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An Analysis of Health Expenditure in Karnataka

KEYWORDS: Health, GSDP, TPHE, Stationarity, Regression

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ABSTRACT *Health plays a vital role in making an individual and society productive, efficient and optimal. There is a positive correlation between health and development, both social and economic. The Constitution of India places the responsibility of health of the citizens in the hands of the 'State 'in Indian federal system. The study found that although there is increase in total spending on public health expenditure it is less than much needed amount. Further, the proportion of health expenditure to GSDP is very dismal and lower than required. Moreover, GSDP influences health expenditure of Karnataka.*

1.Introduction:

Health plays a vital role in making an individual and society productive, efficient and optimal. There is a positive correlation between health and development, both social and economic development. Human development fits into both of these arenas attracting and magnifying the importance of health. Health is a capital. Thus, investing in health should be a prominent source for economic growth (Mushkin, 1962). A number of empirical studies have documented a strong and positive relationship between health expenditure and income. Health is one of the vital indicators reflecting the quality of life and therefore it has been rightly said, 'Health is wealth'. The state's cognizance of importance of health and expression of inability of private sector to invest on health in the early years of planning demanded active participation of state in providing universal healthcare to all irrespective of caste, gender and religion. The Constitution of India places the responsibility of health of the citizens in the hands of the State in Indian federal system. But the Union government finances national public health programmes which have high social returns, or which are characterized as public goods. Central government efforts at influencing public health had focused on the five year plans, coordinated planning with the states and on sponsoring major national health programs. In this direction, state started many health programmes to eradicate diseases such as polio, malaria, tuberculosis, leprosy, cholera; food and nutrition supplement programmes; hospitals and Primary health care centres, and maternity health supporting programmes.

The World Health Organization defines health in the following way: "Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." The goodness of the health care facilities is determined by the availability, accessibility and affordability of these services (Yaraseeme and Aiyar, 2010). Health care expenditure is very necessary social expenditure for any country. Like any other social expenditure health expenditure also requires a significant contribution from the government. Whether it is developed country or developing country the state's role in developing a good health infrastructure and assuring good health to everybody becomes very critical and important. If there is better, efficient and equitable health system and infrastructure in the nation, it will lead to better health status in the state; improve health indicators of the state and which will further improve human capital. With better health capital in the economy, productivity will improve resulting in less poverty and it will improve economic development of the nation which will further lead to equitable, efficient and better health services in the state. Thus, on the whole, if there is productive investment in health then only it can lead to better economic development of the nation and can remove inequalities in the state

Health expenditure is highly unequal across the globe. OECD countries accounted for less than 20 percent of the world's population but are responsible for almost 90 percent of the world's health spending. Remaining 80 percent of the world's population spent only 10 percent of the total expenditure on health. This includes people in the Asia-Pacific as well as African and Latin American countries. Health expenditure, both in terms of percentage of GDP spent on health and per capita health expenditure, is much higher in the developed countries. Similarly, there was wide variation of per capita health expenditure across countries, which was extremely low in developing countries as compared with most of the developed countries (World Health Report, 2005).

It is argued that public health expenditure is one of the important components for the provisioning of health facilities which further result in better health outcomes. India's performance in improving the health outcomes however remained far from satisfactory. However, Government health spending has remained almost constant and hovered around one per cent of GDP, which is even lower than most of the developing countries. The existing level of health spending is much lower than the required level of resources to provide the basic health facilities in the country across states (Hooda, 2013). Public health expenditure had been grossly inadequate right from the 1940's. The government had been spending less than private expenditure on health. The Bhore Committee report stated that per capita private expenditure on health was Rs. 2.50 compared to a state per capita health expenditure of Rs. 0.36 which was one- seventh of private expenditure. In the 1950's and 1960's private health expenditure was 83 percent and 88 percent of the total health expenditure re-

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spectively (Smith, 4 1963). According to 2007 estimates, expenditure on health to GDP in India was only 0.9 percent while the average public spending of less developed countries was 2.8 percent of GDP. Only 17 percent of all health expenditure was borne by the government, rest being borne privately by the people, making it one of the most highly privatized healthcare systems of the world (Ahluwalia, 2005). Within India also there was huge gap in different states in economic terms and also in terms of development of health sector.

Present study is undertaken to know the pattern of Health expenditure in Karnataka and the relationship between Gross State Domestic Product and Public health expenditure using secondary data collected from various Reports of Economic Survey of Karnataka from 2000-01 to 2012-13 with appropriate econometric and statistical tools.

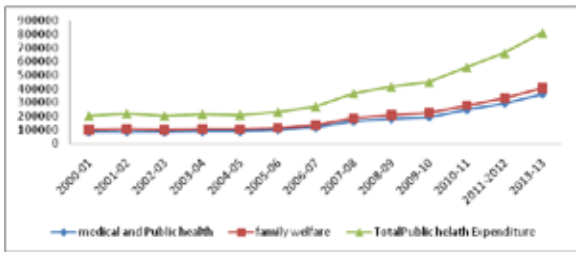
2. Results and Discussions:

Health is a state subject in India. The central government however can directly intervene in establishing major hospitals to assist medical education and research and intervene through Central Plan and Centrally Sponsored Schemes - which are implemented through state budget. Until 2002-03, most of the central schemes were routed through the states' budget and the funds were being transferred as grants to the states as consolidated funds. The state of Karnataka has so far been providing these services through the Ministry of Health, which is responsible for policy matters, and the Directorate of Health and Family Welfare, which is responsible for implementing these policies in the state.

2.1 Trends in Public Health Expenditure in Karnataka from 2000-01 to 2012-13:

A glance at expenditure made on health by the state government of Karnataka shows increasing trend. Most importantly the expenditure is made under the heads of Medical and public health, and Family Welfare. In 2000-01 Rs. 83,837 Lakhs is spent on medical and Public Health; Rs. 16,696 on Family Welfare. This increase was marginal till 2005-06. The expenditure on medical and public health increased to Rs. 101,175 Lakhs in 2005-06, Rs. 117, 899 in 2006-07, Rs. 194,541 Lakhs in 2009-10, Rs. 248,191 Lakhs in 2010-11 and Rs. 364,072 Lakhs in 2012-13. However, amount spent on Family welfare is discriminatory. For example in 2004-05, it was Rs. 17685 and Rs. 13444 (2005-06). In later budgets, the amount spent on Family welfare has increased very moderately. In terms of Total expenditure on Public health has increased significantly in terms of amount but comparatively very least of Gross State Domestic Product (GSDP). In 2000-01, Rs. 100,533 lakhs was spent towards health expenditure. It increased to Rs. 108,584 lakhs (2001-02), Rs. 114,619 lakhs (2005-06), Rs. 207,335 lakhs (2008-09), Rs. 279,652 lakhs (2010-11), Rs. 332, 517 lakhs (2011-12) and Rs. 404,878 lakhs (2012-13). However in 2002-03 (Rs. 100, 412 lakhs) and 2004-05 (Rs. 104,358) the expenditure is low compared to previous years. The proportion of health expenditure to GSDP has decreased from 1.46 (2000-01) to 0.59 (2006-07 and 2007-08). In the following years this ratio has improved but very marginally from 0.67 (2007-08) to 0.78 (2012-13).

Chart.1 Tends in Public Health Expenditure in Karnataka from2000-01 to 2012-13 (in Rs. Lakhs)



Source: Reports of Economic Survey of Karnataka

2.2 Empirical Relationship between GSDP and Total Public Health Expenditure of Karnataka

Present study has tried to analyse the relationship between GSDP and Total Public Health Expenditure (TPHE) of Karnataka using OLS Regression model specified as

TPHE = $\beta_0+\beta_1$GSDP+u

Total Public Health Expenditure (TPHE) depends on its Gross State Domestic Income. Therefore the level of a state's income determines its expenditure on health and family welfare programmes. β_0 and β_1 are constant and coefficient of determination respectively. β1 explains to what extent GSDP affects TPHE. Before finding out the Beta value, Unit root test has been conducted to find whether given time series data is stationary or not. Therefore, Augmented Dickey-Fuller test is used. Results of the unit root test using ADF test are explained in Table.1. Both variables are non- stationary at level but they become stationary by taking First Difference, which is observed from the unit root results in the Table.1. They have a same order of Integration, namely I (1).

Table.1 Results of Unit Root Test

Variables	Level		Ist Difference	
	Test value	P value	Test value	P value
TPH Expenditure	-1.016110	0.3361	-5.437904	0.0056
GSDP	-1.374503	0.2025	-3.170649	0.0132

Table.2 Results of Regression Analysis

No. of Observations: 12 Dependent Variable : Total Public Expenditure			
Variables	β Coefficient	't ' Value	Prob. value
GSDP	0.603121	6.913386	0.0000
Constant	1.877925	1.280711	0.2266
R-squared:	0.812909		

Table.2 explains the results of Regression analysis. Obtained 'β' (0.603) is statistically significant. There is positive relationship between GSDP and TPHE. If GSDP increases by 1000 lakh rupees total health expenditure increases by 60 lakh rupees. R^2 is 0.8129. It means 81.29 % variation is Total health expenditure is explained by GSDP.

3. Summary and Conclusion:

Present study is undertaken with the objective of finding out pattern of Funding of health expenditure in Karnataka.

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It is found that although there is increase in the Budget allocation on Family Welfare, medical and public health expenditure the increase is very marginal and very minimal compared to Karnataka's state domestic income. This ratio is less than 1 percent except for the years from 2000-01 to2003-04. The overall analysis confirms that India and its states are shying away from fulfilling its constitutional commitment of 'Right to Health' for its citizens. The expenditure is made on family welfare has reduced comparatively. Despite recommendations by Bhore and other committees, health has been neglected. On the other hand, there is significant increase of GSDP. It is now high time the state has to act has given its poor health infrastructure and vulnerability to communicable disease such as H1N1, and malnutrition, maternity rates. Unless health is improved the state cannot have productive and efficient human resource. Karnataka has to increase the ratio of TPHE to GSDP. It is far below the standards. Further, the state should revise the funding patterns and rationale of public health expenditure periodically given changes in economic scenario and ensuring provision of constitutional right of 'Health to All'.

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