
Public Expenditure on Human Development: An Empirical Study of Karnataka State

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Introduction

Human development is broadly defined as a process of enlarging people's choices, as well as raising the level of wellbeing. Theoretically, these choices can be infinite and vary over time and space. From among these, the choice to lead a long and healthy life, the choice to acquire knowledge and be educated and to have access to resources needed for a decent level of living are identified as three most critical and socially valuable requirements. A range of social outcomes can reflect these choices in the wellbeing of people, most important being the life expectancy, literacy and Per Capita Income. Life expectancy and educational attainments are valued ends in themselves and Per Capita Income is to incorporate other aspects of well being not captured by indicators on the social attainments on education, health and longevity of people.

Furthermore, growth of per capita income has been considered as a measure of improving human development. However, empirical literature revealed that per capita income cannot be a sole determinant of achieving human development. Public expenditure is an important component of any strategy to achieve higher levels of human development. Its nature and extent is determined by the size and composition of public expenditure, particularly the expenditure on social sector. The proportion of a state's public expenditure allocated to social sectors indicates the importance of the

social sector in the state or the state's commitment to these sectors. This commitment is very important, especially during times when the state governments are spending an increasing proportion of their income on debt servicing.

This paper examines the trends and pattern of public expenditure on human development in Karnataka and also attempts to explain these trends in view of overall changes in the fiscal situation of the State. The paper further examines in detail, the composition of public expenditure in social sectors that are important for human development.

Objectives of the Study

1. To examine the status of human development index of Karnataka in comparison to other neighboring states.
2. To examine the trends and pattern of public expenditure on human development in Karnataka State
3. To conduct a detail study of composition of public expenditure in social sectors.

Methodology and Data Sources

The information for the study has been collected mainly from secondary sources. The study is descriptive and analytical in nature. Data was collected from various published sources such as Karnataka Human Development Report 1999 and 2005, Finance Accounts of Karnataka, UNDP, Human Development Reports, various issues of Economic Survey and National Human

Development Report 2001. The data are also analyzed with the help of simple statistical tools such as percentage method.

Status of Human Development in Karnataka

Human development in Karnataka State was guided by the Millennium Development Goals (UNDP, HDR 2001). The progress of human development of Karnataka state was quite good, since the last two decades of human development experiences in terms of literacy rate, life expectancy at birth, infant mortality rate and other human development indicators in comparison to all India average. For example, the improvement in the literacy rate in the state during 1991-2001 was 66.64 per cent as against an increase of 56.64 per cent during 1981-91.

Similarly, life expectancy has also improved marginally during 1991-92 to 2001-02 from 62.1 to 67.0 years. The Infant Mortality Rate was declined from 82 per 1000 population in 1991-92 to 55 in 2002-03. However, it is 50 in 2005-06, which is higher than its

neighbouring states of Kerala (14) and Tamil Nadu (37) but lower than Andhra Pradesh (57) and all-India rate (58) per 1000 population. The Mortality Rate in Karnataka for the year 2001-03 was 228 per lakh births which are highest among the southern states of Kerala (110) Tamil Nadu (134) and Andhra Pradesh 195.

Karnataka State has medium human development rank which has increased from 0.541 to 0.650 between 1991 to 2001, with Seventh rank among Fifteen states in India, which are well above the national average of 0.423 and 0.621 respectively, during same period. The human development of Karnataka state is more or less equal to Egypt and considerably higher than South Asian countries such as Pakistan, Nepal, Bhutan and Bangladesh in 2001. At the international level, State has 120th rank while the Country has 127th rank (UNDP, HDR 2003). The human development indicators such as Per Capita NSDP, life expectancy at birth, literacy rate and infant mortality rate are also improved over the period of time. The State's Per Capita Gross

Table: 1 Selected Indicators of HD of Karnataka and other neighboring States

Sl. No.	Name of the States	Per Capita NSDP (Rs.)	Life Expectancy at Birth (LEB)	Literacy Rate 2001	Infant Mortality Rate (IMR)	HDI
1.	Andhra Pradesh	10,590	63.9	61.11	59	0.609
2.	Karnataka	10,709	65.8	66.64	52	0.650
3.	Maharashtra	14,892	68.3	77.27	42	0.706
4.	Kerala	10,832	73.4	90.92	11	0.746
5.	Tamil Nadu	12,717	68.4	73.47	43	0.687
	India	10,774	64.8	65.49	57.4	0.627

Source: Government of Karnataka (2006) Karnataka Human Development Report 2005, Planning Commission, Bangalore.

The Table 1 presents selected indicators of human development of Karnataka with other neighboring states. It also infers relative human development position of Karnataka State with other neighbouring states such as Maharashtra, Tamil Nadu, Kerala and Andhra Pradesh. Karnataka has accounted for per capita NSDP of Rs. 10,709, life expectancy at birth 65.8 years, infant mortality rate has 52 per 1000 birth, and literacy rate was 66.64 percent and HDI value of 0.650. While most of the neighboring states except Andhra Pradesh were above Karnataka's relative position in all respects.

According to National Human Development Report (NHDR) published by the Planning Commission, Karnataka state has improved HDI values from 0.346, 0.412 and 0.478 during 1981, 1991 and 2001 respectively among the fifteen major states of India and it ranked at sixth in 1981 and seventh position in 1991 and 2001. (Planning Commission, GOK 2001). The data on each of the indicators such as life expectancy, literacy and income suggests, however, Karnataka is placed above the all India level but it still lags behind the neighbouring states. Kerala is well ahead of Karnataka and topped among other states followed by Tamil Nadu and Maharashtra, in literacy and life expectancy at birth, while Maharashtra is ahead in LEB and income.

The GDI values of Karnataka State have improved from 0.525 to 0.637 during 1991 to 2001 which was above the national average with the value of 0.621 in 2001. Karnataka is the sixth among fifteen major states in gender development. At the international level, Karnataka's rank in terms of the GDI was 99, as against 103 among the 177 countries. When compared with other neighbouring states except Andhra Pradesh with 0.621, the State like Kerala, Tamil Nadu and Maharashtra were

above the state average with value of 0.746, 0.706 and 0.687 respectively. Therefore, Karnataka State has a long way to reach the high human development states.

Role and Pattern of Public Expenditure on Human Development

Public expenditure is likely to influence the status of human development in several ways. In the areas of health, nutrition, education, public distribution system, social welfare and other social services, public expenditure can directly contribute to human development, if appropriate public policies and programmes are designed and adequate funds allocated. Indirectly, public expenditure, influences the pace and course of economic growth that determines to a considerable extent, the sustainability of development on the one hand and funds available for spending on social sectors on the other. (Streeten, 1979, Isenman 1980, Sen 1981, Bhalla & Glewwe 1986, Kanbur 1991, Anand and Ravallion 1993, Chakraborty 2007).

The extent of public expenditure on human development has been measured in UNDP's Human Development Report 1991 and studies have used four ratios to indicate the priority assigned by states to expenditure on human development. These Four ratio are:

1. The Public Expenditure Ratio (PER) - Percentage of national income that goes into public expenditure. For the states in India, it is the percentage of NSDP that goes into public expenditure.

2. The Social Allocation Ratio (SAR) – Percentage of the total expenditure earmarked for social service sectors, such as health, education, social security, water supply and sanitation, is strongly and positively correlated with progress in human development. However, the social allocation ratios do not guarantee a good human development performance, but it makes an important contribution to human development.

3. The Social Priority Ratio (SPR) - Percentage of national income devoted to human priority concerns, such as elementary education, public health, maternal and child health and nutrition and rural water supply and sanitation.

4. The Human Expenditure Ratio (HER) – Percentage of the state income devoted to human priority concerns. Hence by definition, human expenditure ratio is the product of the other three ratios. It is a powerful operational tool that allows policy makers who want to restructure their budgets based on the existing imbalances and available options.

Based on the experiences of a number of countries that were associated with better human development outcomes, UNDP, HDR 1991 suggested certain expenditure norms to ensure human development. As for the suggestions, HER of 5 percent is essential, if a country has to do well on the human development front. This may be achieved in

an efficient manner by keeping the PER moderate (around Twenty-five percent), allocating much of this to social sector (more than Forty percent), and focusing on social priority areas (giving them more than Fifty percent). HER is a powerful operational tool and it allows the policy makers to restructure their budget, address any existing imbalances and avail of the most appropriate options. States with HER over Five percent are supposed to indicate a good political commitment from the Government to human priority or social priority concerns. Those states for which HER lies between three to five percent have moderate human priority concerns. The HER below 2 percent suggests that lack of political commitment for human priorities. In the post reforms periods, these ratios do not show any radical improvement.

The Social Sector comprises expenditure on broad budgetary heads called Social Services and Rural Development Social Services include subheads such as, (i) Education, Sports, Art and Culture (ii) Medical and Public Health (iii) Family Welfare (iv) Water Supply and sanitation (v) Housing (vi) Urban Development (vii) Welfare of Scheduled Castes, Scheduled Tribes and other Backward Castes (viii) Labour and Labour Welfare (ix) Social Security and Welfare (x) Nutrition (xi) Relief on Account of Natural Calamities (xii) other Social Services. Further, within the social sector, social priority areas are defined which comprise elementary education, health and family welfare (excluding medical education, training and research), nutrition,

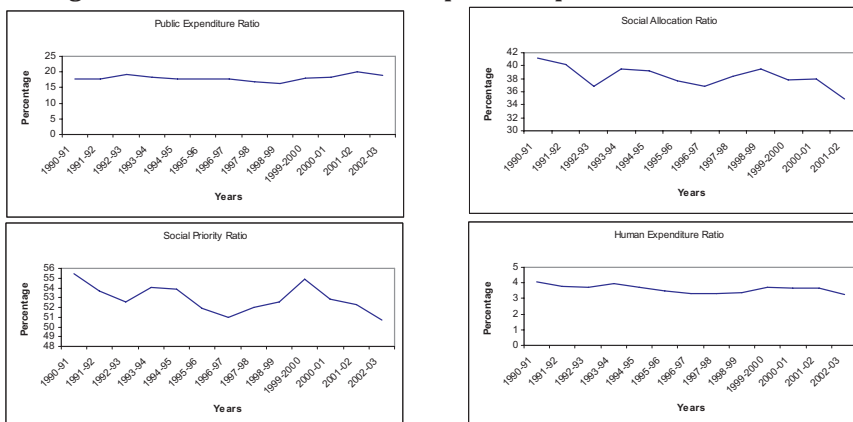
water supply, sanitation and rural development. These sectors are particularly important for human development.

Public Expenditure in Karnataka State Prabhu and Chatterjee (1993) have computed these four ratios for the fifteen major states in India for four years viz., 1974-75, 1980-81, 1985-86 and 1990-91. The different indicators of spending on human development and their trends in Karnataka for the years 1990-91 to 2002-03 are estimated from the financial accounts of the State Government are presented in the Table 2 and figure 1 which illustrate the level of spending on various public expenditure in Karnataka. In the post-reforms period, these ratios do not show any radical improvement. PER increased from 17.78 in 1990-91 to 19.2 percent in 1998-99. Thereafter mainly due to pay and pension revision, the PER increased to constitute more than 18 percent of GSDP in 1999-2000. SAR also shows wide fluctuations with declined long term trend. The ratio declined from 41.22 in 1990-91 to 34.36 in 2002-03. SPR also shows wide fluctuations with a declining long-term trend. The ratio declined.

Table: 2 Trends in Human Development Expenditure in Karnataka

Years	Public Expenditure Ratio (PER)	Social Allocation Ratio (SAR)	Social Priority Ratio (SPR)	Human Expenditure Ratio (HER)
1990-91	17.78	41.22	55.45	4.06
1991-92	17.61	40.20	53.72	3.80
1992-93	19.18	36.77	52.54	3.71
1993-94	18.45	39.50	54.03	3.94
1994-95	17.70	39.19	53.83	3.73
1995-96	17.79	37.62	51.94	3.48
1996-97	17.75	36.90	51.02	3.34
1997-98	16.73	38.40	51.99	3.34
1998-99	16.33	39.49	52.55	3.39
1999-2000	18.09	37.75	54.86	3.75
2000-01	18.22	37.89	52.84	3.65
2001-02	20.06	34.91	52.29	3.67
2002-03	18.83	34.36	50.69	3.28

Figure: 1 Trends in Human Development Expenditure in Karnataka



from 55.45 in 1990-91 to 50.69 in 2002-03. HER has remained almost constant with figures going slightly above or below 2.70 against the norm of 5.00 till 2002-03.

Table: 3 Per Capita Real Expenditure on Human Development in Karnataka (in Rs.)

Years	Per Capita Public Expenditure	Per Capita Social Expenditure	Per Capita Social Priority Expenditure
1990-91	1,313	541	300
1991-92	1,435	577	310
1992-93	1,580	581	305
1993-94	1,606	634	343
1994-95	1,598	626	337
1995-96	1,677	631	328
1996-97	1,794	662	338
1997-98	1,783	685	356
1998-99	1,936	764	402
1999-2000	2,229	842	462
2000-01	2,437	923	488
2001-02	2,613	914	478
2002-03	2,520	866	439

Source: Karnataka Human Development Report 2005

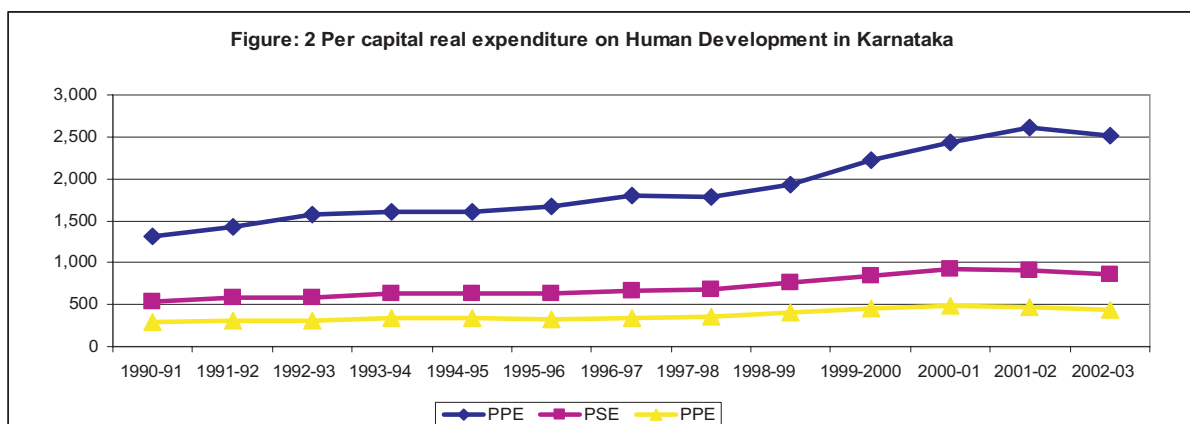


Table 3 and Figure 2 shows the trends in Real Per Capita Public Expenditure on social sector and social priority areas in Karnataka between 1990-91 and 2002-03. The table shows that there was significant increase in Real Per Capita Expenditure on social and social priority sectors over this period. The per capita public expenditure increased from Rs. 1,313 in 1990-91 to Rs. 2,613 in 2001-02 before decline to Rs. 2,520 in 2002-03. The Per Capita Social Expenditure increased from Rs. 541 Per Capita in 1990-91 to Rs. 866 in 2002-03. The Per Capita Social Priority Expenditure increased from Rs. 300 in 1990-91 to Rs. 488 in 2000-01. It may be noted that although the public expenditure as a share of GSDP declined between 1990-91 to 2002-03, there was a reallocation of public expenditure towards the social sector over this period. As a result, the Social Allocation Ratio of the State increased over this period, indicating a greater emphasis in public spending on social sector.

Table: 4 Human Development Expenditure in Major States in India during 2002-03

States	Public Expenditure Ratio	Social Allocation Ratio	Social Priority Ratio	Human Expenditure Ratio
Andhra Pradesh	18.86	36.43	54.14	3.72
Bihar	24.47	35.47	69.12	6.00
Gujarat	17.69	39.80	35.46	2.50
Haryana	17.17	29.55	49.38	3.51
Karnataka	20.06	34.96	52.29	3.67
Kerala	16.18	39.33	50.88	3.24
Madhya Pradesh	17.66	39.49	55.76	3.89
Maharashtra	15.43	36.46	54.42	3.06
Orissa	25.45	34.96	55.59	4.94
Punjab	19.63	23.25	38.27	1.75
Rajasthan	19.95	42.73	61.58	5.25
Tamil Nadu	15.85	38.19	52.14	3.16
Uttar Pradesh	18.97	31.97	65.09	3.95
West Bengal	16.83	35.72	44.24	2.66

Source: Government of Karnataka (2006) Karnataka Human Development Report 2005, pp. 43

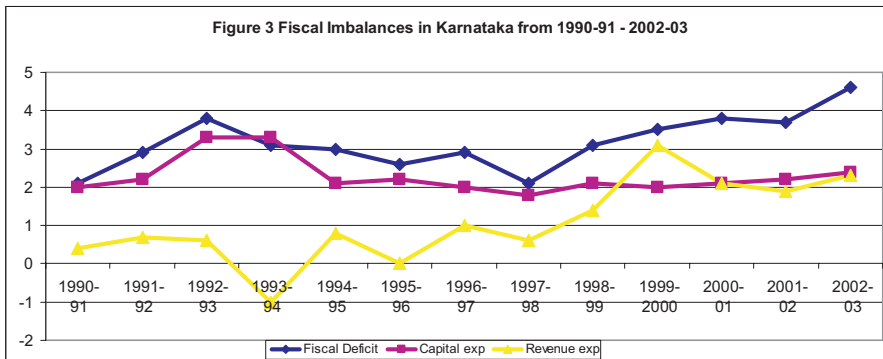
Infact, Karnataka has had one of the highest growth rates of Per Capita Public Expenditure in the 1990's. Between 1990-91 and 2001-02, Karnataka registered the highest percentage increase in Per Capita Public Expenditure among the major states in India. The Table 4 presents a bird's eye view of human development expenditure in major Indian states during 2002-03. A comparison of the PER, SAR and SPR for different states shows that while the relative ranking of Karnataka in terms of PER has improved in the 1990s, there has been a fall in its rank in terms of SAR. Orissa recorded the highest Public Expenditure ratio of 24.46 and 25.45 percent between 1990-91 to 2001-02. On the other hand West Bengal and Maharashtra made lowest 15.30 and 15.43 percentage respectively during the same period. Karnataka State got 7th and 3rd place of 17.78 and 20.06 percent respectively in the same year.

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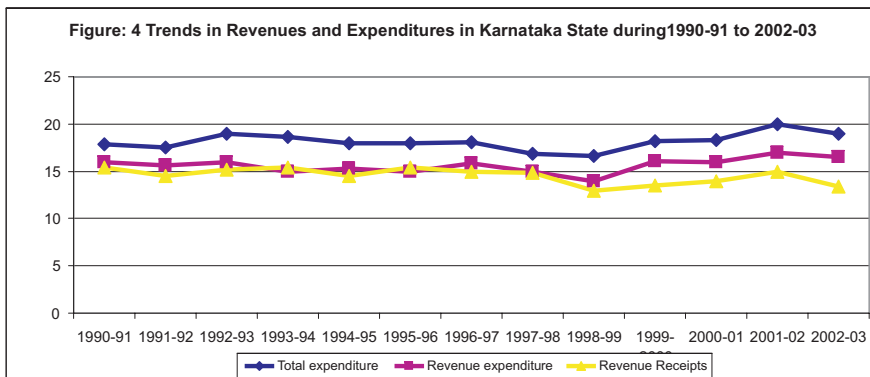
Source: Government of Karnataka (2006) Karnataka Human Development Report 2005, pp. 43

Human Development Expenditure and Fiscal Situation in Karnataka

The decline in human expenditure ratio of Karnataka has been analysed in the light of changes in the fiscal situation in the State. The white paper on State finances presented to the State Legislature in 2000 noted the sharp deterioration in the State finances during the 1990s. In the revenue side, the problem was attributed to deceleration in the growth rates of own revenues of the State. On the expenditure front, the single most important issue causing significant deterioration was due to revision of salaries and pension. Expenditures on debt servicing and implicit and explicit subsidies also contributed to a worsening fiscal outcome.



The Figure 3 presents a General view of Fiscal Imbalance in Karnataka during 1990-91 to 2002-03. Both revenue and fiscal deficits deteriorate in the State even as the State's revenues as a percentage of GSDP increased from 12.8 percent to 14.20 percent between 1998-99 to 2002-03. The ratio of revenue deficit to GSDP increased from 1.4 percent in 1998-99 to 3.1 percent in 2001-02, but declined thereafter to 2.3 percent in 2002-03. Similarly, during the period, the fiscal deficit in the State increased from 3.5 percent to 5-6 percent before improving to 4-6 percent in 2002-03 and the ratio of Capital Expenditure to GSDP remained just above 2 percent.



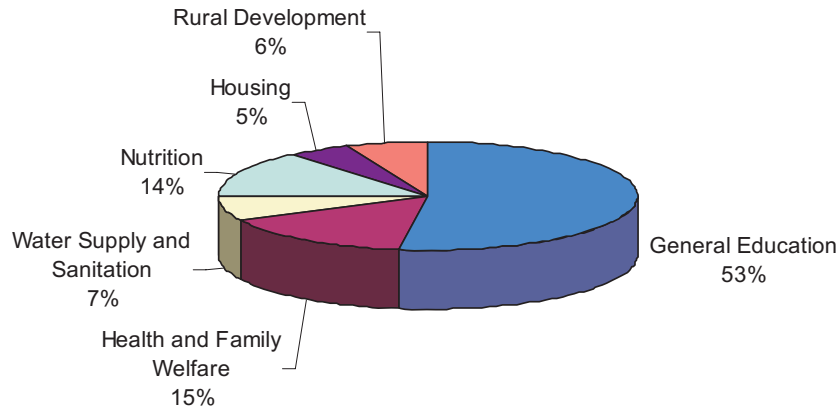
While the revenue receipts between 1990-91 and 2002-03 increased at the rate of 11.9 percent per annum, the growth of revenue expenditure was much faster at 13.4 percent. The gap between the growth of expenditures and revenues has continued, even after the programme of fiscal adjustment. While the revenue receipts at a ratio of GSDP increased by 1.4 percentage points between 1998-99 and 2002-03, the ratio of revenue expenditure to GSDP increased by 2.3 percentage points, thus increasing the revenue deficit. Thus, the share of revenue deficit in fiscal deficit increases from about 39 percent in 1998-99 to 50.1 percent in 2002-03 (see figure: 4)

Composition of Social Sector Spending

Education

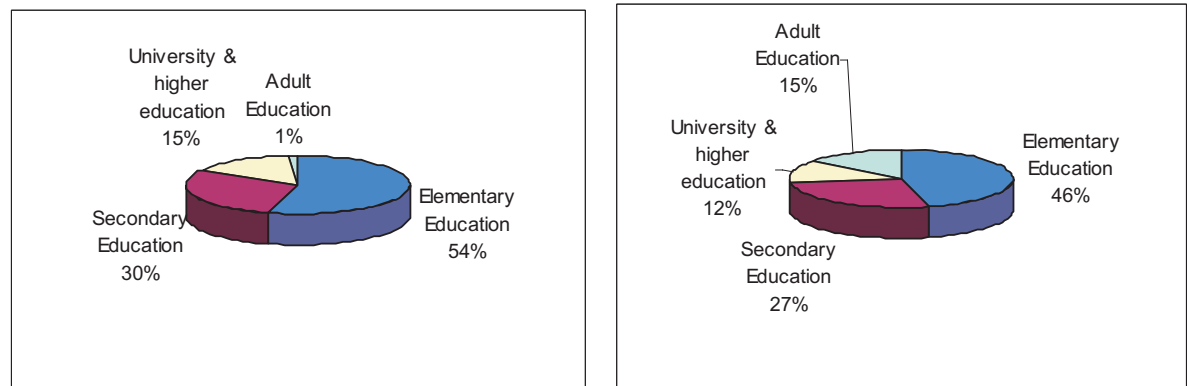
Education expenditure on general education is the largest component of social sector expenditure in Karnataka. In 2002-03, expenditure on general education accounted for nearly half the total expenditure on the social sector (49.75 percent). This was higher than the target of 6 percent on education set by the National Policy on Education.

Figure: 5 Composition of Expenditure on Social Sector in Karnataka during 2002-03



Expenditure on elementary and secondary education constitutes the bulk of expenditure in Karnataka. In 2002-03, elementary education accounted for about 53 percent of total expenditure on education. The share of expenditure on secondary education was about 31 percent of the total expenditure on education (See in figure 5).

Figure: 6 Composition of Expenditure on General Education in Karnataka during 1990-91 and 2002-03



It is note worthy that between 1990-91 and 2002-03, the share of elementary education in total expenditure went up marginally from 52.42 percent to 53.02. In comparison, the share of secondary education increased from about 17.30 in 1990-91 to about 31.20 percent in 2002-03.

An examination of the trends of real expenditure in elementary and secondary education in the state suggests that between 1990-91 and 2002-03 there was an increase in expenditure on elementary education, while the expenditure on secondary education was marginally declined. There was acceleration in the growing expenditure on both elementary and secondary education after 2002-03. This rise can be attributed to the increase in salaries and wages following the recommendations of the fifth pay commission.

Table: 5 Total Expenditure on Social Sector and its Components as a percentage of GSDP in Karnataka during 1990-91 - 2002-03

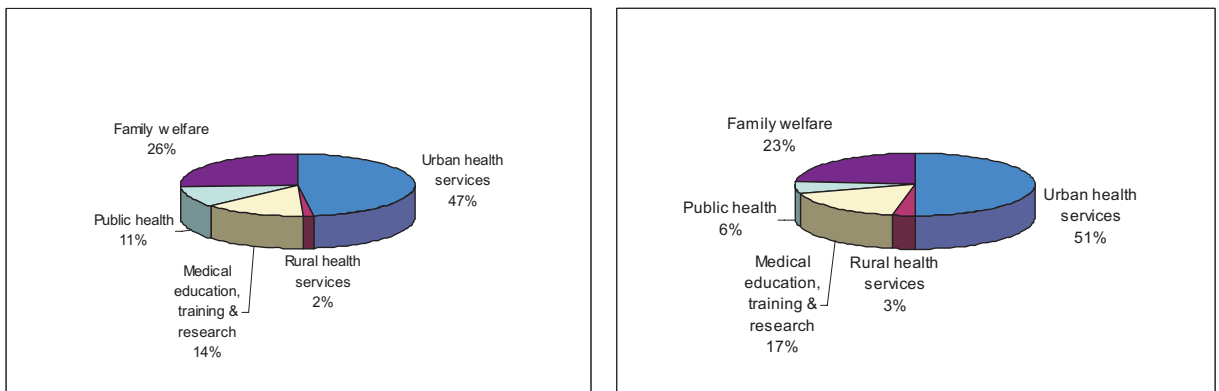
Sl No.	Social Sector	1990 91	1998 99	2002 03
1.	Social Services	6.32	6.00	6.01
2.	General Education	3.03	2.78	2.99
3.	Health and Family Welfare	1.00	0.93	0.88
4.	Water Supply and Sanitation	0.17	0.13	0.15
5.	Nutrition	0.31	0.58	0.42
6.	Housing	0.15	0.21	0.28
7.	Rural Development	1.01	0.45	0.46
	Total of	5.78	3.08	4.78
	2 + 3 + 4 + 5 + 6 + 7	91.4	51.3	79.5

Health and Family Welfare

In contrast with the levels of expenditure on education, the level of public expenditure on health is low in Karnataka. In 2002-03, expenditure on health and family welfare was about 0.32 percent of GSDP. This accounted for about Fifteen percent of total expenditure on social sector. It is also noteworthy that the expenditure on health and family welfare remains almost same between 1990-91 to 2002-03 it is also same. (See in Table 5).

An examination of the composition of expenditure on health and family welfare shows that the major share of expenditure in health and family welfare is towards urban health services (See in figure 7). It is noteworthy that the budgetary head "urban health services" refers to expenditure on medical facilities provided in urban areas. These medical facilities typically include secondary and tertiary health care facilities which also cater to rural population around each urban centre. Expenditure on facilities situated in urban areas accounted for more than one-third the total expenditure in 1990-91. This share increased slightly in 2002-03. Likewise, the share of urban health services increased during the period and the share of rural health services and family welfare increases significantly. It is important to note that almost the entire expenditure on family welfare in the State is borne by the Centre through Centrally Sponsored Scheme Viz., National Family Welfare Programme. The State's contribution to family welfare expenditure is negligible. Expenditure towards public health was only about 4.5 percent of total expenditure in health and family welfare in 2002-03. The share of expenditure towards public health has however, been declining over the period 1990-91 to 2002-03.

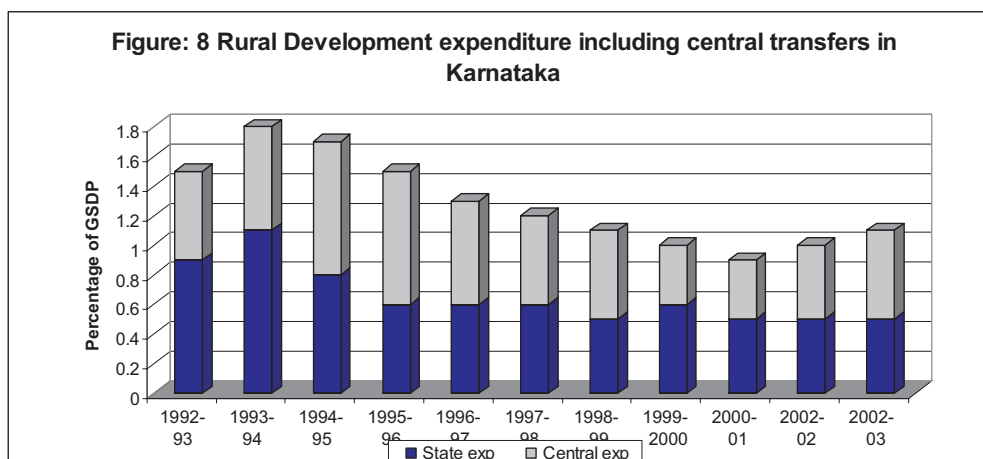
Figure: 7 Composition of Expenditure on Health and Family Welfare in Karnataka during 1990-91 and 2002-03



It is note worthy that there has been a significant change in the composition of expenditure in 1990-91 to 2002-03, the share of expenditure towards rural health services has increased by Fifty percent from 1990-91 to 2002-03 while, the share of urban health services remains almost unchanged. Similarly, the share of total expenditure on public health as proportion of total GSDP decline drastically from 0.07 percent in 1990-91 to 0.04 in 2002-03. The share of expenditure on family welfare services has declined from 0.17 in 1990-91 to 0.15 percent of total GSDP.

Expenditure on other Human Development related areas

It is important to note that a substantial part of the expenditure on rural development is not routed through the State Budget by the Centre on Centrally Sponsored and Central Sector Schemes. To account for this, expenditure by the Centre on rural development schemes has been added to the actual expenditure incurred by the state on rural development. Even after making an adjustment to include central transfers, the rural development expenditure as a ratio of GSDP has declined from almost 1.8 percent in 1993-94 to about 1.0 percent in 2002-03. (See in figure 8)



Expenditure on water supply, sanitation, nutrition and housing together in the State has been marginally increased from 0.74 percent of GSDP in 1990-91 to 0.78 percent of GSDP in 2002-03.

Conclusion

Human development is the most strategic and crucial determinant of growth. In this regard, the purpose of development is to improve human lives by not only enhancing income but also by expanding the range of things that a person can do. A link between growth and human development has to be created consciously, through deliberate public policy such as public spending in social sector and fiscal policy to re-distribute income and assets. Financing human development is a very critical aspect of ensuring that public policies concrete realities and that the poor and other vulnerable populations are supported by the State to empower. Human Development Report 1991 rightly suggested that, the best strategy for human development is to ensure through strong public expenditure on human development and better distribution of income. The slow growth in expenditure on human development relative to GSDP is closely related to the fiscal deterioration in the State in particular, because of rise in debt services and pension revision.

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