

## **Kerala's Development Paradigm: Are there any blind spots?**

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### **Abstract**

*The Kerala Model of Development is renowned for its focus on social development and welfare policies, showcasing significant progress in human development despite modest per capita income. However, Kerala's development strategy faces significant challenges. It raises concerns about its sustainability due to demographic shifts, climate change, environmental concerns, and fiscal challenges, necessitating a revisit of its development approach. The present study examines the state's achievement in public service delivery and social and physical infrastructure. It also compares its achievements in human development and social indicators with the nation's position. Although there are strides on the development front for Kerala, there are challenges that cannot be undermined.*

### **1. Introduction**

The Kerala Model of Development is widely acclaimed as an epitome of social development and welfare-oriented policies. Kerala's remarkable progress has been evident from the strides in human development and welfare for its people despite a meagre per capita income by international standards (UN, 1975). This, popularly referred to as the Kerala Model of Development, got much wider attention internationally through several writings of Amartya Sen and Jean Dreze (Dreze & Sen, 1991; Sen, 1999; Dreze 2017). Kerala's development strategy aligned with Amartya Sen's human capacity approach, which gave rise to UNDP's Human Development Index. The success of the Kerala Model challenges the 'trickledown theory' advocated by market economists, relying instead on the principle that enhancing

human capabilities and entitlements ensures sustained economic growth. While most Indian states struggle with social indicators, Kerala has notably elevated living standards for its people through investments in social infrastructure, especially education, health, and social protection.

Notwithstanding the achievements, the sustainability of Kerala's development strategy has been subjected to intense scrutiny on various fronts like demographic transition, climate change, environmental concerns, out and in migration, etc. Concerns have been raised regarding the sustainability of Kerala's development model, which was led by state intervention due to the potential fiscal crisis (George, 1999). The financing of social sector expenditure was mainly met through borrowings, and this fiscal implication limited the Kerala development model (George, 1999). High human development coupled with increasing unemployment and the state's failure to manage public finance poses a serious challenge towards the sustainability of the development already achieved (Kannan, 2022). The recent publication of RBI (2022) on risk analysis of state finances showed that Kerala is one of the five fiscally stressed states in the country, which gained significant attention. Therefore, the current model is at a crossroads, necessitating a reassessment to steer development in the right direction. The present study examines the development trajectory of the state of Kerala, analysing its achievements and future challenges in the light of evolving macro-fiscal dynamics.

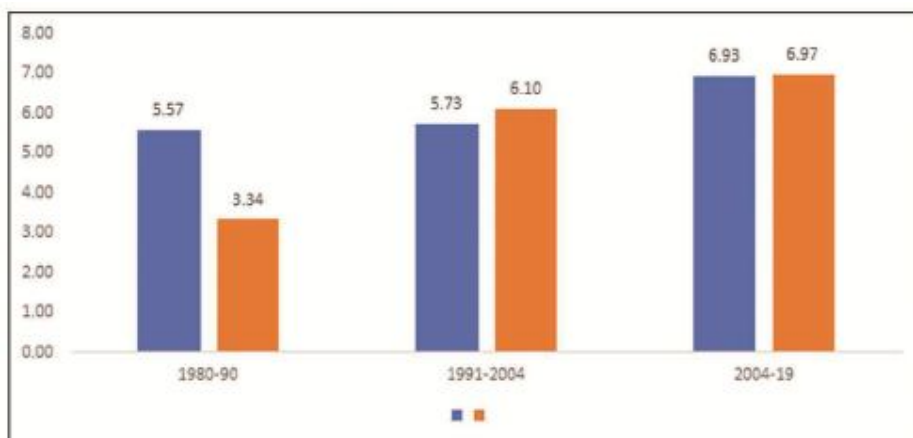
The remainder of the article is as follows. Section 2 presents an overview of Kerala's growth dynamics over the last four decades, compared to the national performance of other states. Section 3 discusses Kerala's achievements in creating public infrastructure, followed by its achievements in development outcomes in Section 4. Section 5 presents the second-generation challenges of Kerala's development and the final section offers concluding remarks.

## **2. Kerala's Growth Performance**

The narrative suggests that Kerala had been living with a course of 'lopsided development' for a rather long time - its human development achievements were not matched by its economic growth (Chakraborty, 2005). This narrative, however, is now giving way to a newly emerging one based on the recent observation that growth has not eluded Kerala after all. The evidence suggests that the state of Kerala is one of those states that is a front-runner in many economic

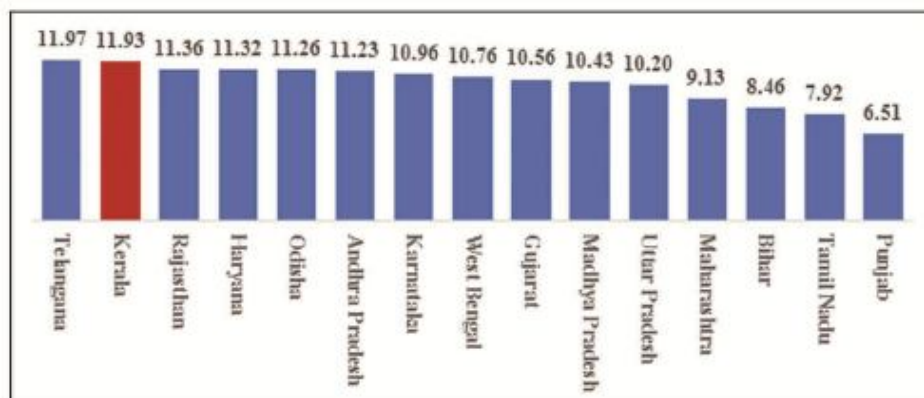
development indicators, ensuring growth with equality. Kerala's per capita GSDP surpasses the national average, highlighting the state's income level. It is important to note that from 2003 to 19, Kerala's GSDP growth was 6.9 per cent, marginally higher than all of India's (6.4 per cent).

**Figure 1:** Growth Performance of Kerala and India (1980-2019) in %



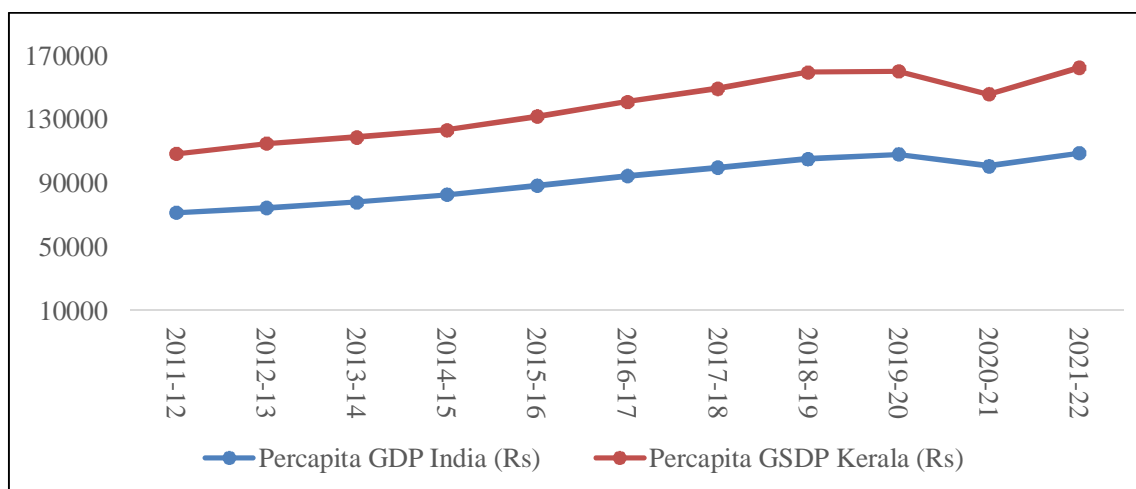
Source: Authors' calculation based on MOSPI

**Figure 2:** Real GDP growth of Indian states (In Percentage), FY2021-22



Source: Authors' calculation based on MOSPI

**Figure 3:** Per capita Gross Domestic Product Kerala vis-à-vis India (In Rupees)



Source: Authors' calculation based on MOSPI

Notes: GDP and GSDP are at constant prices of 2011-12

The efforts of the state to build social structure have indeed paid rich dividends. In the 1980's Kerala's per-capita GSDP was only 0.6 times the national average, whereas in 2019-20, Kerala's per-capita GSDP was 1.6 times the national average (Figure 3). The process of human development did contribute to the growth process through a demographic transition that helped to reap a premium in per capita growth in income to the extent of one percent per annum compared to the national performance in per capita growth. In what follows, we show how Kerala's state-led development process resulted in achieving higher economic growth and better provisioning of public services through the creation of social, physical and digital infrastructure, notwithstanding the development outcomes that are compared with developed countries.

### 3. Creation of public infrastructure and public service delivery

The significance of the state, physical infrastructure, and human capital cannot be overstated on the path to economic growth, social progress, and sustainable development. The East Asian Miracle is a compelling illustration of swift economic advancement and a rise in per capita income achieved through sustained investments in human capital (Drèze & Sen, 2013; Stiglitz, 1996). Apart from social infrastructure, physical and digital infrastructure is vital in fostering economic growth and development. The turnaround can be attributed significantly to the capacity of the state and its institutions. Kerala has made remarkable progress in achieving social well-being, as evidenced by its performance on indicators like the Human Development Index (HDI), Multi-Dimensional Poverty Index (MPI), and Global Hunger

Index (GHI). All these are outcome of effective and calibrated social investments. This progress not only exceeds national averages in India but also compares favourably with middle-level developed countries, highlighting Kerala's significant advancements in social welfare (Chathukulam & Tharamangalam, 2021). This section shows Kerala's efforts in creating a better public services delivery system, which is an outcome of the state's active spending over the decades.

## **Social infrastructure**

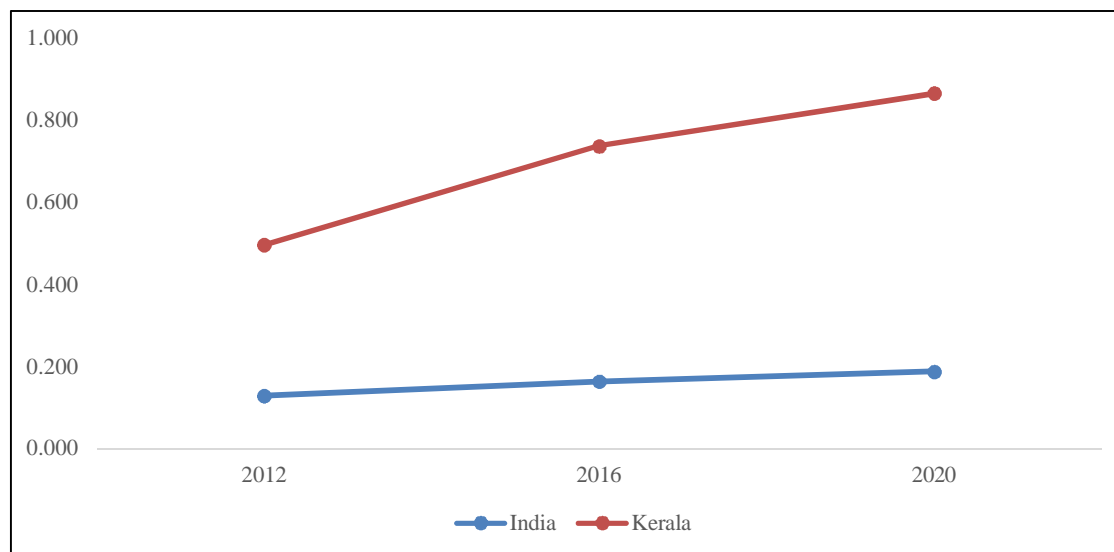
### *Health Infrastructure*

Infrastructure development plays a pivotal role in driving overall economic progress. For instance, (i) direct investments in infrastructure establish production facilities, thereby spurring economic activities; (ii) it diminishes transaction and trade costs, thereby enhancing competitiveness; and (iii) it generates job prospects and fosters the creation of physical and social infrastructure, particularly benefiting disadvantaged communities. (Estache, 2004). The linkage between economic development and social and economic infrastructure is well-established in the empirical literature. For instance, developing South Asian infrastructure plays a crucial role in fostering economic growth. Similarly, investments in social infrastructure like healthcare and education also contribute significantly to the economic progress of South Asia (Easterly & Rebelo, 1993); (Sahoo & Dash, 2012). Human capital requires significant investment, and the benefits are not realized immediately. The public provision of essential services such as education and healthcare and their related infrastructure is justified based on the concept of externalities and the distinction between private and social returns (Musgrave, 1996). Indian States typically allocate considerably fewer financial resources to healthcare expenditure compared to education. Health spending ranges from 0.5 percent to 4.0 percent of Gross State Domestic Product (GSDP), whereas education spending ranges from 1.6 percent to 8.4 percent of GSDP.

With respect to health infrastructure, Kerala distinguishes itself as one of the states with a surplus of doctors and specialists at primary health centres, surpassing the mandated number. According to the 2022 data from Health and Family Welfare Statistics by the Government of India and Niti Aayog, Kerala accounts for 1503 doctors and specialists, exceeding the required 780. The state also maintains one of the lowest numbers of vacant positions for

doctors and specialists at primary health centres, with only 66 such positions remaining unfilled.

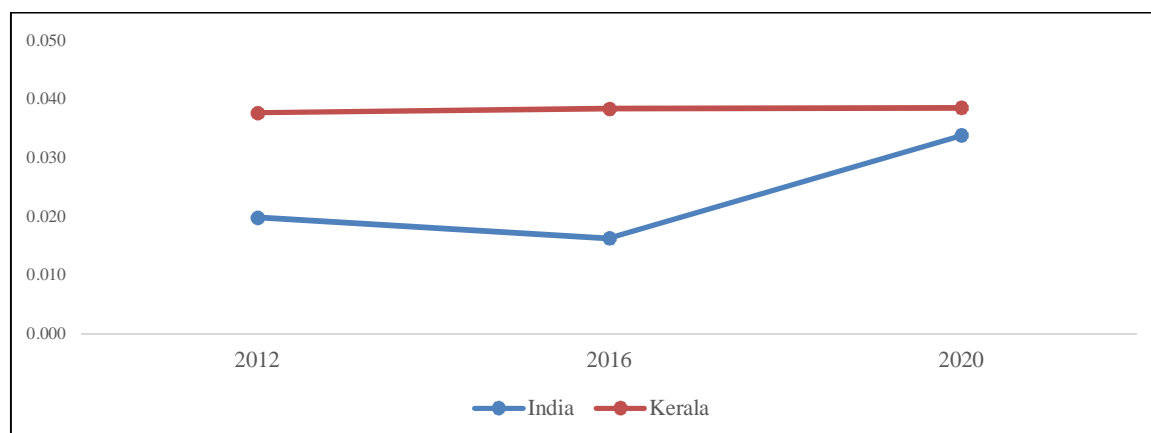
**Figure 4:** Kerala outperforms in health manpower: Registered number of nurses and midwives per thousand population



*Source: National Health Profile, Ministry of Health and Family Welfare, Various Issues*

*Notes: normalised figures per thousand population*

The number of government hospitals and available beds serves as a crucial measure of health infrastructure. Kerala stands at the fourth position, possessing one of the highest numbers of hospital beds among Indian states, with a total of 38,097 beds distributed across 1,284 government hospitals (Figure 5). This achievement is noteworthy, especially when compared to other states such as Maharashtra, Andhra Pradesh, Gujarat, and Rajasthan, where the number of government hospitals is substantial, but the bed capacity is deemed unsatisfactory. Notably, in Kerala number of hospital beds available per thousand population is higher than the national availability. It reflects that Kerala outperforms in terms of health infrastructure which is the consequent result of sustained public intervention on this front.

**Figure 5:** Number of hospital beds available for Kerala vis-à-vis India per 1000 population

Source: RBI, *Handbook on Statistics of Indian states*,

Notes: The score is normalised per thousand population

The significant progress in health comes in terms of child health and various other indicators, comparable to those of developed nations, is a result of a vibrant public health infrastructure built over the years. The state's commitment to public health is evident in its primary healthcare infrastructure, which has played a crucial role in preventing and managing various health crises including the COVID-19 pandemic.

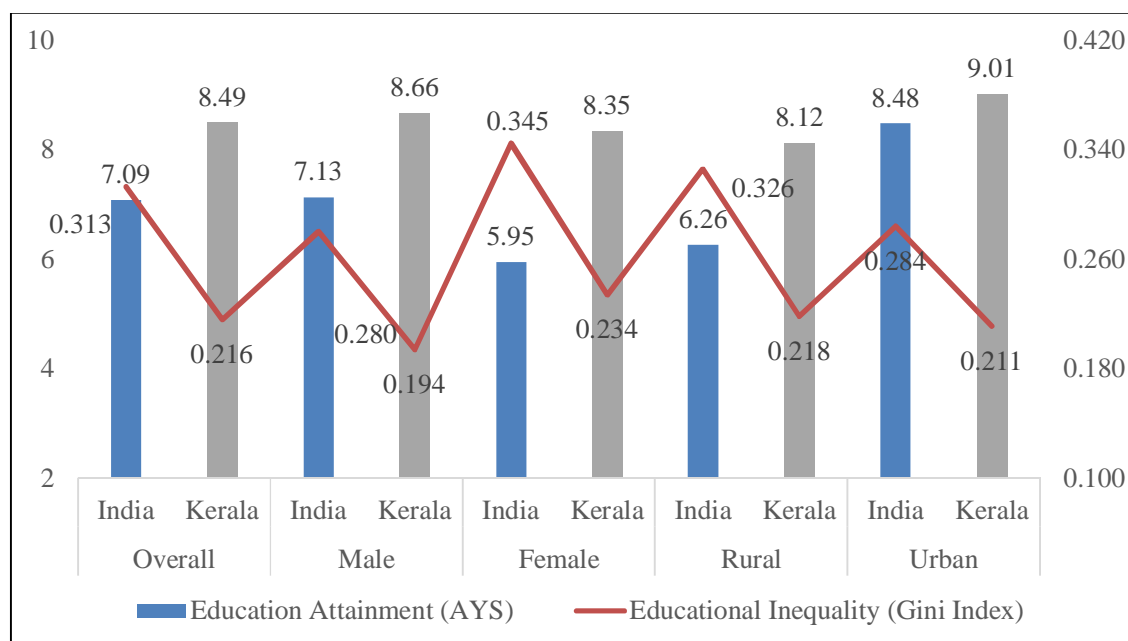
### Education attainment

To attain sustainable development, access to education and the quality of education are essential components. A proactive fiscal policy is necessary to support the provision of such merit goods. India allocates approximately 8 per cent of its GDP to the social sector, of which education gets around 2.5 to 3 per cent. Compared with educationally well-performing nations in terms of their score in HDI, for India, there is room for enhancement in investments in education and healthcare (Varughese & Bairagya, 2020). Although social sector spending in India at the state level has shown no specific pattern in relation to economic cycles, it is noteworthy that spending on education tends to be pro-cyclical. This trend becomes more pronounced during periods of negative output gaps, particularly in larger states (Kaur et al., 2013). Kerala's percapita public spending and household education expenditure on education is higher compared to other Indian states. It is reflected in the educational outcome as well.

Educational attainment is more favorable in the southern states, characterized by a more equitable distribution compared to other regions. Among all Indian states, Kerala stands out

with the highest mean (Average Years of Schooling - AYS) and lowest educational inequality measured by the Gini index. In terms of overall educational attainment, Kerala exhibits 8.49 Average Years of Schooling (AYS), surpassing India's average of 7.09. Additionally, Kerala experiences lower educational inequality compared to the national level (Figure 6). Nevertheless, there is less room for complacency while its educational outcome is compared with globally well performing countries.

**Figure 6:** Educational attainment of Kerala vis-à-vis India



Source: Computed from PLFS (2019)

### Physical infrastructure

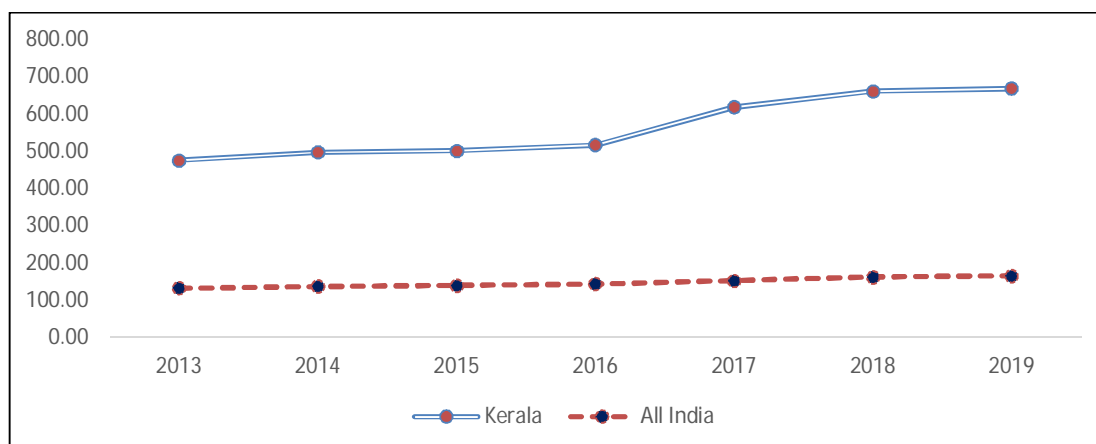
The significance of infrastructure in economic growth and development has long been recognised (Rosentein-Rodan, 1943; Hirschman, 1958; Rostow, 1960). The argument is grounded in the basic principle that one must have access to markets and ideas before reaping their benefits. This notion is reinforced by the fact that the development of infrastructure like railroads historically aligned with periods of significant economic expansion in Western Europe, Japan, and the United States. Presently, it's evident that wealthier nations possess vastly superior transportation infrastructure compared to less affluent ones (Banerjee et al, 2020). Numerous empirical studies have shown the positive impact of physical infrastructure like roads, rail network ports, electricity on economic growth, inflow of foreign investments,



poverty reduction, reduction in unemployment productivity gains, reduction in crime rate, women's labour force participation.

The developing countries are mainly characterised by poor infrastructural facilities due to resource constraints. Road network in rural areas in many states often need to be better connected and maintained. To address this challenge, the Union government has introduced Pradhan Mantri Gram Sadak Yojana (PMGSY) to provide connectivity to unconnected Habitations as part of a poverty reduction strategy. Road transportation is a vital infrastructure contributing to a country's economic advancement. This network encompasses various types of roads, including national highways, expressways, state highways, major district roads, other district roads, and village roads. Widely regarded as a cost-efficient and preferred means of transportation for both goods and passengers, road transport holds significance due to its extensive reach into densely populated areas, playing a crucial role in a nation's economic progress and societal cohesion. Easy accessibility, customization to individual requirements, and cost-effectiveness favor road transport. Additionally, it serves as a feeder system to other modes of transportation like railways, shipping, and air travel. Given the imperative link between the capacity of national highways and the burgeoning traffic demands for passengers and goods, it becomes essential to align this capacity with economic expansion. India boasts the world's second-largest road network, spanning 63.72 lakh kilometres, trailing only the United States.

Kerala stands at the forefront among all Indian states with the highest road density among other Indian states. The road connectivity, operating in the public and private sectors, extended to almost every village in the state, enabling a seamless movement of people and goods across the state. The state has 8 major National Highways, spanning a length of 1523.954 Km. The road density in Kerala to 668 Km per 100 square KM in 2019 increased from 476 Km per 100 square in 2013. Road density in the State is four times higher than the national average. As evident from the Figure, the gap in road density between Kerala and All India has been widening, especially since 2016. The success of Kerala's road infrastructure lies in its concrete road network's depth across village panchayats, municipalities, and corporations.

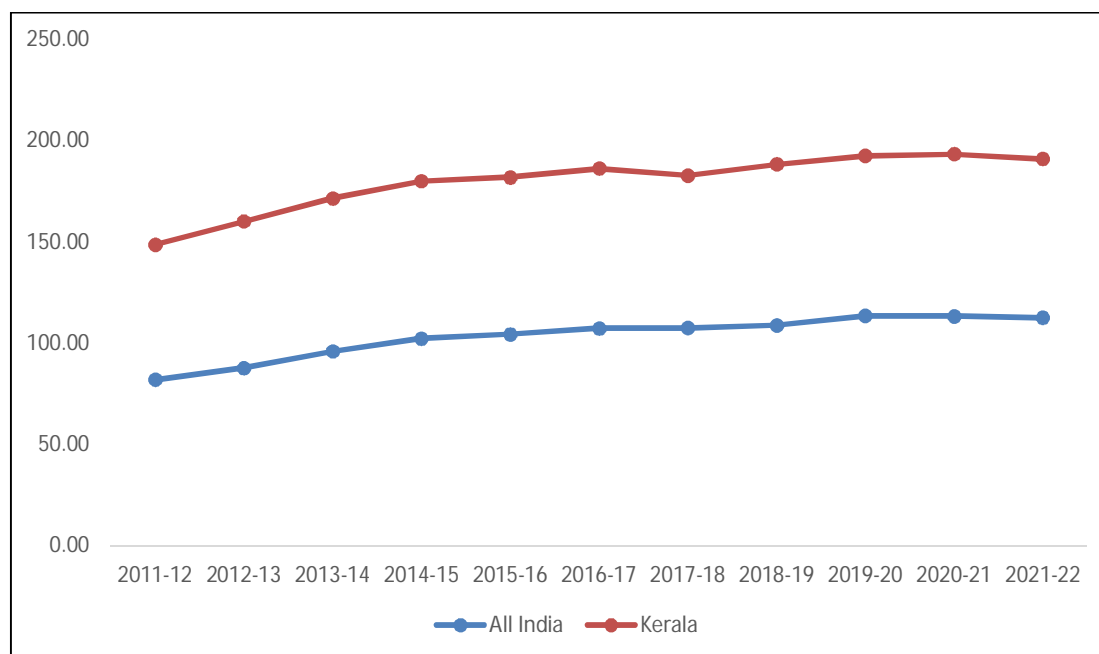
**Figure 7:** Road density in KM per 100 Square KM

Source: Authors' calculation based on RBI data

### Bank Branch density

Banks are the dominant financial intermediaries in developing countries and are crucial for growth and development. Kerala boasts a rich history of indigenous banking, dating back to private moneylenders, hundi merchants, and chit funds, evolving into organised banking by the late 19th century with the establishment of the Travancore Bank in 1893. Subsequently, numerous banks, essentially joint stock companies, commenced operations between 1900 and 1947, primarily in the southern and central regions, significantly expanding the banking culture. Post-independence, Kerala's banking sector witnessed substantial growth, with branch numbers escalating from around 600 in 1969 to over 6817 by 2022. Remittances from overseas Keralites, crucial for the state's economic growth since the 1980s, have significantly impacted its banking system. Kerala receives approximately 40% of India's total remittances, constituting over a third of the net state domestic product, directly affecting a fifth of households (Nair, 2017). With a robust banking culture, high literacy rates, substantial remittance inflows, and extensive welfare programs, Kerala has emerged as a leader in fostering financial inclusion since the mid-2000s. The state achieved early success in meeting targets set by schemes like Swabhiman in 2011. It was among the first states and Goa to achieve complete saturation in bank account coverage under the Jan Dhan Yojana by November 2014. The bank branch density in Kerala is almost double that of all of India. The salient feature of Kerala's bank network is that the state has the highest bank density in rural areas, indicating inclusive development of the sector (Nair, 2017).

**Figure 8:** Bank branch density per 1000 people

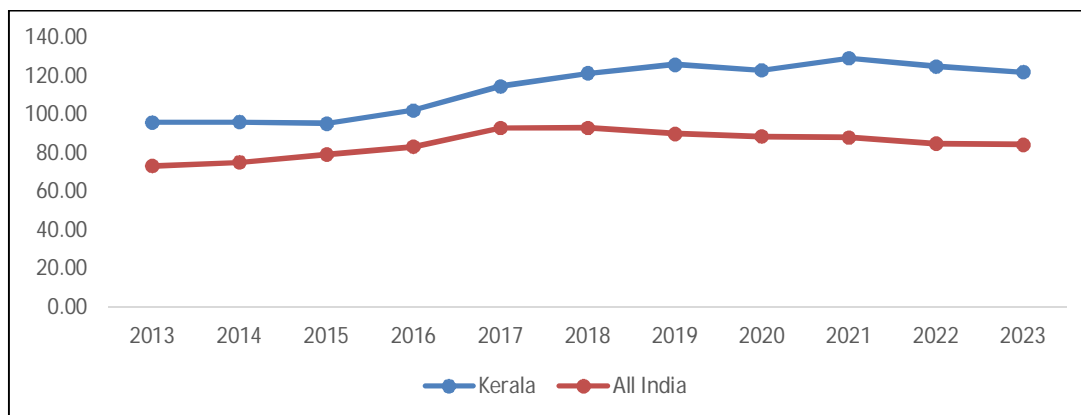


Source: Author's calculation based on RBI database

## Digital Infrastructure

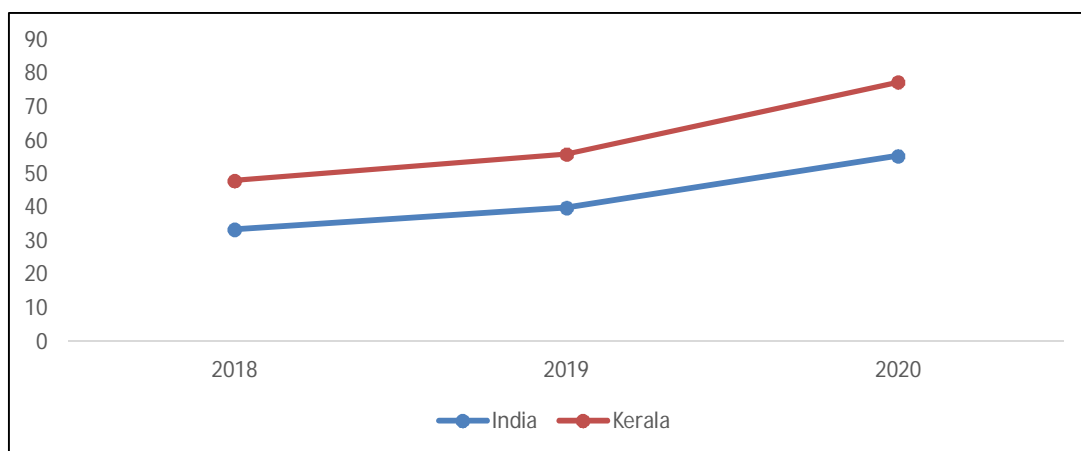
### *Phone and Internet Connectivity*

Telecommunications and associated information infrastructure plays a critical role in building a modern industry and service sector which are responsive to global demands. The telecom industry in India is the second largest in the World with a subscriber. Kerala surpasses the national average in tele density, boasting a teledensity of 128.93%. (Figure 9). This figure translates to 45.72 million telephone subscribers, including 4,42,86,150 wireless subscribers. Moreover, Kerala's internet infrastructure remains robust, with 27.44 million internet subscribers. The Kerala Fiber Optic Network (K-FON) initiative aims to provide affordable, high-speed internet access to government offices, educational institutions, and BPL (Below Poverty Line) families, making Kerala a pioneering state in this regard.

**Figure 9:** Telephone density in %

Source: Author's calculation based on RBI database

The total number of internet subscribers in India stood at 824.89 million at the end of March 2022. The number of subscribers accessing wireless internet connection constitutes the major chunk of over 797.61 million subscribers, contributing 96.69 per cent to the total number of internet subscribers, while the wireline subscriber base is at 27.27 million, which forms 3.31 per cent of the total number of internet subscribers. (Figure 11) The analysis thus far shows Kerala's achievements in the provisioning of public infrastructure which is made possible through a state-led development policy. The state government has spent considerable resources, which came at the cost of a stressed fiscal position. The achievements at the national level compare poorly in many of the indicators.

**Figure 10:** Internet subscriptions per 1000 people in %

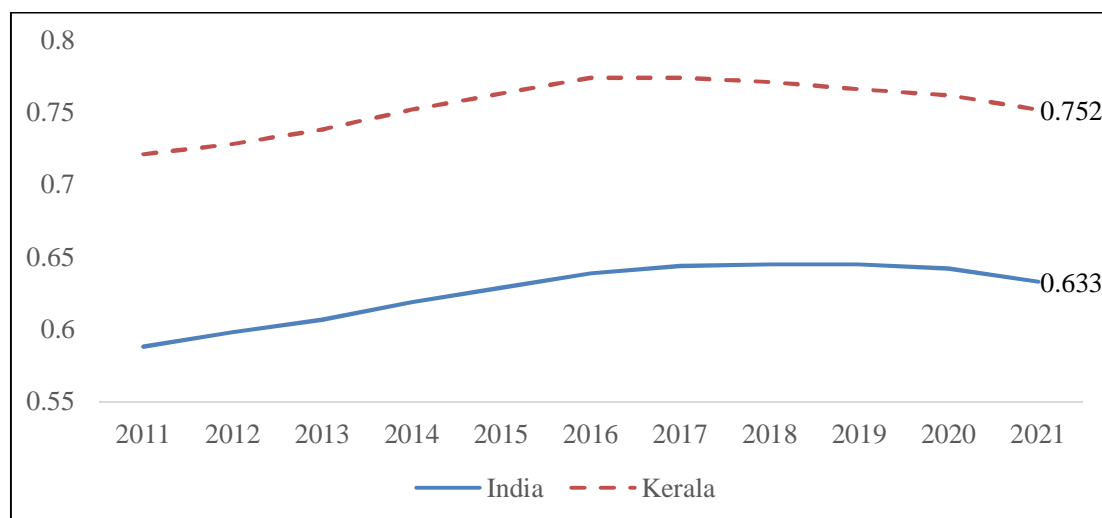
Source: NITI Ayog, SDG dashboard

#### **4. Kerala's exemplary performance development achievements**

Kerala's unique model of development is a testament to the effectiveness of prioritizing human development, social justice, and participatory governance. The key feature of early Kerala model was the achievement of high social sector development with low per capita income. Decentralisation has played a vital in the development process of the state (Pillai, 2003). Though the state's achievements in human development, social sectors such as education and health and the social welfare were celebrated widely, the sustainability of the model was criticised mainly from the fiscal point of view (Kannan, 2022). The state's achievements in education, healthcare, social welfare, women's empowerment, and environmental sustainability provide valuable lessons for other regions seeking a more balanced and inclusive approach to development. While challenges remain, Kerala's model serves as an example of how a focus on human well-being can lead to sustainable and equitable development.

#### **Human Development**

Globally, India often ranks low in composite indices related to health, education, and nutrition among countries outside Africa. However, Kerala's development model stands out, emphasizing the widespread sharing of economic gains. Kerala's HDI is almost comparable to developed countries. Kerala achieved a high HDI almost four decades ago. Since then, it has continued to improve human development through active state intervention. The analysis on spatial pattern of the human development of Kerala revealed that 28.75 % of the villages of the state need further attention to human development (Das et,al, 2022). But concerns were raised on sustainability of human development indicators, financing on human development expenditure and fiscal constraints faced by the state to meet these expenditures (Chakraborty et, al, 2010).

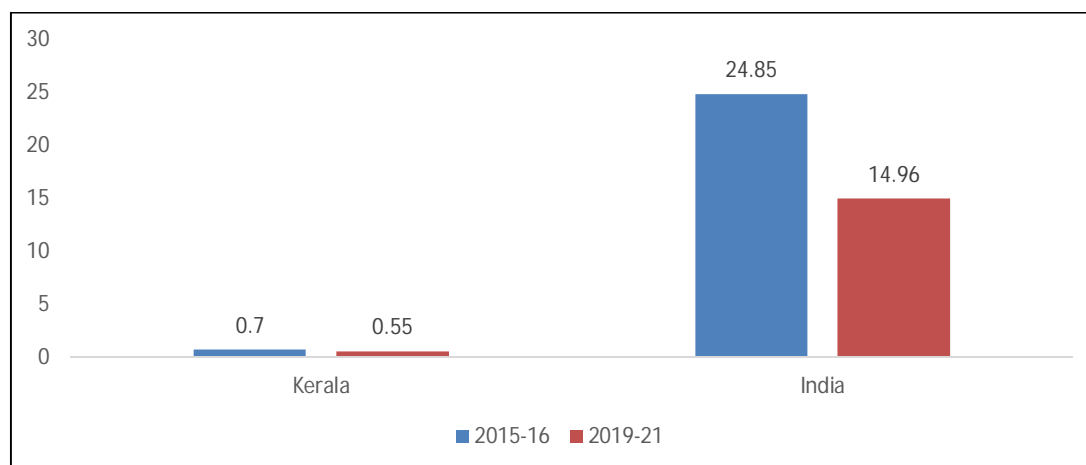
**Figure 11: Kerala outshines India in HDI ranking**

Source: Global Data Lab; <https://globaldatalab.org>

### State with lowest poverty

Poverty has declined steadily in all states and social groups in India (Panagaria and Mukim, 2014). Using different rounds of National Family Health Survey (NFHS), The NITI Aayogs report on Multi-Dimensional Poverty report shows that Index the percentage of poor in Kerala decreased from 0.70 per cent of the total population in 2015-16 to 0.55 per cent in 2019-21 (Figure 12). During this period, 53,239 people were lifted out of multidimensional poverty. According to this report, Kerala has registered lowest poverty in the country followed by Goa with 3.76 per cent, Sikkim with 3.82 per cent, Tamil Nadu with 4.89 per cent and Punjab with 5.59 per cent. The study used the United Nations Multidimensional Poverty Index (MPI), based on 12 indicators such as malnutrition, education, and sanitation. If people are deprived in three or more areas, they are identified as "MPI poor." Kerala's improved ranking can be attributed to its better performance across various parameters used to calculate the MPI score. For instance, the percentage contribution of nutrition increased from 34.12 per cent in 2015-16 to 36.61 per cent in 2019-21. This is a reflection of the government's unwavering commitment towards social welfare and improving the lives of people in the state.

**Figure 12:** Head-count of Multi-dimensional poverty



Source: NITI Aayog

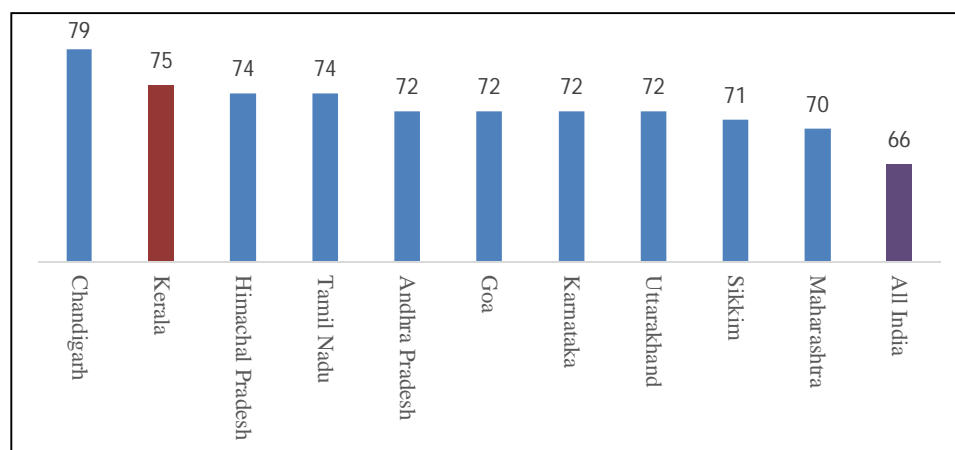
### **Kerala, a top performer in Sustainable Development Goals**

As per the United Nations Sustainable Development Goals (SDGs) Index and Dashboards Report 2023, India holds the 112th position out of 166 countries, attaining an overall index score of 63.5% in its progress toward achieving the 17 listed sustainable development goals (UN, 2023). In the SDG India Index for the year 2020-21 by NITI Aayog, Kerala emerges as the top-ranking state in India, securing the first position. Kerala boasts a composite score of 75, surpassing Himachal Pradesh (74) and Tamil Nadu (74). On the lower end, Bihar (52), Jharkhand (56), and Assam (57) find themselves at the bottom.

Kerala leads in 9 goals with scores ranging from 65 to 99, including no poverty (83), zero hunger (80), global health and well-being (72), quality education (80), clean water and sanitation (89), reduced inequality (69), sustainable cities and communities (75), sustainable consumption and production (65), climate action (69), life on land (77), and peace, justice, and strong institutions (80). The state performs well in four goals with scores between 50 and 64, covering gender equality (63), decent work and economic growth (62), industry, innovation, and infrastructure (60), and life below water (53). Kerala has already achieved the goal of affordable and clean energy in 2020 (NITI Aayog, 2020). Though the state has achieved social resilience through the investments in human capital which ultimately resulted in the high performance in sustainable development indicators, several challenges are there in front of the state to focus upon. The key challenges include environmental issues such as

global warming and flood, fiscal constraints and unemployment issues (Chattopadhyay). As the main focus of old Kerala model was on distributive policies, the new Kerala model tries to integrate the social, productive and environment aspects of development by developing synergies between civil societies, local governments and state governments (Veron, 2001).

**Figure 13:** Top 10 performers in terms of Sustainable Development Goals



Source: NITI Ayog, SDG Dashboard

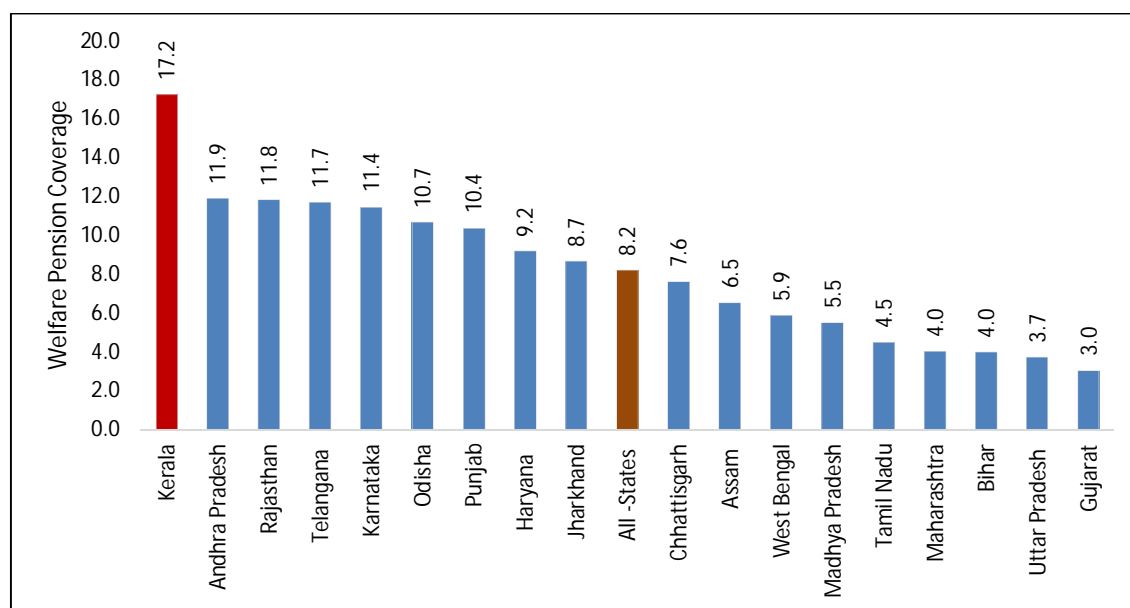
### **Kerala leads in social protection**

Social security and welfare measures are necessary to ensure that the most vulnerable are protected and provided support to mainstream into society. It talks of Social Security for All, which envisages that "in a crisis-shaken world marked by a perhaps unprecedented quagmire of political, environmental, economic and fiscal uncertainties... social security is a human right and all people regardless of where they live, should be guaranteed at least a floor of basic social protection" (ILO, Social Security for All, 2012). Social security benefits are powerful tools to combat poverty and achieve the Sustainable Development Goals. While earlier development theories considered social policy as a residual, it is now being increasingly realised that it is essential to integrate economic and social policies; the build-up of national social security systems early in the economic development process is a key investment in overall development. Kerala has several achievements in introducing social security measures to the vulnerable groups like persons with disabilities, aged people, women and children in difficult circumstances. Kerala has been known for creating



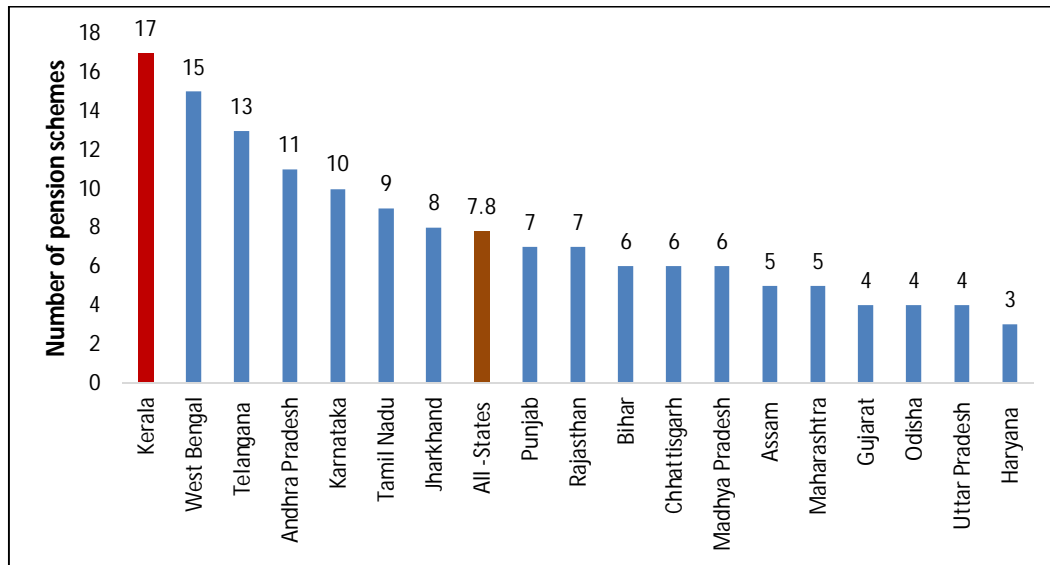
Comparing the number of social security pension schemes among the major 18 states (including 100% state funded welfare boards), Kerala stands at the forefront with 17 schemes. The state holds the top spot in total welfare pension coverage, reaching 17.15% (61,09 lakh beneficiaries out of 3.56 crore population). However, Kerala secures the 4th position in per capita amount, amounting to Rs.1600, trailing Telangana (Rs.3016), Andhra Pradesh (Rs.3000), and Haryana (Rs.2750). In terms of total social security pension expenditure by a state, Kerala holds the 4th position with Rs.8745 crores, following Andhra Pradesh (Rs.19074 crore), Telangana (Rs.11728 crore), and Karnataka (Rs.9484 crore).

**Figure14:** State wise Welfare Pension Coverage (In percentage)



Source: Authors's based on RBI data

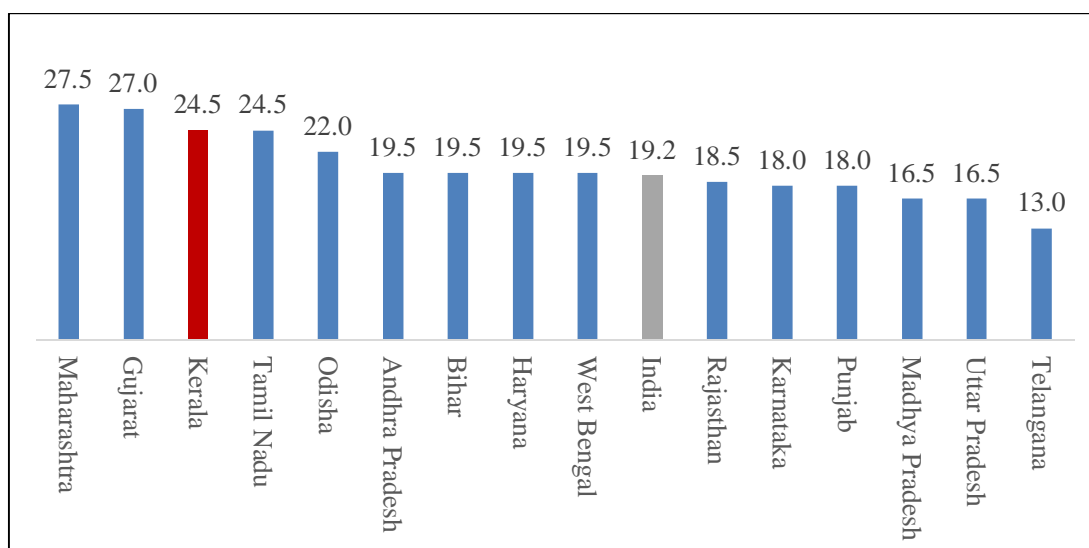
Considering the old age population in India, Kerala has the highest percentage at 16.5% of the total population, followed by Tamil Nadu (13.6%) and Punjab (12.6%). In terms of old age welfare pension coverage, Kerala, with 76.59%, holds the 2nd position after Rajasthan (80.38%). In the allocation of state budget for old age pension, Kerala ranks 3rd with Rs.4929.8 crore, following Andhra Pradesh (Rs.7490 crore), Telangana (Rs.6167 crore), Haryana (Rs.5160 crore), and Tamil Nadu (Rs.4915).

**Figure15:** State Wise Number of Pension Schemes

Source: Authors's based on RBI data

### Disaster Preparedness Index

Kerala significantly outpaces India in terms of the Disaster Preparedness Index, underscoring its proactive approach amid the evolving challenges of climate change.

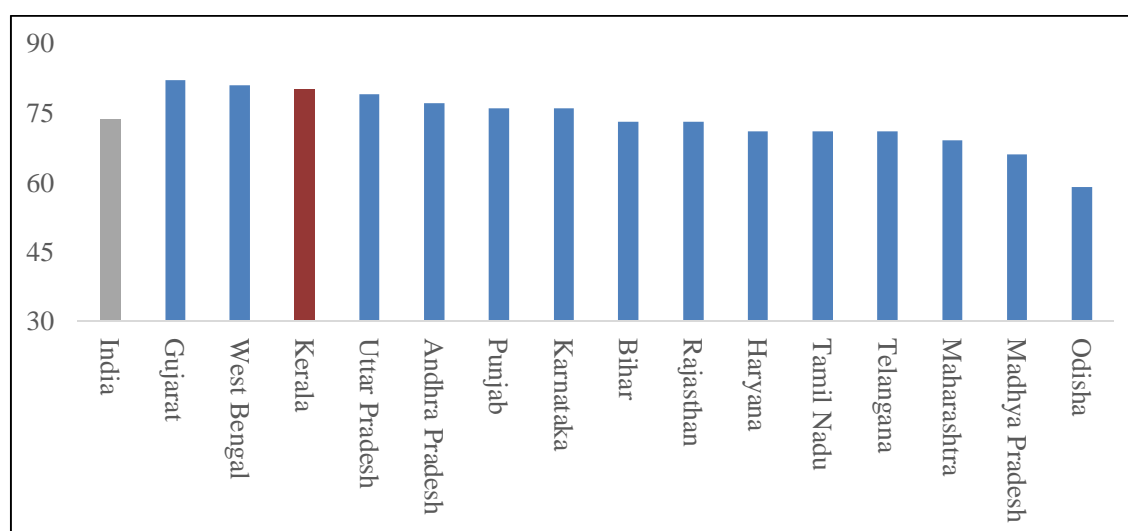
**Figure16:** Scores in disaster preparedness

Source: SDG dashboard

### Strong institutional back up ensuring the rule of law

Kerala has distinguished itself in maintaining a robust and peaceful law and order situation within the state. The region has a strong institutional setup that has played a pivotal role in ensuring the safety and security of its residents. The concerted effort has contributed to the state's reputation for having a secure environment, making it an exemplar in the nation for effective law enforcement and institutional stability. It is evident from the exemplary score in terms of peace, justice and strong institutions.

**Figure17:** Institutional strength



Source: SDG dashboard

### Kerala among the front runners in peace, justice and strong institutions

Infrastructure plays a key role in economic growth and development. Kerala has a high status in infrastructure development in India, and her experiences in social infrastructure development rank her one among many developed countries.

## 5. Adapting to changing challenges becomes crucial

### *Demographic transition*

Kerala completed its demographic transition by the 1990s, resulting in a higher proportion of aging population, which is now around 16%, similar to many developed economies. In 1961, Kerala had a population aged 60 and above at 5.10%, slightly below the national average of 5.60%. However, starting from the 1980s, Kerala began to surpass the rest of India in this demographic. By 2001, the proportion of the elderly in Kerala had risen to 10.50%, compared to the national average of 7.50%. According to the 2011 census, 12.60% of Kerala's population was above 60 years, exceeding the national average of 8.60%. A study by Rajan & Mishra (2014) revealed a continuous growth rate of 2.30% among the elderly in the state, particularly among those aged 70 or 80 years and above.

By 2015, Kerala's elderly population had increased to 13.10%, while the all-India average stood at 8.30% (Sample Registration System Statistical Report, 2015). Subsequent reports, such as the SRS Report 2018, indicated a further increase to 13.30% in Kerala's 60 plus population. The Economic Review 2019 highlighted Kerala's accelerated aging trend compared to India, noting that 48 lakh people in Kerala were aged 60 years and above. Rajan and Mishra (2020) projected the elderly population aged 60 years and above in Indian states and union territories. Kerala had nearly 16% of its population aged 60 years and above. The aging population poses the most significant challenge for the state of Kerala. It is imperative for the state to develop improved care economy models to address this issue. Simultaneously, Kerala bears a greater responsibility to harness the potential of its young population to enhance its productive capacity and sustain its growth and development levels.

The historical factors such as matrilineal system, formal education system and health care system set the stage for demographic transition in the state (Goswami, 2021). Ageing population is both the challenges and opportunities for the state. The state has high responsibility to provide health care facilities and social security for the growing elderly population (Singh, 2013). Growing ageing population will also pose a challenge for the ongoing fiscal crisis in the state (Nair and Sensarma, 2017).

### *Labour force participation*

The absence of job opportunities, inadequate upskilling of the potential workforce, and a lack of initiative in harnessing tourism potential could potentially hinder the benefits that the state has gained so far. Kerala has a contradicting case of high female literacy rate and low female labour force participation rate in the country. Societal norms and kinship play key role in women's decision to work in Kerala (Renuka and Abraham, 2023). The female labour force participation rate of Kerala started declining from 2004 to 2017 and shown an increase thereafter. The disaggregate level data shows that there is an increase in the labour force participation in the higher and middle quintiles in the rural and urban areas respectively in Kerala. Also, the labour force participation rate in the lower education groups was seen at a faster rate (Hajong and Kakarlapudi, 2023). According to the Annual report of Periodic Labour Force Survey (PLFS), 2022-23, Kerala's female labour force participation rate in usual status of employment for the age group 15 years and above is 40.8 % and 33.6 % for the rural and urban areas respectively. While, the rural female labour force participation of Kerala is below the all state average of 41.5 %, urban female labour participation rate is above the all state average of 25.4 %. Educated unemployment among the female is highest in the state which needs policy attention.

### **6. Conclusion**

This study shows the dividends to concerted efforts of the state through building social, social and digital infrastructure. In terms of provision of public infrastructure Kerala ranked among the top performing states. Kerala's development trajectory showcases both remarkable achievements in terms of socio-economic indicators. Further, the economic growth of Kerala in the last two decades surpassed the national average. This is an indication of returns to human capital led social development strategy. However, the state-led people centric development strategy came with a fiscal cost. The state is now termed as a fiscally stressed state. At the same time, the state is currently reeling with second generation development problems such as high unemployment among youth, especially females, aging population leading to decline in productive workforce, and protecting environment. The significant challenge lies in limited fiscal autonomy, primarily due to the structure of fiscal relations between the federal and central governments. With the central government primarily responsible for collecting the majority of tax revenue, the state's own tax revenue constituted only 6.9% of its gross state domestic product in 2021-22. To foster future growth, Kerala

must establish institutions capable of channeling its substantial savings into necessary investments. The state stands at a crossroads, requiring a calibrated approach to address sustainability concerns while maintaining its focus on human development. Understanding the evolving macro-fiscal dynamics and timely adaptation to overcome challenges may ensure a balance between progress and long term resilience.

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