



# DYNAMICS OF SOCIAL SECTOR EXPENDITURE IN KARNATAKA

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## 1. ABSTRACT

*This paper presents analysis of the trends and patterns of public expenditure at the state of Karnataka from 2000 to 2023, particularly in the social sector, and its key social sub-sectors, of education and health. The analytical framework is divided into three distinct periods, in the first one (2000–2007), where fiscal rationalization was at the Centre of policy making; the second (2008–2014), where the Global Financial Crisis and implementation of landmark entitlements, such as the MGNREGA, the RTE Act, and the NFSA, played a key role; and the third (2015–2023), where structural changes under the 14th Finance Commission and unprecedented exigencies of the COVID-19 pandemic were dominant. The results show that the absolute levels of public and social sector spending have increased sharply but a decline in rates of growth can be detected across the three phases. The paper, in particular, draws attention to a structural shift in the state's welfare portfolio in that education allocations seems to have been decreasing consistently while those of health are highly unpredictable with a crash driven increase. The analysis, ultimately, presents the shift of fiscal stance from an aggressive and broad expansionary profile towards a more tight and reactive profile, while showing the importance of increasing the efficiency of expenditures and considering new revenue models to ensure human capital formation in a scenario of post-pandemic.*

## 2. INTRODUCTION

In the last few decades, macroeconomic theory has evolved from exogenous growth model (Solow-Swan) to endogenous growth model (Romer and Lucas), with human capital, mainly education and health, being considered the key factor of long-term growth. Due to the inherent failure of the market in the provision of these public goods and the asymmetry of information, a strong role of the state is a top macroeconomic priority, not just a welfare issue.

The fiscal federalism in India is characterized with a structural asymmetry: the Union government has the largest share of the most elastic bases of taxation while the sub-national (state) governments are constitutionally mandated to deliver social sectors. Thus, state policy makers are faced with a macro-economic trilemma between debt sustainability, infrastructure development and social provisioning.

To analyze this trends and patterns, non-linear dynamics of public finances must be recognized and defined by exogenous shocks and phenomena. Secondly, allocative efficiency will need to shift from basic and quantitative investments (such as primary education) to more advanced and qualitative social infrastructure. This paper attempts to empirically dissect the state level welfare budgets to graph the shift from the quantitative expansion to the best qualitative expansion in regional human capital formation by isolating the fiscal paths of major states in India over a long period.

## 3. LITERATURE REVIEW

**Guruswamy et.al (2008)** attempts to analyze the magnitude, trend and pattern of the public expenditure on health at the national and state levels of India for the period 1995-2006. The paper observes that on health expenditure, the public sector has not been able to increase its proportion of GDP over the years and that of the public sector is larger in terms of revenue expenditure. In a comparison of states, the relatively poor states were seen to be spending more on health per capita and as a percentage of GSDP than the relatively rich ones. It was seen that expenditure on health by the state had not grown adequately along the path of overall economic prosperity, and private out-of-pocket expenditure seemed to be on the rise.

**Chattopadhyay (2017)** examines the trend and pattern of social sector expenditure in India during 2000s. The author highlights the need for appropriate monitoring and evaluation framework, and change in the budget making policy with greater involvement of people directly affected by changes in public policies related to social sector.

**Brahmachary (2023)** investigates the trend of government spending in the social sector of India (including education and health) and variations in this type of spending at the state levels. Besides, it tries to realize the



influence of government expenditure on the basic indicators of human development in India. The analysis says that in the field of education though there have been some good things to be seen up to the elementary level, in higher education it is very bad. Public spending in the health sector has relatively remained at the same level for the past 10 years. The results show that a bold policy design is required to boost the overall public expenditure in social sectors, especially health and education sector in order to realize a satisfactory development target in India. **Sharma (2025)** deals with the trend of the social sector expenditure in India and focuses on Uttar Pradesh in particular. The Paper highlights the importance of public expenditure for inclusive growth and human capital development. The study shows that though the growth rate has been volatile in short term, it is not significant different between Uttar Pradesh and other states. Policy ideas to be implemented are the improvement of states own-source revenue, rationalization of allocations, intergovernmental transfer reform, and outcome-based budgeting and participatory governance. It is crucial to address these issues to bring fiscal inputs into concrete human development outcomes, especially in high population states like Uttar Pradesh.

**Maurya & Jaiswal (2022)** evaluates Uttar Pradesh’s public expenditure (2005–2019) and reveals a multifold increase in overall spending and improved expenditure elasticity, marking a positive shift toward higher developmental expenditure. However, this fiscal growth is structurally imbalanced, heavily favoring revenue over capital expenditure while witnessing a concerning absolute decline in vital agricultural and rural investments. Coupled with stagnant budgetary allocations for core human capital sectors like education and healthcare, this misallocation of resources threatens to undermine the state's long-term socio-economic development despite its expanding fiscal capacity.

#### 4. RESEARCH METHODOLOGY

The study is based on secondary sources of data which are collected from Reserve Bank of India and Database of EPW Research Foundation (EPWRF). The study spans from 2000-01 to 2023-24 to demonstrate the Trend analysis of the expenditure of the social sector. The Paper uses statistical tools such as Percentages, Ratios, and Compound annual Growth Rate (CAGR). All the monetary values are converted to 2011-12 Constant Prices using GDP Deflators to remove inflationary effects.

#### 5. DATA ANALYSIS AND INTERPRETATION

##### 5.1. Trends and Patterns in Total Public Expenditure in Karnataka (at 2011-12 constant prices)

The Table 5.1 presents the total public expenditure in Karnataka from 2000 to 2023 in 2011-12 constant prices to adjust the numbers for inflationary biases and obtain a proper measure of fiscal expansion in real terms.

**Table 5.1.**

Year	Total Public Expenditure of Karnataka (In Crore Rupees)
2000	37640.10
2001	40610.55
2002	41116.24
2003	44207.49
2004	50956.16
2005	55151.19
2006	63030.03
2007	64640.04
<b>CAGR</b>	<b>8.03%</b>
2008	66318.64
2009	71723.08
2010	73248.93
2011	80620.72
2012	85052.58
2013	92614.69
2014	104084.97
<b>CAGR</b>	<b>7.80%</b>



2015	113742.04
2016	127954.58
2017	133191.61
2018	147268.08
2019	151689.69
2020	152731.01
2021	163782.56
2022	164021.71
2023	172662.27
<b>CAGR</b>	<b>5.36%</b>
<b>Overall CAGR</b>	<b>6.85%</b>

Source: Author's Calculation. Data retrieved from Database of EPW Research Foundation (EPWRF)

The first phase of observation was the FRBM Act Era (2000-2007) which can be identified as a highly accelerated growth rate of public expenditure with the highest sectional Compound Annual Growth Rate (CAGR) of 8.03%. This sound fiscal position is a result of a crucial phase in setting up state level fiscal discipline, in rationalizing the deficits, and in building up structured expenditure regimes, allowing rapid, capacity-building investments.

The next phase (2008-2014) shows a continuation of strong, although slightly reduced, fiscal expansion at a CAGR of 7.80%. The fiscal limitations of dealing with the Global Financial Crisis (GFC) and implementing significant rights-based entitlements were characteristic of this phase. The state took specific steps to reduce the macro-economic effects of the 2008 crisis through counter cyclical expenditures and continued to accommodate the huge budgetary responsibilities associated with the introduction of flagship legislation like Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA, 2006), Right to Education (RTE) Act (2009) and National Food Security Act (NFSA, 2013). It is interesting to observe that this consistent financial investment into the social sectors and economic resiliency has been very effective and has been made even during the time of a corrected per capita growth process of 9.89% for the state in the current period.

However, the last phase recorded (2015-2023) shows a significant slowdown in public spending growth speed and thus gave a slowdown of public spending CAGR of 5.36%. Structural changes in tax devolution and fiscal autonomy brought about by the recommendations of the 14th Finance Commission characterized the first part of this period. However, the COVID-19 pandemic had a huge impact on the economy during the latter years of this phase, and overshadowed everything else. Stagnation in 2019 expenditure at 151,689.69 Crore Rupees and 2022 at 164,021.71 Crore Rupees reflects the harsh strains on state revenue, the need for fiscal reprioritization, and emergency deficit-reduction and consolidation efforts during the global health crisis. Based on these observations, the average CAGR for this period of 6.85% suggests a constant addition of public investment in the past. But the slowdown in each of the phases does suggest a shift in fiscal policy from a wide-based aggressive to a more selective, policy hugging approach that responds to shifting statutory requirements and extreme exogenous shocks.

## 5.2. Trends and Patterns in Social Sector Expenditure of Karnataka at Constant Prices (2011-12)

Table 5.2 shows the social sector expenditure of Karnataka in the period 2000-23 in constant 2011-12 prices to account for inflation effects.



**Table 5.2.**

<b>Year</b>	<b>Social Sector Expenditure of Karnataka (In Crore Rupees)</b>
<b>2000</b>	12991.13
<b>2001</b>	13021.78
<b>2002</b>	12517.09
<b>2003</b>	13440.47
<b>2004</b>	14128.73
<b>2005</b>	16293.31
<b>2006</b>	18362.37
<b>2007</b>	21448.53
<b>CAGR</b>	<b>7.43%</b>
<b>2008</b>	23717.05
<b>2009</b>	26165.31
<b>2010</b>	26874.48
<b>2011</b>	27866.94
<b>2012</b>	30895.07
<b>2013</b>	31129.64
<b>2014</b>	36779.68
<b>CAGR</b>	<b>7.59%</b>
<b>2015</b>	42626.75
<b>2016</b>	49117.57
<b>2017</b>	51791.62
<b>2018</b>	57533.61
<b>2019</b>	54638.20
<b>2020</b>	50533.11
<b>2021</b>	59218.52
<b>2022</b>	56182.74
<b>2023</b>	61950.59
<b>CAGR</b>	<b>4.78%</b>
<b>Overall CAGR</b>	<b>7.03%</b>

Source: Author's Calculation. Data retrieved from Database of EPW Research Foundation (EPWRF)

During the study period, the amount of budget allocated for social sector increased by about 4.7 times from 12,991.13 to 61,950.59 Crore Rupees. In addition to revising the fiscal stance and policies on inflation, the initial Phase I (2000-07) in line with the broader macro-economic reforms has shown strong foundational effort towards social development at 7.43% CAGR, as result of enhanced fiscal discipline of the states which provided the fiscal space needed to pursue consistent social investments.

Of particular interest is the fact that the pace of the social sectors spending increased slightly during Phase II (2008-2014) from 23,717.05 Crore Rupees to 36,779.68 Crore Rupees at a CAGR rate of 7.59%. This hugely accelerated pace reflects the formidable fiscal implications of the major rights-based legislation that required sizeable and ongoing budgetary allocation. The aggressive and entitlement-based social expenditure proved to be a crucial counter-cyclical bluster in the middle of the era of Global Financial Crisis in overall and was happening parallel to the impressive corrected per-capita growth of 9.89% which was enjoyed by Karnataka during the specific period.

By contrast, during Phase III (2015–2023), the social sector budget saw a significant slowing down and increase in volatility, resulting in a significantly smaller CAGR of 4.78%. This period also began amid the new tax



devolution environment outlined by the 14th Finance Commission though the marked couple of decreases in social expenditure between 2018 (57,533.61 Crore Rupees) and 2020 (50,533.11 Crore Rupees) highlights the depth of social developmental setbacks brought on by the COVID-19 pandemic. The Covid-19 pandemic had imposed a new exogenous shock that required a radical reshaping of state income priorities and resulted in the temporary halting of long-term social capacity building in favor of immediate containment and emergency management of the economy. Finally, the overall long-term CAGR of 7.03% indicates an ongoing institutional preference for allocation in the social sector, whereas the phase-wise slowdown after 2015 demonstrates how social sector commitments are structurally susceptible to shocks on the macro level and the need for social sector budgets with greater resilience in the continued process of public finance planning.

### 5.3. Trends and Patterns in Per Capita Social Sector Expenditure (PCSSE) Karnataka

Table 5.3 provides an assessment of social sector budgetary allocation by detailing the trends and patterns in Per Capita Social Sector Expenditure (PCSSE) in Karnataka from 2000 to 2023. By accounting for demographic expansion, this metric offers a more precise evaluation of the real fiscal resources directed toward individual welfare. Over the study period, the PCSSE expanded approximately 3.6 times, escalating from 2,498.29 Rupees in 2000 to 9,150.75 Rupees in 2023, yielding a long-term Compound Annual Growth Rate (CAGR) of 5.81%.

**Table 5.3.**

Year	Per Capita Social Sector Expenditure (In Rupees) in Karnataka
2000	2498.29
2001	2461.58
2002	2330.93
2003	2466.14
2004	2554.92
2005	2904.33
2006	3227.13
2007	3717.25
<b>CAGR</b>	<b>5.84%</b>
2008	4054.20
2009	4404.93
2010	4464.20
2011	4560.87
2012	4999.20
2013	4988.72
2014	5838.04
<b>CAGR</b>	<b>6.27%</b>
2015	6702.32
2016	7650.71
2017	8004.89
2018	8824.17
2019	8316.32
2020	7633.40
2021	8878.34
2022	8360.53
2023	9150.75
<b>CAGR</b>	<b>3.97%</b>
<b>Overall CAGR</b>	<b>5.81%</b>

Source: Author’s Calculation. Data retrieved from Database of EPW Research Foundation (EPWRF)  
 Aligning with the established macroeconomic framework, the initial FRBM Act Era (2000–2007) demonstrates a steady capacity-building course with a CAGR of 5.84%, reflecting a period where improved state-level fiscal discipline facilitated consistent per capita investments. The subsequent Phase II (2008–2014) marks the most aggressive expansion in per capita welfare allocations, registering a peak phase CAGR of 6.27%. This acceleration directly captures the substantial budgetary commitments required to operationalize landmark rights-based entitlements.



On the other hand, Phase III (2015–2023), reveals a pronounced deceleration in PCSSE, with the CAGR contracting sharply to 3.97%. The acute vulnerability of per capita welfare spending to macroeconomic shocks is vividly captured by the absolute decline in per capita allocations observed during the pandemic onset, dropping from 8,824.17 Rupees in 2018 to 8,316.32 Rupees in 2019, and further to 7,633.40 Rupees in 2020. This temporary contraction and broader phase deceleration underscore the severe demographic and fiscal pressures exerted during the crisis, highlighting the critical need for resilient, shock-absorbing revenue models to safeguard per capita social entitlements in an increasingly constrained fiscal environment.

**5.4. Trends and Pattern in Social Sector Expenditure as percentage of Net State Domestic Product of Major Indian States**

Table 5.4 provides an assessment of the trends in the Social Sector Expenditure (as a percentage of Net State Domestic Product [NSDP]) for Major Indian States in the period 2000–2023. The ratio can be regarded as a very important indicator of social sector development is judged in relation to the larger economic framework. The expenditure ratio in the FRBM act era of Phase I (2000-2007) had been witnessed a characteristic of stagnation, it started at 4.70 % and reached at the same level of 4.70 % in 2007. Although in 2002 there was a significant drop of 4.22%, the overall trend in the period suggests that while overall expenditure on the social sector might have increased, it has kept up with state income: it is simply following the, fiscal discipline.

**Table 5.4.**

Year	Social Sector Expenditure as percentage of Net State Domestic Product of Karnataka
2000	4.70%
2001	4.63%
2002	4.22%
2003	4.45%
2004	4.25%
2005	4.44%
2006	4.53%
2007	4.70%
2008	4.86%
2009	5.36%
2010	4.99%
2011	5.02%
2012	5.27%
2013	4.86%
2014	5.48%
2015	5.68%
2016	5.77%
2017	5.66%
2018	5.89%
2019	5.28%
2020	5.07%
2021	5.33%
2022	4.56%
2023	4.75%

Source: Author’s Calculation. Data retrieved from Database of EPW Research Foundation (EPWRF)  
 The following Phase II (2008-2014) marked for a inconsistent increase as the overall social sector spending increased from 4.86% of NSDP in 2008 to 5.48% of NSDP in 2014. This upward path indicates the impact of the rights-based legislative entitlements, in effect, increased the share of the budgetary allocation that went to the social sector.



In contrast, the economic position of the social sector in relation to others has also experienced a peak and contraction in Phase III (2015-2023). The ratio changed to its peak of 5.89% in 2018, possibly due to the new tax devolution rules of the 14th Finance Commission but saw a sharp decline during the COVID-19 pandemic. In 2020, the ratio fell to 5.07%, and dropped to a 20-year low of 4.56% in 2022, improving slightly in 2023 to 4.75%. This compression represents the inability of the social sector expenditure to keep its share with NSDP in the post-pandemic setting. In sum, the trends show that, as hoped, the overall picture of the social efforts of state governments in relation to their income capacity has improved in the middle-term of the study decade, but that there is now a relative decline in this effort as states move toward consolidation and react to the long-term impact of the COVID-19 pandemic.

### 5.5. Trends and Patterns in Social Sector Expenditure as percentage of Total Public Expenditure of Karnataka

Table 5.5 presents the trend and pattern of Social Sector Expenditure as per cent of Total Public Expenditure in Karnataka during 2000-2023. This expresses budgetary prioritization of the State in relation to other administrative, economic and capital demands related to human development.

Table 5.5.

Year	Social Sector Expenditure as percentage of Total Public Expenditure in Karnataka
2000	34.51%
2001	32.07%
2002	30.44%
2003	30.40%
2004	27.73%
2005	29.54%
2006	29.13%
2007	33.18%
2008	35.76%
2009	36.48%
2010	36.69%
2011	34.57%
2012	36.32%
2013	33.61%
2014	35.34%
2015	37.48%
2016	38.39%
2017	38.89%
2018	39.07%
2019	36.02%
2020	33.09%
2021	36.16%
2022	34.25%
2023	35.88%

Source: Author's Calculation. Data retrieved from Database of EPW Research Foundation (EPWRF)

The budgetary allocation of the social sector showed significant variations and the initial trend was in the downward direction during Phase I (2000-2007) reflecting the acceptance and beginning implementation of the FRBM Act. The ratio declined significantly from 34.51% in 2000 to a period low of 27.73% in 2004, before recovering to 33.18% by 2007. However, since the introduction of strict fiscal discipline and deficit targeting in the early years of fiscal consolidation, there is an indication that there was a controlling effect of the same, thereby reducing proportional social sector allocations as a condition of fiscal stabilization elsewhere.



But a clear over-turning construction happened in Phase II (2008-2014). The state's allocative priority for the social sector remained relatively constant and increased overall, generally ranging from 34% to 36% and ending up at 35.34%, despite the overall macro-economic pressures of the Global Financial Crisis. This consistent budgetary allocation is evidence of the serious financial commitments required for implementation of the key legislative rights.

The sequence of the allocation of priorities in phase III (2015-2023) marks the high point and vulnerability therefrom. With the introduction of better tax devolution and increased fiscal space by the 14th Finance Commission, the percentage of the defined social sector gradually increased to reach the highest level ever recorded in 2018, 39.07% of the entire budget. However, this positive developmental path was jolted and disrupted by the external shock of the COVID-19 pandemic. In 2019, the allocative ratio saw the sharpest decline, going down to 36.02%, and reaching the decadal-low at 33.09% in 2020. Such a sharp decrease reflects a very significant crowding out effect in the midst of this global health crisis, as while the overall public expenditure level may have increased to effect macro-economic stabilization, the share of such expenditures devoted to continued, ongoing social sector programs has shrunk significantly under fiscal re-prioritization during the crisis. While the ratio shows marginal improvement to 35.88% till 2023, the data shows that Karnataka has the institutional capacity to increase the proportion of the social sector in the budget, it is highly delicate when faced with severe and unprecedented macro-economic shocks.

**Table 5.6. Trends and Patterns in Public Education Expenditure of Karnataka at 2011-12 Constant Prices**  
 Table 5.6 defines the Total Public Education expenditure from 2000 to 2023 for the state of Karnataka. The data shows an actual increase of about 2.7 times from the level recorded in the year 2000 (7,047.98 Crore Rupees) to what was recorded in 2023 (19,874.89 Crore Rupees).

**Table 5.6.**

Year	Total Public Education Expenditure (In Crore Rupees) in Karnataka
2000	7047.98
2001	6874.27
2002	6749.94
2003	6856.98
2004	7509.16
2005	7964.28
2006	8645.93
2007	9735.93
<b>CAGR</b>	<b>4.72%</b>
2008	11186.23
2009	10567.51
2010	12187.64
2011	12564.52
2012	13888.50
2013	14444.73
2014	15523.67
<b>CAGR</b>	<b>5.61%</b>
2015	16054.80
2016	16940.46
2017	17269.17
2018	18158.05
2019	20044.09



<b>2020</b>	17574.75
<b>2021</b>	19589.01
<b>2022</b>	19743.42
<b>2023</b>	19874.89
<b>CAGR</b>	<b>2.70%</b>
<b>Overall CAGR</b>	<b>4.61%</b>

Source: Author’s Calculation. Data retrieved from Database of EPW Research Foundation (EPWRF)

The public education expenditure has had a moderate Compound Annual Growth Rate (CAGR) of 4.72% for 2000-2007, that corresponds to the FRBM Act Era, Phase I. Interestingly, during this time, there was a slight decline and a standstill from 2000 to 2002, which was caused by fiscal rationalization and deficit targeting at the State level. However, the state got its finances straightened under the new institutional set-up, the educational allocation has had a steady upward swing, up to 9,735.93 Crore Rupees in 2007.

The next Phase II (2008-2014) constitutes the most aggressive in terms of educational investments, with a peak phase CAGR of 5.61%, and absolute spending at 15,523.67 Crore Rupees. This is direct result of the enactment of rights-based legislation, particularly the Right to Education (RTE) Act 2009, with accelerated fiscal commitment. The national need to universalize and to improve the infrastructure of elementary education required significant and non-discretionary increase of the budget. Additionally, this strong educational investment took place at a key moment in Karnataka's counter-cyclical strategy to the Global Financial Crisis (GFC), and synergistically alongside the state's strong corrected per capita economic growth of 9.89% during the same period, thus proving to be a time when economic growth was able to drive big investments in deep structural reforms of human capital.

On the other hand, Phase III (2015-2023) shows a much simpler slowdown in the growth velocity of educations with the CAGR plunging into 2.70%. The altered tax devolution setup of the 14th Finance Commission, which had a positive impact on this sector for some time, saw its peak expenditure in 2019 (20,044.09 Crore Rupees) but the COVID-19 pandemic had an enormous impact on this sector. The exogenous shock has come in the form of a global health crisis, which has resulted in a significant fiscal contraction, with spending on education dropping to 17,574.75 Crore Rupees in 2020. This sharp fall reflects a significant crowding-out effect in which, during extended periods of institutional closures, emergency macro-economic stabilization and health needs, crowded out the educational investments. While the expenditure nominally got back to 19,874.89 Crore Rupees in 2023, the amount was still lower than the pre-pandemic peak, showing a weak range of recovering from the crisis. Adding these observations together, the fact that the long-term CAGR is 4.61% indicates that the education sector has an institutionalized focus on education, whereas the large stagnation in the last decade signals a structural vulnerability of the sector to macroeconomic shocks, posing a great need to design shock-absorbing and resilient mechanisms to ensure long-term human capital formation.

### 5.7. Trends and Patterns in Per Capita Public Education Expenditure of Karnataka

Table 5.7 captures the trends and patterns seen in Per Capita Public Education Expenditure in Karnataka during 2000-23. This measure shows the impact of demographic growth and provides a more accurate estimate of the fiscal resources available to contribute to the education outcomes of individual citizens.

**Table 5.7.**

<b>Year</b>	<b>Per Capita Public Education Expenditure in Karnataka</b>
<b>2000</b>	1355.38
<b>2001</b>	1299.48
<b>2002</b>	1256.97
<b>2003</b>	1258.16
<b>2004</b>	1357.89
<b>2005</b>	1419.66



2006	1519.50
2007	1687.34
<b>CAGR</b>	<b>3.18%</b>
2008	1912.18
2009	1779.04
2010	2024.53
2011	2056.39
2012	2247.33
2013	2314.86
2014	2464.07
<b>CAGR</b>	<b>4.32%</b>
2015	2524.34
2016	2638.70
2017	2669.11
2018	2784.98
2019	3050.85
2020	2654.80
2021	2936.88
2022	2938.01
2023	2935.73
<b>CAGR</b>	<b>1.91%</b>
<b>Overall</b>	<b>3.42%</b>

Source: Author's Calculation. Data retrieved from Database of EPW Research Foundation (EPWRF)

The per capita expenditure grew by around 2.16 times in 24 years from 1355.38 Rupees in 2000 to 2935.73 Rupees in 2023, representing a long-term Compound Annual Growth Rate (CAGR) of 3.42%. The first FRBM Act Era (2000-2007) has not been an unrestricted one but has been a stabilizing approach with a CAGR of 3.18%. However, it is worth noting that this period included a period of decreasing per capita allocations in 2002, to 1,256.97 Rupees, the immediate effects of fiscal rationalization and deficit targeting at the state level. But with the institutional discipline, the funds have picked up again to reach 1687.34 in 2007 showing per capita human capital investment had regained.

The next Phase II (2008-2014) is the most intense growth phase in terms of the individual education allocations – over in that phase, the allocated increase attained a peak phase CAGR of 4.32%. This acceleration, bringing expenditure up from 1,912.18 Rupees to 2,464.07 Rupees is a reflection of the substantial budgetary investments needed to enable implementation of the Right to Education (RTE) Act 2009. Huge per capita investments were needed for universal education, as the quality of education was imperative. Importantly, this strong educational finance also proved to be an important counter-cyclical cushion in the period of Global Financial Crisis (GFC). By contrast, the current Phase III (2015 – 2023) determined by the 14th Finance Commission (2015–2023) and then aggressively disturbed by the extensive disruptions of COVID-19 (2020 – 2023), has shown definite signs of speeding down the per capita education investments, with the CAGR bit smashed to a sluggish pace of 1.91%. The per capita allocations have experienced a steady increase during the phase until reaching a record high of 3,050.85 Rupees in 2019, but the global health crisis that started in that year triggered a sharp decrease to 2,654.80 Rupees in 2020 as an exogenous force. The shocking rate at which this cut-off occurred clearly emphasizes the sensitivity of welfare spending at the individual level to shocks in the wider economy where communication of emergency health and stabilization needs overtook education funding in the midst of institutional closures. In addition, the lack of strong growth in the post pandemic recovery, with expenditure having almost not grown between 2,936.88 Rupees in 2021 and 2,935.73 Rupees in 2023, suggests that investments per student have had difficulty keeping up with population growth and recovering their pre-crisis trend. This recent structural stagnation points to an important leverage in the state's financial structure, and the pressing need for resilient financial arrangements that can withstand a constrained economic setting to sustain long-term human capital formation.



### 5.8. Trends and Patterns in Public Education Expenditure as percentage of Total Social Sector Expenditure of Karnataka

The Table 5.8 details the trend and pattern of Public Education Expenditure in Karnataka as share of the Total Social Sector Expenditure from 2000 to 2023. It is indicative of the prioritization position of educational investment in the State's social sector development portfolio as well as the level of its relative dominance in that portfolio.

Table 5.8.

Year	Public Education Expenditure as percentage of Total Social Sector Expenditure in Karnataka
2000	54.25%
2001	52.79%
2002	53.93%
2003	51.02%
2004	53.15%
2005	48.88%
2006	47.09%
2007	45.39%
2008	47.17%
2009	40.39%
2010	45.35%
2011	45.09%
2012	44.95%
2013	46.40%
2014	42.21%
2015	37.66%
2016	34.49%
2017	33.34%
2018	31.56%
2019	36.69%
2020	34.78%
2021	33.08%
2022	35.14%
2023	32.08%

Source: Author's Calculation. Data retrieved from Database of EPW Research Foundation (EPWRF)  
As observed across the study period, the overall trend is a clear and steady secular decline as the portion of the social sector allocated to education has been drastically reduced from the 54.25% of 2000 to 32.08% in 2023. In Phase 1 (2000-2007) which is the FRBM Act Era education has held an absolute supremacy in the social sector wherein it got more than half of the total welfare budget. As the state began to make the manifold changes and cutbacks necessary to deal with fiscal rationalization under the new statute, however, this proportional dominance gradually began to disappear, reaching 45.39% by 2007, with signs of a general trend of change in state welfare priorities.

This sort of structural compression was additionally promoted throughout Phase II (2008-2014). Although the absolutes of educational expenditure have increased significantly as required by the Right to Education (RTE) Act of 2009, education's proportion has been stagnating and falling, ending this phase at 42.21% in 2014. This seeming contradiction is because there is a strong denominator effect from the overarching macroeconomic and policy conditions of the period. At the same time the Global Financial Crisis had led to a massive and accelerated budgetary allocation in the state for employment, food security and general social welfare, under the MGNREGA. The result was that, as the education budget increased, the increase in the overall social sector budget was at a much faster pace, effectively reducing the proportion of the education budget.



This proportional marginalization is now happening with greater impact during Phase III (2015-2023), which encompasses the 14th Finance Commission as well as the devastating effects of the COVID-19 pandemic. The ratio fell in this period to reach a low in 2018 of 31.56% and ended the study period at 32.08% in 2023. Because of the exogenous shock of a global health crisis, a previously unprecedented reprioritization of the funds allocated to the social sector was required, specifically for emergency healthcare facilities, epidemiological management and direct economic relief. This emergency reallocation reduced and virtually eliminated the historical share of education. Combining this phase-wise dynamics, the data findings clearly reveal a qualitative change in basic social policy institutions in Karnataka. It had passed 20 years and the state has transformed from a very concentrated and education-oriented welfare system towards a very diversified social security system. This indicates a growing multi-dimensionality to understand and model the various forms of human developments; however, it shows that the proportional decline in its overall expenditure is a signal to deliver a new qualitative leap forward in the public education sector in the upcoming years, which will have to be realized by much greater effectiveness in the use of funds.

**5.9. Trends and Patterns in Public Education Expenditure as percentage of Total Public Expenditure of Karnataka**

Table 5.9 offers the trend and pattern of Public Education Expenditure as a proportion of Total Public Expenditure in Karnataka. This shows the overall prioritisation of human capital formation in the state's fiscal policy and how it relates to all other alternative administrative, infrastructure and welfare use.

**Table 5.9.**

<b>Year</b>	<b>Public Education Expenditure as percentage of Total Public Expenditure in Karnataka</b>
2000	18.72%
2001	16.93%
2002	16.42%
2003	15.51%
2004	14.74%
2005	14.44%
2006	13.72%
2007	15.06%
2008	16.87%
2009	14.73%
2010	16.64%
2011	15.58%
2012	16.33%
2013	15.60%
2014	14.91%
2015	14.12%
2016	13.24%
2017	12.97%
2018	12.33%
2019	13.21%
2020	11.51%
2021	11.96%
2022	12.04%
2023	11.51%

Source: Author’s Calculation. Data retrieved from Database of EPW Research Foundation (EPWRF)



The overall trend over that study period shows a worrying and systematic decrease, from a high of 18.72% allotted to the education in 2000 to a low of 11.51% in 2023. This ratio witnessed a sharp decline in Phase I (2000-07) where the FRBM Act was enacted and implemented, to reach 13.72% in 2006. This indicates that in moving towards fiscal targets and rationalization at the state level in the first place, part of what was cut and frozen were proportional allocations to education as the state settled its costs.

The ratio has displayed a high level of variability over the next Phase II (2008-2014), but has been temporarily stabilized in the range of 14.73% to 16.87%. Although the absolute funding requirements of RTE 2009 supported the education budgets, it was difficult for the sector in terms of the relative share. This was primarily due to a very strong denominator effect as the overall public expenditure of the State increased at a much higher rate to meet the counter-cyclical requirements of the Global Financial Crisis and the huge spending during the Global Financial Crisis on various rights entitlements in particular MGNREGA and NFSA.

Lastly, Phase III (2015–2023) reveals a most serious and deep seated of the structural marginalization of educational funds. The ratio was successively worsened, and reached its lowest point in two decades in 2020 when the world is facing an exogenous shock of the COVID-19 pandemic despite the enhanced fiscal autonomy that was conceptually given by the 14th Finance Commission. The next slowdown (reached 11.51% in 2023) vividly demonstrates how education has been gradually pushed off the budget agenda by emergency macroeconomic stabilization policies, health interventions, and fiscal consolidation to finance the post-pandemic era. This steady, long-term (20 years), proportional decline is an important policy point – it means that the availability of funds for Karnataka's public education at a given time will be lower than is fairly customary for states, while future qualitative gains will have to come from greater expenditures efficiency.

**5.10. Trends and Patterns in Public Education Expenditure as Percentage of Net State Domestic Product for Karnataka**

Table 5.10 shows that Public Education Expenditure (PEE) as per cent of Karnataka's Net State Domestic Product (NSDP) has been a gradual rise since 2000. This is a crucial ratio which indicates the ratio of the formation of human capital from the total economic resources of the state.

**Table 5.10.**

Year	Public Education Expenditure as Percentage of Net State Domestic Product of Karnataka
2000	2.55%
2001	2.44%
2002	2.28%
2003	2.27%
2004	2.26%
2005	2.17%
2006	2.13%
2007	2.14%
2008	2.29%
2009	2.16%
2010	2.26%
2011	2.26%
2012	2.37%
2013	2.26%
2014	2.31%
2015	2.14%
2016	1.99%
2017	1.89%
2018	1.86%
2019	1.94%
2020	1.76%
2021	1.76%
2022	1.60%
2023	1.52%



Source: Author’s Calculation. Data retrieved from Database of EPW Research Foundation (EPWRF)

The Table shows a serious downward trend with the education fiscal effort shrinking continuously year after year, reaching an all-time low in 2023 with 1.52%, after peaking at 2.55% in 2000. The ratio in this Phase has a steady decline from 2000 to end of Phase I (2007) when the FRBM Act was in place. This contraction indicates that though the size of absolute investments in education may have increased, there was insufficient proportional increase relative to the growth of the state economy, which had been the overarching policy goal in the form of fiscal rationalization and deficit reduction.

The next Period (Phase II, 2008-2014) is a period of stability, in which the ratio moves slightly between 2.16% and 2.37%. Although the Right to Education (RTE) Act 2009 introduced the principles of sizeable absolute fund growth, the sector didn't see a corresponding growth in its relative share of the state's economic output.

Phase III (2015-2023) reveals the commitment to structural retreat of the state's education system. The ratio continued to decline in the days of the 14th Finance Commission and further on into the massive disruptions of the COVID-19 pandemic, eventually falling below the 2.0% target in 2016 and then to 1.52% in 2023. Acute economic shocks and a huge revenue squeeze imposed by the global health crisis made it impossible to continue long-term investments in education, and led to emergency reprioritizations focused on health and immediate economic stabilization. This ratio has failed to rise since the pandemic hit in the subsequent years, which shows that the education system is taking a shrinking share of the state's income. That Karnataka has been experiencing a 20-year macro-fiscal retreat, and if this trend continues it will indicate not only an inadequate level of funding of the public education system, given the state's overall economic potential, but also an inability to commit resources for the qualitative reform required in its public education system.

### 5.11. Trends and Patterns in Public Health Expenditure of Karnataka

Table 5.11 presents the longitudinal trajectory of public health expenditure in Karnataka from 2000 to 2023, standardized at 2011-12 constant prices to neutralize inflationary effects and capture real fiscal effort. Over the twenty-four-year study period, the sector experienced a substantial real-term expansion of approximately 4.2 times, escalating from 1,693.68 to 7,228.85, yielding a commendable long-term Compound Annual Growth Rate (CAGR) of 6.51%. However, a systematic phase-wise analysis reveals a highly uneven growth trajectory heavily dictated by shifting macroeconomic frameworks and unprecedented exogenous shocks.

**Table 5.11.**

<b>Year</b>	<b>Public Health Expenditure in Karnataka (In Crore Rupees)</b>
<b>2000</b>	1693.68
<b>2001</b>	1696.55
<b>2002</b>	1582.84
<b>2003</b>	1480.27
<b>2004</b>	1491.79
<b>2005</b>	1647.80
<b>2006</b>	1770.26
<b>2007</b>	2283.61
<b>CAGR</b>	<b>4.36%</b>
<b>2008</b>	2326.49
<b>2009</b>	2338.23
<b>2010</b>	2697.73
<b>2011</b>	2948.37
<b>2012</b>	3244.47
<b>2013</b>	3516.25
<b>2014</b>	4411.77



<b>CAGR</b>	<b>11.25%</b>
<b>2015</b>	4287.89
<b>2016</b>	4999.50
<b>2017</b>	5758.77
<b>2018</b>	6443.64
<b>2019</b>	6033.36
<b>2020</b>	7585.64
<b>2021</b>	9185.88
<b>2022</b>	6969.57
<b>2023</b>	7228.85
<b>CAGR</b>	<b>6.75%</b>
<b>Overall CAGR</b>	<b>6.51%</b>

Source: Author's Calculation. Data retrieved from Database of EPW Research Foundation (EPWRF)

During Phase I (2000–2007), corresponding to the enactment and initial enforcement of the FRBM Act, public health expenditure exhibited a moderate CAGR of 4.36%. Notably, the sector experienced an absolute contraction during the early years of this period, dropping to a lowest point of 1,480.27 Crore Rupees in 2003. This stagnation underscores the restrictive impact of emerging state-level fiscal rationalization and stringent deficit targeting, which temporarily constrained capacity-building investments in healthcare infrastructure.

On the contrary, Phase II (2008–2014) represents a period of profound and aggressive fiscal expansion within the health sector, registering an exceptional peak phase CAGR of 11.25%. This rapid acceleration, which drove absolute expenditure to 4,411.77 Crore Rupees by 2014, aligns with the state's broader macroeconomic pivot toward enhanced social welfare and the rollout of major systemic health missions to complement rights-based entitlements. This alignment demonstrates the state's capacity during this era to channel strong economic momentum into vital health sector capacity building, which concurrently functioned as a strategic counter-cyclical investment during the broader Global Financial Crisis.

The path within Phase III (2015–2023) is explicitly defined by extreme volatility and emergency fiscal mobilization induced by the COVID-19 pandemic. While the phase ultimately records a CAGR of 6.75%, these average masks severe intra-phase fluctuations. Expenditure spiked dramatically from 6,033.36 Crore Rupees in 2019 to 7,585.64 Crore Rupees in 2020, reaching a historic peak of 9,185.88 Crore Rupees in 2021. This unprecedented allocative surge directly reflects the immense, non-discretionary fiscal mobilization required for emergency medical infrastructure, epidemiological management, and statewide vaccination imperatives. However, the subsequent and precipitous contraction to 6,969.57 Crore Rupees in 2022 highlights a rapid post-pandemic withdrawal of emergency funding. This sharp normalization to 7,228.85 Crore Rupees by 2023 exposes the underlying fragility of the health budget, suggesting that the massive investments of the pandemic years were largely transient, crisis-driven responses rather than permanent structural elevations in the state's baseline public healthcare capacity.

### 5.12. Trends and Patterns in Per Capita Public Health Expenditure of Karnataka

A detailed assessment on the trends and patterns in Per Capita Public Health Expenditure in Karnataka between 2000-2023 is provided in Table 5.12. This provides an accurate assessment of the actual fiscal resources that are used to provide the average person with medical security, taking into account demographic growth.



**Table 5.12.**

<b>Year</b>	<b>Per Capita Public Health Expenditure in Karnataka (In Rupees)</b>
2000	325.71
2001	320.71
2002	294.76
2003	271.61
2004	269.76
2005	293.73
2006	311.12
2007	395.77
<b>CAGR</b>	<b>2.82%</b>
2008	397.69
2009	393.64
2010	448.13
2011	482.55
2012	524.99
2013	563.50
2014	700.28
<b>CAGR</b>	<b>9.89%</b>
2015	674.20
2016	778.74
2017	890.07
2018	988.29
2019	918.32
2020	1145.87
2021	1377.19
2022	1037.14
2023	1067.78
<b>CAGR</b>	<b>5.92%</b>
<b>Overall CAGR</b>	<b>5.30%</b>

Source: Author's Calculation. Data retrieved from Database of EPW Research Foundation (EPWRF)

During the study period, the per capita expenditure grew by about 3.28 times in real terms, increasing from 325.71 Rupees in 2000 to 1,067.78 Rupees in 2023, with growth presenting a long-term Compound Annual Growth Rate (CAGR) of 5.30%. The very first FRBM Act Era (2000-07) witnessed a very low CAGR of 2.82%, following the general trend of overall macroeconomic policy. Significantly, this period began with a decline in absolute budgetary allocation per capita, reaching a low value of 269.76 Rupees in 2004. This situation is a stark illustration of the impact of the initial fiscal rationalization at the state level and the need to stick to strict deficit limitation on a rolling three-year period (suffered from by all governments) that had the immediate effect of reducing the investment climate at an individual level, before improving in 2007 to 395.77 Rupees.

Phase II (2008-2014) is the most ambitious and the most impactful phase in terms of per capita health allocations with the maximum phase CAGR of 9.89%. This sharp acceleration, which has increased expenditure from 397.69 Rupees to 700.28 Rupees, is in line with the overall macro-economic shift of the state to improved social development and implementation of big systemic missions in the health sector. What mattered most is that this strong sectoral investment was to a certain extent a counter-cyclical measure implemented at a very critical time during the Global Financial Crisis.



The phase III (2015-2023) is clearly characterized by high volatility, with a phase CAGR of +5.92% which, however, hides in the phase high fluctuations controlled by COVID19. Although the phase started in stable growth during the 14th Finance Commission, it jumped sharply and per capita was Rs. 1145.87 Rupees in 2020 and went to a record high of Rs.1377.19 Rupees in 2021. The historic allocative boost is a direct response to the vast and beyond-discretionary fiscal mobilization for emergency health care services, epidemiology control and statewide vaccination mandates. But its subsequent and sharp drop to 1,037.14 Rupees in 2022 signals a swift post-pandemic withdrawal of emergency funding. Relying on these targets, the cut to 1,067.78 Rupees by 2023 shows the delicateness of individual budgets for health and indicates that the considerable increase in the level of government expenditure on health during the COVID years were mainly temporary crisis response and are far from structural accommodation of a higher level of government-based healthcare per capita.

### 5.13. Trends and Pattern in Public Health Expenditure as Percentage of Social Sector Expenditure in Karnataka

Table 5.13 presents the trend and pattern in Public Health Expenditure of Karnataka as percentage of Total Social Sector Expenditure in the period 2000-23. This ratio is used as a foremost measure of internal allocation of funds for health care over other social services like education, rural development, social welfare etc.

Table 5.13.

Year	Public Health Expenditure as Percentage of Social Sector Expenditure in Karnataka
2000	13.04%
2001	13.03%
2002	12.65%
2003	11.01%
2004	10.56%
2005	10.11%
2006	9.64%
2007	10.65%
2008	9.81%
2009	8.94%
2010	10.04%
2011	10.58%
2012	10.50%
2013	11.30%
2014	12.00%
2015	10.06%
2016	10.18%
2017	11.12%
2018	11.20%
2019	11.04%
2020	15.01%
2021	15.51%
2022	12.41%
2023	11.67%

Source: Author's Calculation. Data retrieved from Database of EPW Research Foundation (EPWRF)

Remarkably, during the FRBM Act Era (2000-2007) as Phase I, the share of the health sector in the social sector's budget witnessed a substantial drying up from 13.04 per cent in 2000 to the lowest of 9.64 per cent in 2006. This downward pledge indicates that initially, in state-level fiscal rationalization and deficit reduction, health funding suffered in the attempt to put in place fiscal discipline. A relative marginalization of health in the overall developmental portfolio was found in the passing years, although a slight improvement was noted to 10.65% for the year 2007.



The ensuing Phase II (2008 – 2014) reflects a process of recovery and structure-building and a shift from 9.81% in 2008 to 12.00% in 2014. This upward trend happened even in the face of new and high cost rights-based entitlements (such as MGNREGA and RTE Act) which pushed up the total social sector denominator. Healthcare's relative share grew during this period, reflecting a conscious policy shift towards bolstering the medical facilities, which is an encouraging development. This sectoral growth coincided with Karnataka's impressive corrected per capita economic growth of 9.89% in this period expressing the state's ability to harness the economic windows of opportunity to raise the priority accorded to health in their welfare package whilst balancing the impacts of external shocks such as the Global Financial Crisis.

The structural changes made by the 14th Finance Commission and the unprecedented emergencies of the COVID-19 pandemic are captured in Phase III (2015–2023). It rose to an extraordinary level in 2020 (15.01%) and in 2021 (15.51%), breaking an all-time high. This is a massive intra-sectoral reprioritization that would represent the emergency needs of epidemiological management, infrastructure for medical oxygen and vaccination effectively “crowding in” health expenditure, at the cost of other social subsectors. But the re-normalisation to 12.41% in 2022 and 11.67% by 2023 shows the temporariness of this fiscal mobilisation. Finally, although the data has shown that during a crisis, Karnataka can quickly transfer its social sector expenditure from other areas to the health sector, the long-term move indicates that investment in health is a less prominent social sector, and is sensitive to both the budget consolidation drive and the major macro-economic shocks.

**5.14. Trends and Patterns in Health Expenditure as Percentage of Total Public Expenditure in Karnataka**

As shown in Table 5.14, public health spending has been steadily contracting in Karnataka's overall budgetary allocation since 2000, although with some structural improvements following that, and more substantial but temporary pandemic-induced increases since 2020. The share of the health sector in total public expenditure has shown a remarkable decrease from 4.50% in the year 2000 to a minimum of 2.81% in the year 2006 during Phase I (2000-2007) (FRBM Act Era). This sectoral allocation for healthcare observed a small increase to be achieved at the end of the period (3.53%).

**Table 5.14.**

Year	Health Expenditure as Percentage of Total Public Expenditure
2000	4.50%
2001	4.18%
2002	3.85%
2003	3.35%
2004	2.93%
2005	2.99%
2006	2.81%
2007	3.53%
2008	3.51%
2009	3.26%
2010	3.68%
2011	3.66%
2012	3.81%
2013	3.80%
2014	4.24%
2015	3.77%
2016	3.91%
2017	4.32%
2018	4.38%
2019	3.98%
2020	4.97%
2021	5.61%
2022	4.25%
2023	4.19%

Source: Author’s Calculation. Data retrieved from Database of EPW Research Foundation (EPWRF)



The state put renewed effort in the field of health in the transition phase (2008-2014) with its budgetary contribution increasing gradually from 3.51% in 2008 to 4.24% in 2014. The relevance of this phase of escalation lies in the fact that it happened during the Global Financial Crisis and in the same period when huge participation-oriented entitlements such as MGNREGA, the RTE Act and the NFSA were put in place. Although these fiscal pressures brought about a relative decrease in investment across all other fields, the share of the health sector increased, thus indicating a clear cut of medical infrastructure policy. Moreover, this prioritization was associated with successful funding for the strong economic momentum of that era, which was seen in corrected per capita growth of 9.89%, showing that this economic dividend was translated effectively to social sector capacity building, even with an era of volatility all over the globe.

Finally, Phase III (2015–2023) reflects the fiscal situation during the 14th Finance Commission, and the unprecedented nature of COVID-19. Although the start of the phase was fairly stable in terms of allocations, the allocational decisions were brought into a complete turnaround due to the exogenous shock of the health crisis, with expenditure on health rising to a record 5.61% in 2021 from 3.98% in 2019. This rise stands as a mobilization in cases of emergency, with regards to epidemiological management and expansion of the hospital bed capacity. The abrupt and quick normalization (4.25% in 2022 and 4.19% in 2023, respectively), however, suggests that this increase was temporary and resulted mostly from the crisis. Overall, we find that Karnataka has been proficient in making fast-track fund transfers for health in times of crises, but the net effect of the fiscal contraction since the pandemic indicates that funding for health is sensitive to larger macro-economic and fiscal consolidation measures.

#### 5.15. Trends and Patterns of Health Expenditure as Percentage of Net State Domestic Product (NSDP) in Karnataka

Table 5.15.

Year	Health Expenditure as Percentage of Net State Domestic Product (NSDP)
2000	0.61%
2001	0.60%
2002	0.53%
2003	0.49%
2004	0.45%
2005	0.45%
2006	0.44%
2007	0.50%
2008	0.48%
2009	0.48%
2010	0.50%
2011	0.53%
2012	0.55%
2013	0.55%
2014	0.66%
2015	0.57%
2016	0.59%
2017	0.63%
2018	0.66%
2019	0.58%
2020	0.76%
2021	0.83%
2022	0.57%
2023	0.55%



**Source: Author's Calculation. Data retrieved from Database of EPW Research Foundation (EPWRF)**

Table 5.15 presents the public health expenditure as a share of the Net State Domestic Product (NSDP) in Karnataka from 2000 to 2023 which offers a clear indication of the macroeconomic fiscal effort for health in the state. In Phase I (2000-2007), the share of the health sector in the state's total economy has substantially reduced from 0.61% in 2000 to lowest of 0.44% in 2006. On the other hand, this downward trend also suggests, that in the first phase of institutionalization of fiscal discipline and deficit targeting process health investments lagged behind the economic growth of the country, which means that macro-fiscal marginalization of the sector during this period was more relative than absolute. Overall, the phase was marked by limited scope for public health policies compared with the rest of the economy, although there was some improvement to 0.50% by 2007.

The next Phase II (2008 - 2014) is a key transition reflecting under strong structural recovery in terms of the percentage of health expenditure to NSDP which increased from 0.48% in 2008 to 0.66% in 2014. The expansion of the healthcare ratio, in fact, in the face of this economic growth suggests an intentional and radical policy move to increase the Government of India's fiscal commitment to health in the state. It was a time when the state was managing the double challenge of the Global Financial Crisis and the introduction of a number of critical rights-based entitlements; in the face of this double challenge the state was able to use its economic momentum to propel the macro-economic status of public health, which led to successful state investment in structural capacity building using increasingly available economic dividends.

On the other hand, Phase III (2015-2023) shows a situation in which the structural changes of the 14th Finance Commission and the huge disruptions of the COVID-19 pandemic have had huge impact. The ratio saw a period of stagnation, before the unprecedented large increase, extending to 0.76% in 2020 and a historic high of 0.83% in 2021. The increase is an unprecedented mobilization of state resources in the direction of epidemiological management and emergency medical infrastructure in the light of a crisis. The latter, however, shows a swift unwinding of emergency funding and a reversion back to fiscal business as usual, to 0.57% in 2022 and 0.55% in 2023. The sudden leveling trend indicates that the increased value placed on this area during the pandemic was a short-term adjustment, and not a structural change. Overall, the ratio of public expenditure on health to GDP in 2023 of just 0.55% is lower than that at the start of the study period (0.61%) and during the peak of the second phase (0.66%), highlighting a continuing challenge to maintaining a high level of macro-economic commitment to health in a post-pandemic fiscal consolidation environment.

## 6. CONCLUSION

The analysis found that under FRBM Act Era, the state has succeeded in institutionalizing fiscal discipline, which laid a solid ground work for the larger social sector investments in the later era. Surprisingly, this phase II proved to be an important "golden period" for developmental expenditure as the launch of rights-based entitlements coincided with a solid growth in the economy and thus helped the state to find the money to finance its large social commitments in the midst of international financial turbulence. But the findings of the ongoing decade (Phase III) reveal a huge backsliding in the fiscal effort. The COVID-19 pandemic required a huge emergency mobilization effort in the health sector, but at the same time had the "crowding-out" effect on other important sectors particularly in the education sector which has witnessed the lowest allocation levels to economic growth and the state budget. Sectoral analysis suggests that while the state of Karnataka has moved from an education-focused welfare to more diversified but fiscally under pressure social security model. The downward trend in the share of education in the budget and the flattening-out of health expenditure through the after-Covid increase, indicate that the gains of growth seem to go back to older and "mandatory" obligations of the government as well as the fiscal consolidation process. This indicate that the traditional absolute volume growth mode of social sector development has become less and less feasible in the 2020s in the state at least. In the future, policies need then to focus on optimizing the use of resources and safeguarding individual-level per capita entitlements. "If the social sector is to be lasting in Karnataka, a paradigm change is needed towards building resilient budgetary mechanisms to buffer the impact of macroeconomic swings while committing to essential investments to drive human development and regional economic stability".

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