and awareness. Urban women are more likely to receive timely care after childbirth from healthcare professionals, ensuring early detection and management of potential complications, contributing to better maternal and neonatal outcomes.

Institutional births disparity: The substantial urban lead in institutional births (93.8%) compared to rural (86.7%) reflects better access to healthcare facilities and skilled attendants in urban areas. This disparity emphasizes the importance of promoting institutional deliveries for safer childbirth practices.

Health insurance coverage disparity: The slight urban lag in health insurance coverage (38.1%) against rural areas (42.4%) suggests a need for increased awareness and accessibility in urban settings. This difference could be influenced by factors such as income levels, education, and healthcare infrastructure, highlighting areas for improvement in urban health insurance outreach.

Immunization disparity: Rural areas (57.0%) outperform urban (43.1%) in childhood immunizations, indicating a positive trend in rural healthcare. This could result from targeted immunization campaigns and outreach efforts in rural communities, emphasizing the importance of continued efforts to ensure comprehensive vaccine coverage and reduce preventable diseases among children in both urban and rural settings.

C. Education

Figure 60

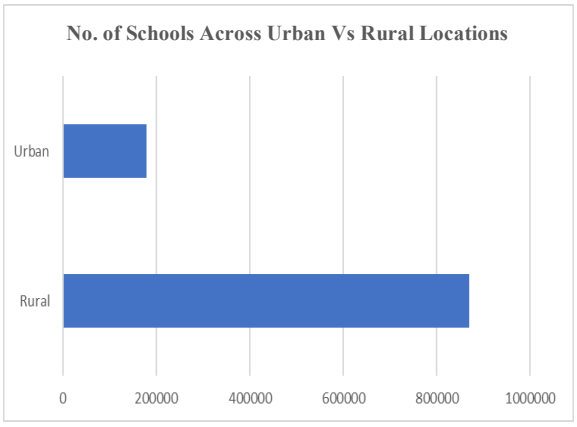
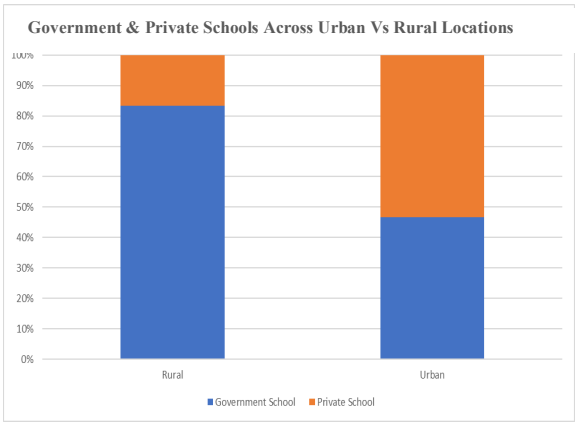


Figure 61



The rural-urban divide in the total number of schools reflects a disparity in educational infrastructure and accessibility across different geographic settings. Rural areas, characterized by expansive landscapes and dispersed populations, exhibit a greater prevalence of schools, potentially addressing the educational needs of a scattered populace. This distribution aligns with the often-agrarian nature of rural regions, catering to the families engaged in agricultural activities. In contrast, urban areas with higher population densities and more centralised economic opportunities, maintain a comparatively lower count of schools. This pattern may emerge from the concentration of educational facilities to serve a denser urban population.

The rural-urban educational landscape exhibits a distinct pattern in the prevalence of government and private schools, reflective of broader socio-economic dynamics. In rural areas, the predominance of government schools underscores a reliance on publicly funded institutions to provide accessible education, especially, for economically disadvantaged families dispersed across expansive landscapes. These government schools play a critical role in addressing the educational needs of rural populations. In contrast, urban regions, characterized by greater economic opportunities, witness a higher proportion of private schools. The urban populace, often possessing the financial means to explore alternative education options, gravitates towards private institutions, seeking perceived advantages, such as smaller class sizes and enhanced facilities.

Conversely, while private schools are more prevalent in urban areas, there is a notable presence in rural regions as well, indicating an evolving trend. This may signify a response to improving economic conditions or an increasing demand for diverse educational choices in rural communities. The rural-urban divide in the distribution of government and private schools highlights the need for tailored educational policies that address the unique challenges and aspirations of both settings, ensuring equitable access to quality education and fostering an inclusive learning environment across diverse geographic landscapes.

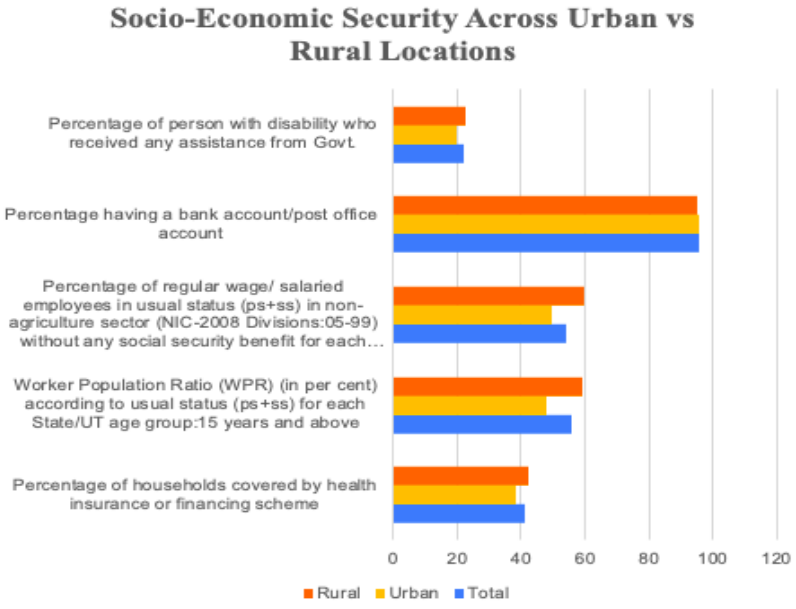
Simultaneously, the rural-urban educational divide highlights the nuanced dynamics in catering to diverse populations. The prevalence of government schools in rural areas acknowledges the importance of publicly funded education to serve dispersed communities, especially, those engaged in agrarian activities. Conversely, the higher presence of private schools in urban areas aligns with economic affluence and centralized opportunities, emphasising the demand for alternative educational choices.

D. Socio-economic security

The essence of financial inclusion is to ensure the universal delivery of financial services, encompassing active and functional bank accounts, low-cost credit, financial advisory services, insurance facilities, etc. Banking can be defined as a fundamental infrastructure providing crucial means to empower individuals and households, economically and socially. Social security ensures support for the employed, retired, disabled, and unemployed, promoting income stability and

social standing, thus, making everyone feel protected and empowered, preventing exploitation. As there is certainly a power dynamic between rural and urban, it's vital to understand how widely the socio-economic sub-indicators are adopted, through the lens of regional disparity.

Figure 62



Access to work: The Worker Population Ratio for individuals aged 15 and above reveals interesting trends. In urban areas, this ratio stands at 47.7% while, surprisingly, it is higher in rural settings, reaching 59.4%. This unexpected difference highlights a notable employment engagement in rural regions, possibly influenced by diverse economic activities and opportunities through MGNREGA and other rural schemes in those areas.

Access to health insurance: Unexpectedly, health insurance coverage is higher in rural areas reaching 42.4% compared to urban areas, where it stands at 38.1%. This signifies the necessity for increased implementation of health insurance and financing initiatives in both rural and urban settings. Efforts should be directed towards enhancing the awareness and implementation of Pradhan Mantri Jan Arogya Yojana and other schemes to ensure more widespread and equitable coverage across both demographics.

Access to bank accounts: Around 95% of both urban and rural households have access to bank accounts. This widespread access to banking services signifies a positive trend towards financial inclusion across diverse communities.

Assistance to divyang: Only 19.9% of the differently-abled population in urban areas receive government assistance, while the figure is slightly higher at 22.4% in rural regions. This implies that a substantial number of individuals with disabilities have not availed themselves of

government schemes, such as DISHA, VIKAS, GHARAUNDA, and many others, provided by the Ministry of Social Justice and Empowerment. This underlines the need for policymakers to take action and implement inclusive government programmes that cater to the needs of the differently-abled.

Furthermore, urban areas exhibit a significant 66% dependency on non-farm informal employment whereas 80% of the rural population rely on it. A substantial 59.9% of the non-agricultural rural population lacks access to **social security benefits**, compared to 49.4% in urban areas. The Employee's State Insurance Act of 1948, which provides medical, sickness, maternity, and disablement benefits, and the Employee's Provident Fund & Miscellaneous Provisions Act of 1952, which offers retirement benefits, are two acts of legislation in India dealing with social security benefits for workers. However, these Acts only apply to industrial establishments employing more than ten workers and so do not apply to most of the unorganised sector establishments. Therefore, the majority of the workers in the informal sector are devoid of social security benefits.

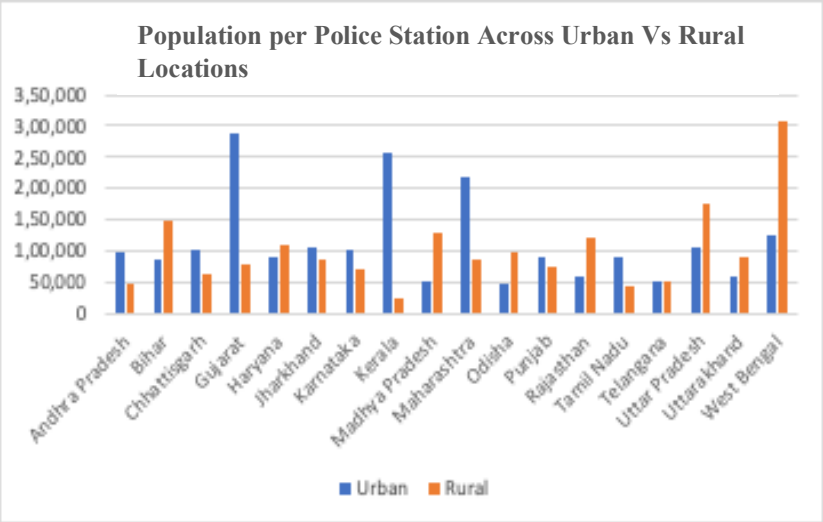
E. Legal Recourse

Overall, even though 60 per cent of India's population continues to live in rural areas, area-wise policing machinery is far more concentrated in urban areas. On average, a rural police station covers an area of 337.4 sq. km—this translates as 16.7 times the area covered by the urban ones (20.2 sq. km).

In all 30 states/UTs55 for which data is available, police stations in rural areas serve larger areas than urban. For example, rural police stations of Himachal Pradesh cover areas 118 times more than urban police stations. In Madhya Pradesh and Rajasthan, it is 41 and 36 times, respectively. Kerala and Puducherry are the only geographies where the difference is marginal56. Among the large and mid-sized states, Rajasthan serves the largest area per rural police station (684 sq. km per PS) and Kerala the largest per urban police station (74 sq. km per PS).

On average, rural police stations also serve slightly larger—and perhaps more scattered—populations (97,362) than urban ones (94,683).

Figure 63



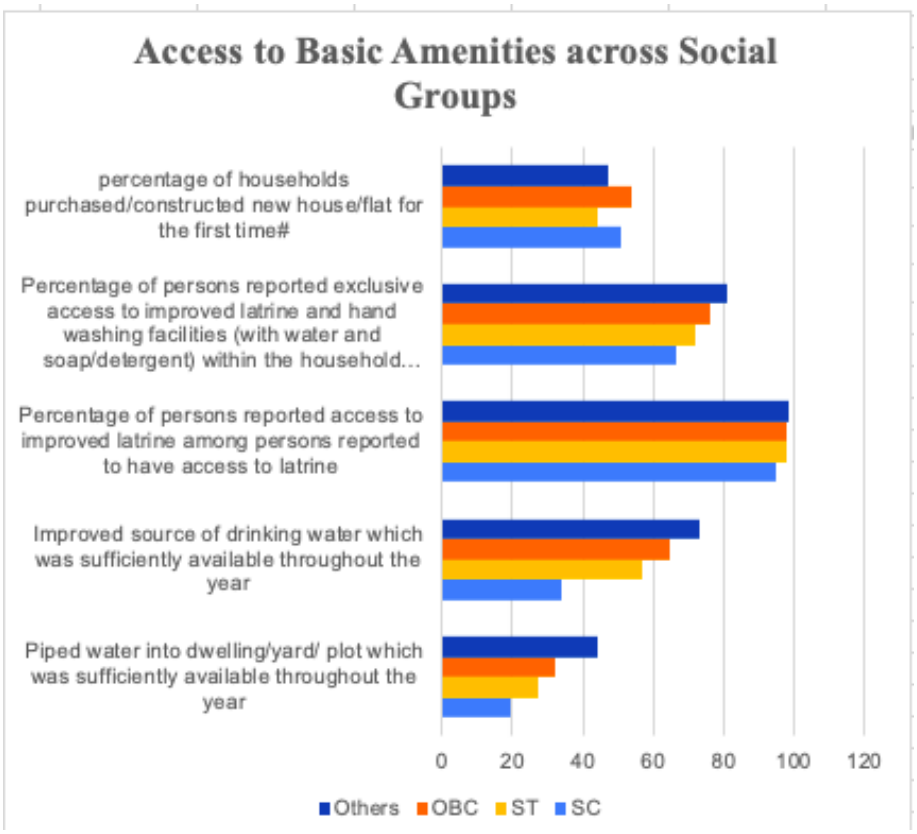
4.2 By caste group: SC, ST, OBC

The Scheduled Castes (SCs), Scheduled Tribes (STs), and Other Backward Classes (OBCs) populations often confront systemic discrimination when it comes to accessing fundamental amenities, such as tap water, latrine facilities, and housing.

Despite advancements in social equality, these marginalised communities frequently encounter barriers that hinder their equitable access to necessities. Disparities in infrastructure development, discriminatory practices, and socio-economic inequalities contribute to an uneven distribution of essential services. Addressing these issues requires a comprehensive approach that addresses both systemic biases and promotes inclusive policies to ensure that every segment of society, regardless of caste or background, can enjoy equal access to essential amenities.

A. Basic Amenities

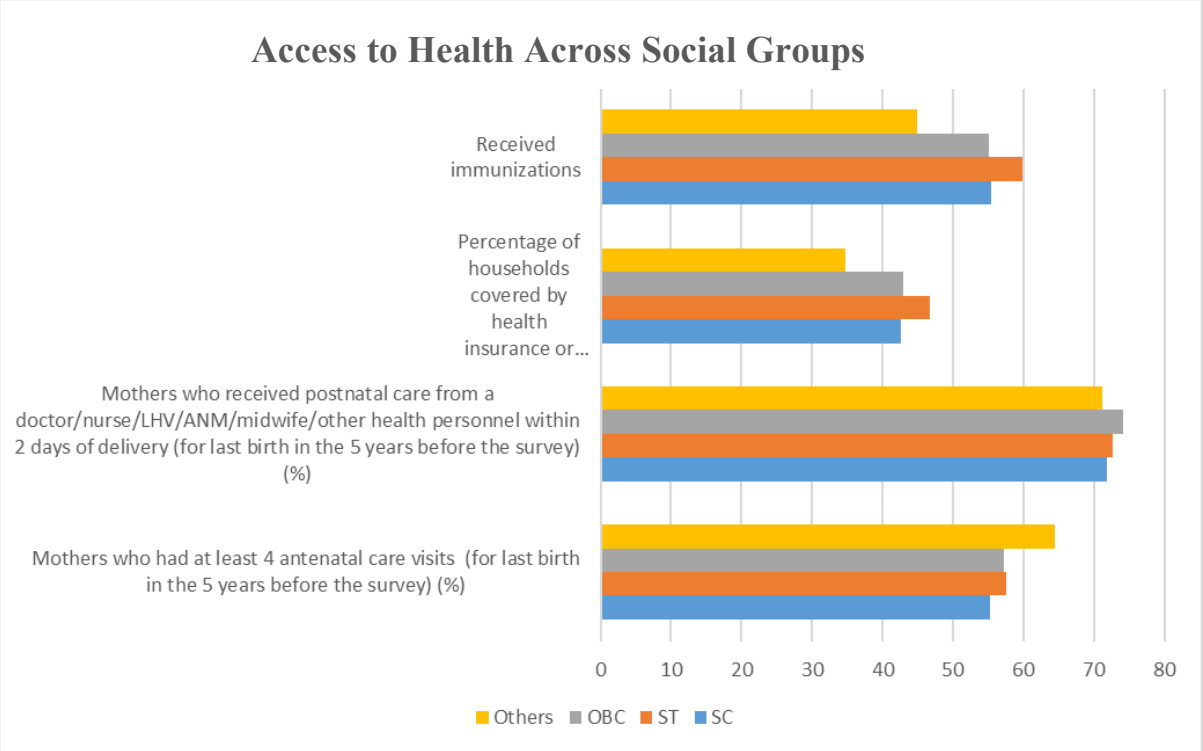
Figure 64



The statistics present stark disparities in access to essential amenities across various social groups. Less than 50% of households from SCs, STs, OBCs, and other categories have consistent access to piped water throughout the year. Notably, only 19.5% of the ST population has sufficient access to piped water annually, emphasizing their acute marginalization. Similarly, access to sanitation facilities shows improvement, with 60-80% having access, but STs remain the most underserved, with just 66% having access. In housing, around 50% of households, irrespective of category, purchased or constructed a house for the first time. This indicates challenges in securing housing. These statistics highlight the pressing need for targeted initiatives to bridge gaps and ensure equitable access to water, sanitation, and housing for all social groups.

B. Health

Figure 65



Mothers who had at least 4 antenatal care visits (%): This parameter measures the percentage of mothers who underwent a minimum of four antenatal care sessions during pregnancy. Analysis across different demographic groups reveals distinct patterns. Among SC mothers, 55.3% fulfilled this criterion, whereas corresponding percentages for ST, OBC, and Others are 57.6%, 57.2%, and 64.4%, respectively. The data underscores a notable disparity, with mothers categorised as 'Others' exhibiting a higher adherence to recommended antenatal care visits compared to their SC counterparts, who, in contrast, demonstrated a comparatively lower rate of meeting this crucial health benchmark.

Mothers who received postnatal care within 2 days of delivery (%): The postnatal care metric reveals disparities among social groups, with 71.9% of SC, 72.7% of ST, 74.2% of OBC, and 71.2% of Others receiving timely care. While OBC mothers show a slightly better performance, understanding socioeconomic, geographical, and cultural factors is essential. Lower percentages suggest accessibility challenges for SC mothers, indicating a need for targeted awareness campaigns and improved infrastructure in remote areas. Addressing these disparities requires tailored interventions to ensure equitable healthcare access and outcomes for all maternal demographics.

Percentage of households covered by health insurance or financing: The figure illustrates the percentage of households with health insurance or financial support for healthcare expenses. Notably, 42.7% of SC households have coverage, while ST have a slightly higher percentage at 46.8%. OBC stand at 43.0%, indicating a moderate level of coverage. However, the figure drops to 34.8% for the general category (Others). This discrepancy suggests a need for targeted efforts to improve insurance penetration, especially, in the general category. Addressing barriers to access, increasing awareness and tailoring policies can contribute to more inclusive healthcare financial support.

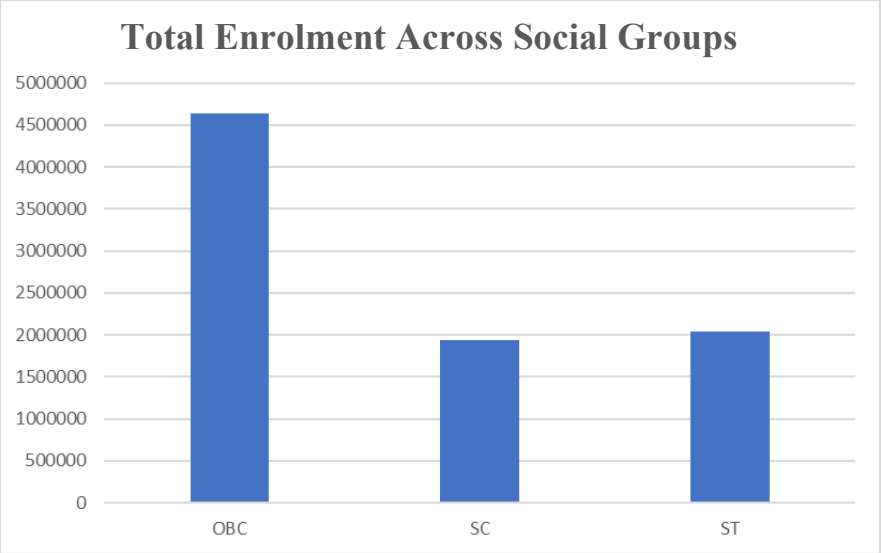
Received immunizations (%): This indicator signifies the percentage of individuals, likely children, who have received recommended vaccinations. Specifically, 55.5% of SC individuals have been immunized. STs show a slightly higher percentage at 59.8%, indicating relatively better coverage. OBCs stand at 55.1%, reflecting a moderate level of immunization. Notably, the general category (Others) lags with only 45.0% coverage. Addressing factors contributing to lower immunization rates, such as awareness, accessibility, and education, is crucial, ensuring comprehensive vaccination coverage and promoting overall community health, particularly, among marginalized groups.

In the realm of maternal health, the disparities in timely postnatal care reveal distinct patterns among SCs, STs, OBCs, and the general category (Others). Understanding the reasons behind these variations is crucial for designing strategies that address specific challenges faced by each social group, thereby promoting equity in maternal healthcare.

Similarly, the percentages of households with health insurance coverage shed light on the financial aspect of healthcare accessibility. While ST households exhibit slightly higher coverage, the lower percentage for the general category emphasizes the need for tailored approaches to improve insurance penetration and mitigate social disparities in access to financial support for healthcare. Furthermore, the vaccination coverage percentages unveil disparities in ensuring essential immunizations, particularly, among the general category (Others). These insights underscore the importance of targeted health education campaigns, improved accessibility to vaccination services, and community-specific interventions to bolster overall immunization rates. Addressing urban-rural disparities is also crucial, as these variations may contribute to differential healthcare outcomes.

C. Education

Figure 66

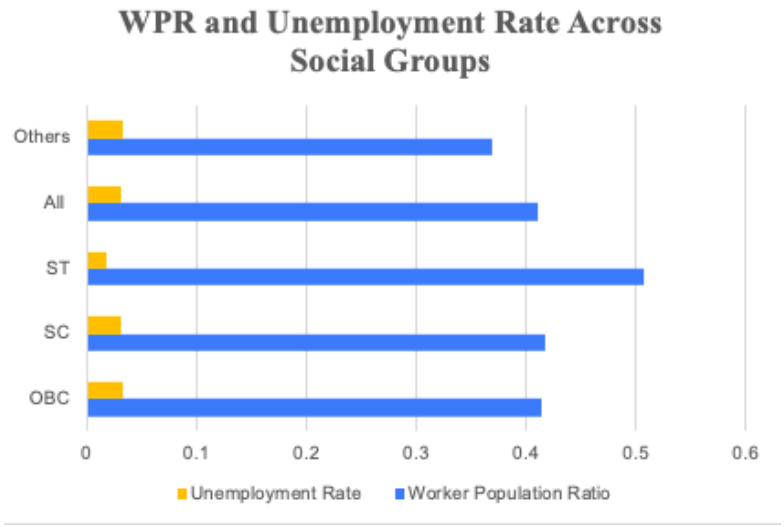


The social divide in total school enrolment is evident across different categories, reflecting historical and socio-economic disparities. OBC, SC, and ST represent distinct communities, each facing unique challenges. The higher enrolment in the OBC category may indicate improved access to education, potentially influenced by awareness campaigns or governmental initiatives. SC communities, historically marginalized, show notable representation in schools, suggesting efforts to enhance educational opportunities. Similarly, ST enrolment reflects the presence of students from tribal communities, often residing in economically disadvantaged areas. Bridging the social divide necessitates addressing historical discrimination, economic inequalities, and geographical challenges. Policies should focus on equalizing educational resources, improving infrastructure in marginalized regions, and promoting awareness about the importance of education across all social groups. Inclusive interventions should consider socio-economic and cultural factors influencing educational participation to ensure equitable opportunities for all.

In conclusion, the social and educational landscapes in both school enrolment and infrastructure distribution underscore the persistent impact of historical, socio-economic, and geographical factors. The higher enrolment in the OBC category, alongside significant representation of SC and ST communities, reflects commendable efforts to address historical marginalization through increased access to education. However, challenges persist, demanding a comprehensive approach to bridge the social divide. Policies must target historical discrimination, economic inequalities, and geographical disparities, emphasizing the equalization of educational resources and infrastructure improvements in marginalized regions.

D. Socio-Economic Security

Figure 67



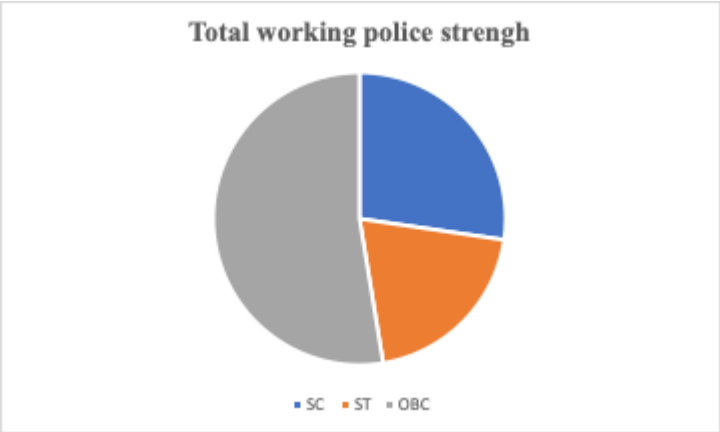
The presented statistics on Worker Population Ratio (WPR) and Unemployment Rate (UR) across various social groups in India underscore the existing disparities in employment opportunities and joblessness. Notably, ST exhibit a relatively higher WPR at 51%, suggesting a significant proportion engaged in the workforce, yet an UR of 18% indicates persistent unemployment challenges. In contrast, SC face both lower WPR (41%) and a higher UR (32%), reflecting a more constrained labour market and elevated unemployment rates. OBC display a modestly higher WPR (42%) but still contend with a considerable UR of 33%. The 'Others' category, representing the general population, grapples with a lower WPR (37%) and the highest UR at 34%, indicating a complex employment scenario.

Policy implications arise from the need for targeted interventions to address the nuanced challenges within each social group. Initiatives fostering skill development, entrepreneurship, and industry-specific training could enhance employability, particularly for SCs and OBCs. Additionally, policies addressing regional imbalances and promoting inclusive economic growth are crucial. Strengthening social safety nets, investing in education, and promoting equal opportunities can help reduce unemployment rates across all segments. Policymakers should tailor strategies to the unique dynamics of each social group, aiming to create an inclusive and resilient job market that accommodates the diverse needs of India's population.

E. Legal recourse

As of January 2022, SCs make up 15.99 per cent of the total working police strength (against 16 per cent share in population), STs 11.77 per cent and OBCs 30.79 per cent.

Figure 68



Gujarat and Manipur stood out for meeting their SC quotas at both the officer and constabulary levels, whereas Bihar, Telangana, and Himachal Pradesh for fulfilling their ST quotas. States fare relatively better when it comes to OBCs. At least 9 states (Karnataka, Chhattisgarh, Telangana, Andhra Pradesh, Punjab, Odisha, Jharkhand, Tamil Nadu, and Kerala) met their OBC quotas.

In some states, the percentage share of reserved groups varied greatly between the officer and constabulary levels. In Uttarakhand, against the SC reservation of 19 per cent, at the constabulary level 98 per cent of posts reserved for SCs have been filled, while for officers it is just 54 per cent. In Uttarakhand, against the quota of 4 per cent for STs, 132 per cent of the constabulary posts were filled but only 55 per cent of officers. Conversely, Goa has a much higher SC share at the officer level (110 per cent) than in the constabulary (43 per cent). Assam and Jammu & Kashmir fared the worst in meeting reservation targets.

6. Comparison with previous AEI

While some states' AEI ranks remained stable, others saw considerable changes between 2021 and 2024. Andhra Pradesh made the biggest jump, rising from 10th to 3rd place out of all the states. In the meantime, well-known top performers like Tamil Nadu and Kerala switched places, demonstrating consistent excellence. Maharashtra and Telangana held their places in the middle, however Himachal Pradesh and Haryana climbed steadily. A closer group of competitors is shown in the fact that Karnataka, Gujarat, and Punjab tied for 8th place in 2024. There was a lot of movement in the lower rankings, with states like Rajasthan, Mizoram, and

Uttarakhand gaining momentum. On the other hand, a few states dropped in their rankings, including West Bengal and Odisha.

Overall, the 2024 AEI rankings paint a dynamic picture of progress and stagnation among Indian states. While some have made impressive strides, others face challenges in maintaining or improving their positions.

Table 4

State	AEI 2021	AEI 2024	Change
Goa	Rank 1	Rank 1	
Sikkim	Rank 2	Rank 2	
Andhra Pradesh	Rank 10	Rank 3	
Kerala	Rank 4	Rank 4	
Tamil Nadu	Rank 3	Rank 5	
Himachal Pradesh	Rank 5	Rank 6	
Haryana	Rank 11	Rank 7	
Maharashtra	Rank 13	Rank 8	
Telangana	Rank 8	Rank 8	
Karnataka	Rank 8	Rank 8	
Gujarat	Rank 15	Rank 8	
Punjab	Rank 7	Rank 9	
Uttarakhand	Rank 16	Rank 10	
Mizoram	Rank 8	Rank 11	
Rajasthan	Rank 18	Rank 12	
Tripura	Rank 19	Rank 13	
Arunachal Pradesh	Rank 13	Rank 14	
Chhattisgarh	Rank 17	Rank 14	
West Bengal	Rank 20	Rank 15	
Madhya Pradesh	Rank 23	Rank 16	
Odisha	Rank 24	Rank 16	
Nagaland	Rank 11	Rank 17	
Assam	Rank 24	Rank 18	
Jharkhand	Rank 28	Rank 18	
Uttar Pradesh	Rank 27	Rank 18	
Meghalaya	Rank 21	Rank 19	
Manipur	Rank 21	Rank 19	
Bihar	Rank 26	Rank 20	

The landscape of the AEI rankings among UTs witnessed a fascinating shuffle between 2021 and 2024. While some retained their positions, others embarked on journeys of ascent or descent, offering a nuanced narrative of progress and regression. Chandigarh swapped places with Lakshadweep, trading its top spot for the second rank. Delhi made a steady climb from fourth to third, showcasing consistent improvement. Andaman & Nicobar Islands, however, slipped one position, relinquishing their third-place rank to Puducherry, which saw a remarkable jump from fifth to second.

Ladakh, a relatively new UT, entered the rankings at number seven, marking its place on the Index. Daman and Diu, however, mirrored Andaman & Nicobar Island's descent, moving down one rank to sixth.

Table 5

Union Territory	AEI 2021	AEI 2024	Change
Lakshadweep		Rank 1	
Chandigarh	Rank 1	Rank 2	
Delhi	Rank 4	Rank 3	
Andaman & Nicobar Islands	Rank 3	Rank 4	
Ladakh		Rank 7	
Puducherry	Rank 2	Rank 9	
Dadra and Nagar Haveli	Rank 6	Rank 5	
Daman and Diu	Rank 7	Rank 6	

7. Limitations of Data and Methodology

- Given the performance of states is also dependent upon the size of the population and area of states and UTs, this year index is limited in providing comparison on how large, medium sized and small states perform.
- Ideally, political representation is an important set of opportunities, but it has not been considered.
- Definition of Access does not look at "Demand Side", such as "Acceptability" dimension which depends on perception of the people and usability of the services by the citizens. This dimension is usually captured qualitatively or through a dedicated survey, which was not in current scope.

- Aggregation of data may have aberrations which require qualitative analysis at disaggregated level. For instance, in education, average expenditure by students for secondary education is not fully representative of affordability and aggregating this with other indicators in the calculation of sub- index can distort the rankings.
- The AEI 2024 aims for the most recent data available, although restrictions have led in differing data ages for sub-indicators. As a result, there could be a possible error margin in the evaluation.
- In comparison to the AEI 2021, some sub-indicators have experienced modifications in definitions or methodology as well as new sub indicators have been added which must be considered when comparing it with AEI 2024.

8. Conclusion and way forward

The AEI 2024 paints a revealing picture of India's development disparities. It ranks states and UTs based on opportunities (un)available across five crucial pillars: basic amenities, education, healthcare, security, and legal recourse. While "front runners" like Goa and Sikkim excel in most areas, "aspirants" and "achievers" generally lag.

The AEI serves as a powerful tool for positive change. Its rankings motivate lagging states to learn from front runners, while its findings highlight the need for targeted policies and interventions. This is especially crucial post-pandemic, where inequalities have widened. Securing livelihoods for the most deprived should be the immediate focus, recognising their well-being is vital to the nation's progress.

To ensure its continued relevance, the AEI should be a continuous exercise, facilitating longitudinal comparisons and progress assessment. Regular refinement of indicators and methodology will further strengthen its ability to capture the nuances of a dynamic India.

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Appendices

Appendix 1: Synopsis of Major Literature

S. No.	Name of authors	Paper	Literature review/ Extract/ Interpretation
1.	Sen A.	Sen, A.K. (1979a, 1979b, 1985a, 1985b). "Equality of What?". In Sterling M. McMurrin (ed.), The Tanner Lectures on Human Value, pp: 195-220. Sen, A.K. (1987, 1989, 1992, 1996, 1999, 2004, 2009). The Standard of Living: The Tanner Lectures. Cambridge: Cambridge University Press. "Development as Capability Expansion". Journal of Development Planning, 17, pp. 41-58. Inequality re-examined.	An evaluative framework which can be used to assess individual well-being. Instead of focusing exclusively on economic means or subjective well-being, the capability approach focuses on people's capabilities to live the kind of life they have reason to value. Capabilities are described as freedom or real opportunities one has regarding the life one may lead. It enables us to look at opportunities which relate to the "process" or "means" rather than "outcome" or "end"
2.	John Rawls	A Theory of Justice (Cambridge, MA: Harvard University Press, 1971)	According to Rawls, no inequalities in the distribution of primary social goods should be tolerated, so long as inequalities of wealth and income will be to everyone's advantage, and specifically to the advantage of those who will be worst off. Fair equality of opportunity requires that citizens with the same talents and willingness to use them have the same educational and economic opportunities regardless of whether they were born rich or poor.
3.	John E. Roemer Inequality goes beyond	Theories of Distributive Justice	Beginning from the recent theories of Arneson and G. A. Cohen, he constructs a theory of equality of opportunity.

	income and affects opportunities		
4.	Genicot and Ray, 2016	Aspirations and Inequality, NBER Working Paper No. 19976	"While social outcomes affect aspirations, those very aspirations influence via the aggregation of individual decisions the overall development of a society. As a result, aspirations and income (and the distribution of income) evolve together." In equilibrium, the overall income distribution influences individual aspirations, which in turn shape the distribution via individual choices.
5.	Cojocaru 2019	"Inequality of Access to Opportunities and Socio-economic Mobility: Evidence from the Life in Transition Survey", Policy Research Working Paper 8725	Paper examines the link between beliefs about the importance economic of personal connections for getting access to opportunities, such as a good job or university education, and expectations of future socioeconomic mobility. Perceptions of unequal access to opportunities are also linked with stronger redistributive preferences. Finally, there is some evidence that unequal access to opportunities is associated not only with lower intragenerational mobility, but also with lower intergenerational mobility.
6.	Chetty, R., Hendren, N., and Katz, L.E. (2016)	The Effects of Exposure to Better Neighbourhoods on Children: New Evidence from the Moving to Opportunity Experiment." American Economic Review 106 (4): 855-90	The Effects of Exposure to Better Neighbourhoods on Children: New Evidence from the Moving to Opportunity Experiment." find robust evidence that children who moved to lower- poverty areas

			when they were young (below age 13) are more likely to attend college and have substantially higher incomes as adults.
7.	Fields and Fei (1978), Atkinson (1970), Deaton (2013,2021), Milanovic (2016), Niño-Zarazňa, Roope and Tarp, (2017), Goldin and Muggah (2020), Chateauneuf and Moyes (2005)	Multiple	Developed an approach to inequality comparisons which differs from the conventional ones (Gini and Lorenz)- looking at what comprises a "good index" of inequality.
8.	Barros et al. (2009, 2011)	Molinas, J., R. Paes de Barro, J. Saavedra and M. Giugale. 2012. "Do Our Children Have a Chance?" The 2010 Human Opportunity Report for Latin America and the Caribbean. Washington, DC: World Bank.	The HOI was proposed by Paes de Barros et al. (2008) and is an adaptation of the welfare function suggested by Amartya Sen (1976). In particular, this index takes into account the average coverage of a certain service and the inequality of its distribution. It follows the same logic as GDP per capita and inequality indicators in Sen's welfare function.
9.	Dworkin, R. (1981a,b)	"What is Equality? Part 1: Equality of Welfare, Part 2: Equality of Resources" Philosophy and Public Affairs,	Two general theories of distributional equality first (which I shall call equality of welfare) holds that a distributional scheme treats people as equals when it

			distributes or transfers re-sources among them until no further transfer would leave them more equal in welfare. The second (equality of resources) holds that it treats them as equals when it distributes or transfers so that no further transfer would leave their shares of the total resources more equal.
10.	Francisco H. Ferreira World Bank and IZA Vito Peragine	Equality of Opportunity: Theory and Evidence	social justice in contemporary western societies. Inequality of opportunity has been analysed in different spheres of human life and for different domains of public policy, ranging from income distribution and income taxation; to health and health care; educational achievement; and anti-poverty policy. Altogether, the inequality of observed opportunities is responsible for a very substantial proportion of total outcome inequality in Brazil
11.	Arneson	Equality and Equal Opportunity for Welfare (1988)	The claim that "we are responsible for our preferences" is ambiguous. It could mean that our preferences have developed to their present state due to factors that lay entirely within our control. An opportunity is a chance of getting a good if one seeks it. For equal opportunity for welfare to obtain among a number of persons, each must face an array of options that is equivalent. to every other person's in terms of the prospects for preference satisfaction it offer. Equal opportunity for welfare obtains when all persons face effectively equivalent arrays of

			options.
12.	Gustavo A. Marrero Juan G. Rodríguez	Inequality of opportunity and growth	Income inequality is actually a composite measure of at least two different sorts of inequality: inequality of opportunity (IO) and inequality of returns to effort (IE). IO can reduce growth as it favours human capital accumulation by individuals with better social origins or circumstance. They find robust support for a negative relationship between inequality of opportunity opportunities.
13.	Nussbaum, M. (2011).	Creating capabilities: the human development approach. Cambridge, Massachusetts; London, England: Harvard University Press, 2011.	Nussbaum's capabilities approach is centred around the notion of individual human dignity. She defends these capabilities as being the moral entitlements of every human being on earth. She advocates that all people all over the world should be entitled, as a matter of justice, to threshold levels of all the ten capabilities; but apart from mentioning that it is the governments' duties to guarantee these entitlements
14.	R Penchansky , J W Thomas	Penchansky R, Thomas JW. The concept of access: definition and relationship to consumer satisfaction. Med Care. 1981 Feb;19(2):127-40. doi: 10.1097/00005650-198102000-00001. PMID: 7206846.	Access is presented here as a general concept that summarizes a set of more specific dimensions describing the fit between the patient and the health care system. The specific dimensions are availability, accessibility, accommodation, affordability and acceptability.
15.	Levesque, J. F., Harris, M. F., & Russell, G. (2013)	Levesque, J. F., Harris, M. F., & Russell, G. (2013). Patient-centred access to health care: conceptualising access at the interface of health systems and populations. International journal	Conceptualize five dimensions of accessibility: 1) Approachability; 2) Acceptability; 3) Availability and accommodation; 4) Affordability; 5)

		for equity in health, 12, 18. https://doi.org/10.1186/1475-9276-12-18	Appropriateness

Appendix 2: List of Indicators

Access to Basic Amenities							
S. No.	**Category**	**Access Dimension**	**Indicator**	**Unit**	**Definition**	**Year**	**Source**
1	Drinking Water	Availability & affordability	Piped Water Supply as principal sources of drinking water	percentage	Percentage of households with piped water connection to one or more taps either to the dwelling units or the yard/plot within the housing premises as principal source of drinking water.	2021-22	NSS survey reports
2		Approachability	Distance to the principal source of drinking water of the household	percentage	Percentage of households where principal source of water for the household is available within their dwelling units or housing premises.	2021-22	NSS survey reports
3		Availability	Access to Latrines	percentage	Percentage of Households that have any form of access to latrine whether that be for exclusive or common or public use.	2021-22	NSS survey reports
4	Sanitation	Appropriateness	Access to Improved Latrines	percentage	Percentage of persons reported access to improved latrine and exclusive access to improved latrine for each State/UT, among persons	2021-22	NSS survey reports

					reported to have access to latrine		
5	Housing	Availability	Pucca houses	percentage	% households living in pucca houses	2020-21	NFHS -5
6	Clean Energy	Availability & Appropriateness	Access to clean fuel	percentage	Percentage of households with clean cooking fuel - LPG connection.	2021-22	NSS survey reports
7	Nutrition	Availability & Affordability	Access to food through public distribution - NFSA	percentage	% of Accepted Persons under National Food Security Act	2022	Open Data Government Platform
8		Availability	Internet users	percentage	% of person ever used internet	2020-2021	NFHS -5
9	Digital Access	Availability	Mobile users	percentage	Any individual who is the main user of at least one mobile phone.	2020	IMRB

Access to Healthcare							
S. No.	**Category**	**Access Dimension**	**Indicator**	**Unit**	**Definition**	**Year**	**Source**
1		Appropriateness	Public Expenditure in Health by States & Union Territories (Rs. in 000) (per '000 population)	Rs		2022	RBI
2		Approchability	Area covered by subcentre	Kilometres	1 / Radial distance covered by a subcentre	2021-2022	Rural Health Statistics
3		Availability	Number of government hospital beds (including CHCs) (per '000 population)	Unit	Number of government hospital beds (including CHCs) (per '000 population)	2021-2022	Rural Health Statistics
4		Availability	Number of government hospitals (Sub-Centres, PHCs & CHCs) (per '000 population)	Unit	Number of government hospitals (Sub-Centres, PHCs & CHCs) (per '000 population)	2021-2022	Rural Health Statistics
5	Infrastructure	Availability	Number of government hospitals (District, Sub-District & Medical	Unit	Number of government hospitals (District, Sub-	2021-2022	Rural Health Statistics

			Colleges) (per '000 population)		District & Medical Colleges) (per '000 population)		
6		Availability	population covered by subcentre	per person	1/average rural population covered by sub centre	2022	Rural Health Statistics
7		Affordability	Reproductive health expenditure	Rs	1 / Average out-of-pocket expenditure per delivery in a public health facility (for last birth in the 5 years before the survey) (Rs.)	2021	NFHS-5
8		Affordability	Medical Expenditure by household (Rural)	Rs	Average medical expenditure (Rs.) incurred for treatment during stay at public hospital per case of hospitalization (excluding hospitalization for childbirth) rural	2019-20	MHFW Report
9		Affordability	Medical Expenditure by household (Urban)	Rs	Average medical expenditure (Rs.) incurred for treatment during stay at public hospital per case of hospitalization (excluding hospitalization for childbirth) urban	2019-20	MHFW Report
10	Affordable healthcare	Affordability	Access to Health Insurance	Percentage	Percentage of households with at least one usual member covered by any health insurance/financing scheme	2020-21	NFHS-5
11		Appropriateness	Antenatal care	Percentage	Mothers who had at least 4 antenatal care visits (%)	2021	NFHS-5
12	Reproductive healthcare and childcare	Appropriateness	Post - natal care	Percentage	Mothers who received postnatal care from a doctor/nurse/LHV/A	2021	NFHS-5

					NM/midwife/other health personnel within 2 days of delivery (%)		
13		Appropriateness	Institutional births (%)	Percentage	Institutional births (%)	2021	NFHS-5
14		Appropriateness	child immunisation coverage	Percentage	Percentage of children fully immunized	2021	HMIS 2021-22
15		Appropriateness	Child Mortality	Percentage	Number of children dead before attaining adulthood	2021	NFHS-5
16	Digital health infrastructure	Availability	Tele-consultation	per person	Beneficiaries under NHM for Tele-consultation at Ayushman Bharat Health and Wellness Centresed under NHM for teleconsultation (per '000 population)	2022	Open Data Government

Access to Education							
S. No.	**Category**	**Access Dimension**	**Indicator**	**Unit**	**Definition**	**Year**	**Source**
1	Vocational Training	Appropriateness	vocational courses under NSQF	Percentage	Percentage of schools with UDISE vocational course training under NSQF at secondary and higher secondary level	2022	Open Data Government
2		Appropriateness	Average annual drop-out rate	Percentage	percentage of students who drop out from the education cycle at the give year	2021-2022	UIDSE+
3		Availability	Net Enrolment Rate	Percentage	percentage of students of the age enrolled in secondary education.	2021-2022	UIDSE+
4	Access to School	Appropriateness	Schools with female toilets	Percentage	The percentage of schools that are equipped with female toilets	2021-2022	UIDSE+

5		Appropriateness	Public Expenditure (per '000 population)	Rs	Amount spent by the government on secondary education divided by the age wise population for secondary education (13-15 years)	2020	
6		Availability	Schools with functional computer	Percentage	Percentage of schools with functional computer facility	2021-2022	UIDSE+
7		Availability	Schools with functional internet	Percentage	Percentage of schools with functional internet facility	2021-2022	UIDSE+
8	Digital Infrastructure	Approachability	Trained under Pradhan Mantri Gramin Digital Saksharta Abhiyan (per '000 population)	Unit	Number of students trained under Pradhan Mantri Gramin Digital Saksharta Abhiyan (per '000 population)	2023	Open Data Government
9	Teaching Staff	Appropriateness	Pupil-Teacher Ratio	Percentage	Number of students divided by the number of teachers available	2021-2022	UIDSE+

Access to Socioeconomic Security							
S. No.	**Category**	**Access Dimension**	**Indicator**	**Unit**	**Definition**	**Year**	**Source**
1	Financial Security	Approachability	Number of ATMs, CRMs & WLAs	per1,00,000 population	Deployment of ATMs CRMs & WLAs as on September 30, 2023	2023	RBI Report
2		Approachability & Availability	Bank Credit	per1,00,000 population	State-wise bank credit of Scheduled Commercial Banks	2022	Economic Survey 2022-23
3		Approachability & Availability	Bank Deposit	per1,00,000 population	State-wise deposit of Scheduled Commercial Banks.	2022	Economic Survey 2022-24
4	Digital Transactions	Affordability & Availability	Digital Payments Transactions	Per Capita Basis	Digital Payments Transactions (Per capita basis)	2023	Digidhan Dashboard
5	Economic Security	Availability	Access to work	Percentage	Worker Population Ratio - For Persons Aged 15 Years & Above for year 2018- 19 (WPR is defined as the percentage of	2022-2023	Periodic Labour Force Survey

					employed persons in the population.)		
6		Availability	Access to social security when employed	percentage	Percentage of regular wage/ salaried employees in usual status (ps+ss) in non-agriculture sector (NIC-2008 Divisions:05-99) without any social security benefit	2022-2023	Periodic Labour Force Survey
7		Availability	Access to ESI when employed	Per Capita Basis	Region-wise No. of Employees, Insured Persons, Insured Women, Contributing Employer and Total Employer as on 31-3-2021.	2020-2021	ESI Annual Report
8		Availability		Per Capita Basis	persondays Employment generated under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)	2022	Labour & Employment Statistics 2022
9	Social Security	Availability	Access to public assistance to disabled/ divyang	percent	Percentage of person with disability who received any assistance	2021	MOSPI - Persons with Disabilities (Divyangjan)

Access to Legal Recourse							
S. No.	**Category**	**Access Dimension**	**Indicator**	**Unit**	**Definition**	**Year**	**Source**
1	Representation of women	Availability, Approachability, Appropriateness	Share of women judges	percentage	Share of women judges	2022	India Justice Report

2		Availability, Approachability, Appropriateness	Share of women in police	percentage	Share of women in police	2022	India Justice Report
3	Timely Justice	Availability	Proportion of pending cases (0-1 years)	Number	Total civil and criminal cases that have been pending from 0-1 years as a percentage of total cases	2023	National Judicial Data Grid
4		Availability	Police case pendency	%	Cases Pending Investigation at End of the Year divided by Total Cases for Investigation	2022	Crime in India Report
5	Human Resources	Availability	Population per civil police persons	1/x number	Population per civil police persons	2022	India Justice Report
6		Availability	High court judge vacancy	1/x percent	High court judge vacancy	2022	India Justice Report
7		Availability	Inmates per officer (persons, December 2021)	1/x percent	Inmates per officer (persons, December 2021)	2021	India Justice Report
8		Availability	Vacancy of state police forces	1/x percent	Percentage of vacancies in state police forces upon the actual force size	2022	India Justice Report
9		Availability	Population per high court judge	1/x number	Population per high court judge	2022	India Justice Report
10	Physical Infrastructure	Availability	Courthall shortfall	1/x percent	Court hall Shortfall	2022	India Justice Report
11		Availability	Prison occupancy	1/x percent	Prison occupancy	2021	India Justice Report
12		Availability, approachability	Total Police Stations	number per 1000 population	Total number of sanctioned Police Stations	2022	India Justice Report

13	Legal Aid	Approachability	Average villages per legal service clinic	ratio	1/Average villages per legal service	2022	India Justice Report
14	Digital Infra-structure	Availability, Approachability, Appropriateness	Services provided by state's citizen portals.	ratio (per population)	Services provided by state's citizen portals.	2022	India Justice Report
15		Availability	Number of functional e-courts			2023	Lok Sabha Question