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GLIMPSES OF HEALTH ECONOMICS: PICTURE AND PERFORMANCE IN MIZORAM

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ABSTRACT

Mizoram has a fairly healthy and manageable population in the midst of less polluted environment of the green North Eastern part of the country. Health services in Mizoram are mainly provided by the Government sector and Churches, rendering the cost to its minimum possible level. However, the specialised health delivery services in the State are not up to the mark and are skewed towards the urban locations. Health is considered as consumer goods owing to its direct satisfaction and utility, and at the same time, it is conceived as investment goods because of its indirect satisfaction through increased productivity, fewer sick days, and higher wages. Increasing economic manifestation of health and diseases and the limited resources allocated to health care services has brought about a new discipline, viz., 'health economics'. Cost accounting, cost benefit analysis, cost effectiveness methods etc. are increasingly becoming an integral part of the health management and evaluation of health programmes. The main concern of this paper is to discuss the health scenario in Mizoram from economic perspective.

KEY WORDS: *Health economics, Human Capital, Consumer goods, Investment goods, Healthy time, Sickness-free time.*

INTRODUCTION

Health and education are the two foundations of 'human capital'. In the absence of human capital, physical capital remains unused and hence, for economic development, the former is accorded prime importance in the present-day world. Health is a sort of capital which degrades overtime in the absence of investments (Grossman, 1972). With its direct satisfaction and utility health is considered as consumer goods, and at the same time, it is conceived as investment goods because of its indirect satisfaction through increased productivity, fewer sick days, and higher wages. Increasing economic manifestation of health and diseases and the limited resources allocated to health care services has brought about a new discipline, viz., 'health economics'. Cost accounting, cost benefit analysis, cost effectiveness methods etc. are increasingly becoming an integral part of the health management and evaluation of health programmes. The present paper describes the concept and evolution of health economics with a brief account of economic significance of health, in general, and the status quo of health in Mizoram, in particular, with a critical assessment of government performance in this vital sector. It also presents a short review of related literatures.

HEALTH ECONOMICS

Health economics is the discipline that determines the quantity and price of scarce resources devoted for the care of the sick and promotion of health. It encompasses the medical industry as a whole and extends to such fields as the economic analysis of the cost of diseases, benefit of health programmes, returns from investments in medical education, training and research. Since the pen of Sir William Petty in the late 17th Century, plethora of works has been done on the subject. However, a seminal 1963 article by Kenneth Arrow is often credited with giving rise to health economics as a discipline. The World Health Organisation (WHO) defines health economics as, 'that which seeks inter alia-to quantify over times, the resources used in health service delivery, their organisation, functioning and the efficiency with which the resources allocated and used for health purposes and the effect of preventive, curative and rehabilitative health services on individual and national productivity'.

Health economics is quite distinct from other areas of knowledge. The main distinctive factors are the presence of third party agents, uncertainty, asymmetric information and externalities. The physicians who make purchasing decision are the third party agents. Uncertainty is intrinsic to health, both in patient outcomes and financial concerns. The knowledge gap that exists between a patient and a physician create a situation of distinct advantage for the physician called asymmetric information. Externalities arise frequently when considering health and health care, notably in the context of infectious diseases.

Human capital theory treats everyone's state of health as a stock, i.e., as health capital and its contribution as health

services. Part of the quality of the initial stock is inherited and part is acquired. The stock depreciates overtime and at an increasing rate in later life. Gross investment in human capital entails acquisition and maintenance costs. These investment includes child care, nutrition, clothing, housing and medical services. The flow of services that health capital renders consists of 'healthy time' or 'sickness-free time' which is input into work.

REVIEW OF LITERATURE

Health as an important productivity augmenting factor that contributes to economic growth was explicitly recognised only in the 1990s (Barro, 1991; Fogel, 1994; Schultz, 1997). The empirical literature, establishing the positive relationship between health and growth, is based on evidence at both macro levels (Barro and Lee, 1996; Benhabib and Speigel, 1994; Bhargava et. al, 2001; Bloom et al., 2004) as well as micro levels (Dinda et. al., 2006, Glick and Sahn, 1998). Of course, there is another strand of argument that takes into account ageing of population as a consequence of better health, may adversely affect economic growth. Therefore, an inverted U-shaped relationship between life-expectancy and economic growth has been suggested by Cipriani (2000); Croix and Licardro (1999); Zang et. al., (2001).

There are a few macro studies on health and growth in the Indian context. World Bank (2004) found that per capita GDP is inversely related to infant mortality rates; Gupta and Mitra (2003) analysed the relationship between health, poverty, and economic growth in India based on data from fifteen major Indian states and established a two-way positive relationship between growth and health. Mahal (2005) found a strong positive impact of per capita income on health status (life expectancy and infant mortality rate) and also established the reverse causality, namely a positive and significant influence of life expectancy on state level domestic product.

ECONOMIC SIGNIFICANCE OF HEALTH

Improvement in health can contribute to economic development in a number of ways:

(i) **Improved productivity**: Better health can make workers more productive, either through fewer days off or through increased output while working. Improved health of family members will have a similar impact through reducing time lost to caring for dependants.

(ii) **Improved learning:** Improved nutrition and reduced disease, particularly in early childhood, leads to improved cognitive development, enhancing the ability to learn. Healthy children will also gain more from school, having fewer days absent due to ill health. Enhanced learning through either of these mechanisms will add to human capital – an important determinant of economic growth.

(iii) **Reduced family size**: Investments in sexual and reproductive health can lead to reduced poverty by reducing the size of families. At a societal level, similar investments may lead to demographic changes conducive to economic development.

(iv) **Reduced treatment burden**: Initiatives that prevent certain illnesses or provide for their early treatment can help avoid the major downstream costs associated with illness and subsequent complications. Because of this, such initiatives can reduce health care burdens on families and governments, freeing capital for investment in productive activities like education and infrastructure.

LIMITATIONS OF THE STUDY

The present study is essentially a descriptive, at best, an analytical and definitely not a prescriptive one. The entire study is based on secondary sources of data as no primary data could be collected for this purpose. Like other works, it is not free from flaws. Main shortcomings of the study are that, (i) it has not calculated specifically the cost of various health services in the study area, (ii) it has also not worked out the cost-benefit analysis of health expenditures, and (iii) finally, no cost effective method of health services delivery has been prescribed. Due to the constraints of time and space, it is practically difficult to overcome certain shortcomings, as mentioned above.

HEALTH SCENRIO OF MIZORAM

With only 132 persons per square kilometre, Mizoram has a fairly healthy and manageable population in the midst of less polluted environment of the green North Eastern part of the country. For a population size of 10,91,014, spread over 869 villages, health services in Mizoram is provided through one State Hospital (an upgraded district hospital), 11 district hospitals, 12 Community Health Centres, 57 Primary Health Centres and 370 Sub- Centres & 78 Clinics. Apart from these, there are as many as 12 private hospitals, with almost same bed strength and similar health infrastructures, in this small state. Government sector being the dominant player in supplying health inputs, the cost of medical treatment and other health services are cheap. However, the state Government spends quite a sizeable amount on medical re-imbursement, especially for the government servants referred outside for treatment. In the private sector, big hospitals are mostly owned and managed by the Churches and charges are always reasonable, on charity lines. As for the beneficiaries or the people at large, they are mostly literate and any consciousness drive, including health campaigns, is comparatively easy in Mizoram. This lessens the wastage and investment of money, time and effort, all of which contributes to the formation of a healthy society.

GOVERNMENT PERFORMANCE

However, to speak about the performance of the State Government, both financial and physical, in the sphere of health infrastructure and delivery of health care services, the achievements fell short of the target in the recent past.

Financial Achievements during the 11th Five Year Plan (2007-2012)

(Rs. in lakhs)

2007-08		2008-09		2009-10		2010-11		2011-12	
Approved Outlay	Expen-diture	Approved Outlay	Expen-diture	Approved Outlay	Expen-diture	Approved Outlay	Expen-diture	Approved Outlay	Expen-diture
1900.00	1900.00	2900.00	2819.00	3550.00	2930.00	3850.00	3885.00	4500.00	4470.00

Source: http://health.mizoram.gov.in/

The agreed outlay during the 11th Five Year Plan for Health Services is Rs. 269.66 crores and the total approved outlays is Rs. 167.00 crores and the total financial achievement is Rs. 160.04 crores.

Physical Target & Achievements during the 11th Five Year Plan (2007-2012)

Sl. No.	Items	Physical Target	Achievement					
			2007-08	2008-09	2009-10	2010-11	2011-12	TOTAL
1.	Construction/ Reconstruction of CHC	9	-	-	-	-	-	**-**
2.	Construction / Reconstruction of PHC	-	-	-	-	-	3	**3**
3.	Construction / Reconstruction of SC	-	4	12	9	-	36	**61**
4.	Establishment of CHC	3	-	3	-	-	-	**3**
5.	Establishment of PHC	-	-	3	-	-	-	**3**
6.	Establishment of SC	-	-	4	-	-	-	**4**
7.	Construction / Reconstruction of Type I, II, II & Staff Quarters	387	15	16	6	4	58	**99**
8.	Creation of new posts	407	-	-	-	-	-	**-**

Source: http://health.mizoram.gov.in/

Out of total outlays during 11thFive Year Plan, Rs. 8,988.30 lakhs is utilized for maintenance of 826 nos. of existing staff which is 53.82% of the total outlay under Plan and only meagre infrastructure development have been done under State Plan Schemes. As such, only 3 nos. of PHC, 160 nos. of Sub-Centres / Staff Quarters could be constructed during this five years time.

SHORTFALLS

Health services are quite unsatisfactory in the rural and semi-urban areas of Mizoram. Community Health Centres (CHC), Primary Health Centres (PHC) and Sub-Centres (SC) are located in the smaller towns and far-off villages, where a sea gap between the required and existing manpower as well as infrastructure is witnessed from the following tables:

Staff position and requirement as per IPHS norms at CHC, PHC and Sub-Centre

1. Total no. of CHCs = 12 nos.

Sl. No.	Designation	Manpower					Infrastructure		
		IPHS norm for 1 CHC	Req as per IPHS	Existing	Gap (4-5)		IPHS norm	Existing	Gap (7-8)
1	*2*	*3*	*4*	*5*	*6*		*7*	*8*	*9*
1.	Specialist (Surgeon, Physician, Obst. & Gynae., Paedia, Anaest., AYUSH)	6	72	0	72		72	0	72
2.	Medical Officer	6	72	26	46		72	24	48
3.	Dental Surgeon	1	12	12	0		12	0	12
4.	Medical Officer (AYUSH)	1	12	0	12		12	0	12
5.	Staff Nurse	19	228	41	187		228	60	168
6.	Pharmacist	3	36	6	36		36	12	24
7.	Pharmacist (AYUSH)	1	12	0	12		12	0	12
8.	Laboratory Technician	3	36	24	12		36	12	24
9.	Radiographer	2	24	0	24		24	0	24
10.	Ophthalmic	1	12	4	8		12	0	12
11.	Registration Clerk	2	24	0	24		24	0	24
12.	Statistical Assistant	2	24	0	24		24	0	24
13.	Accountant	1	12	12	0		12	0	12
14.	O.T. Technician	1	12	0	12		12	0	12
15.	IV Grade	25	300	98	202		300	80	220
	TOTAL	**74**	**881**	**269**	**618**		**887**	**195**	**701**

2. Total no. of PHCs = 57 nos.

Sl. No.	Designation	Manpower					Infrastructure		
		IPHS norm for 1 PHC	Require-ment as per IPHS	Existing	Gap (4-5)		IPHS norm	Existing	Gap (7-8)
1	*2*	*3*	*4*	*5*	*6*		*7*	*8*	*9*
1.	Medical Officer	3	171	50	121		171	83	88
2.	AYUSH Practitioner	1	57	0	57		57	0	57
3.	Accounts Manager	1	57	48	9		57	0	57
4.	Pharmacist	2	114	29	85		114	57	57
5.	Staff Nurse	5	285	119	116		285	171	114
6.	Health Worker (F)	1	57	89	(-) 32		57	40	17
7.	Health Educator	1	57	0	57		57	0	57
8.	Health Asst. (M&F)	2	114	0	114		114	0	114
9.	Clerk	2	114	0	114		114	0	114
10.	Laboratory Technician	2	114	43	71		114	43	71
11.	Driver	1	57	26	31		57	26	31
12.	IV Grade	4	228	233	(-) 5		228	171	57
	TOTAL	**25**	**1425**	**700**	**762**		**1425**	**591**	**834**

3. Total no. of Sub-Centre = 370 nos.

Sl. No.	Designation	Manpower					Infrastructure		
		IPHS norm for 1 SC	Req as per IPHS	Existing	Gap (4-5)		IPHS norm	Existing	Gap (7-8)
1	2	3	4	5	6		7	8	9
1.	Health Worker (F)	1	370	311	59		370	246	124
2.	Health Worker (M)	1	370	234	136		370	234	136
3.	IV Grade	1	370	205	165		370	210	160
	TOTAL	**3**	**1110**	**750**	**360**		**1110**	**690**	**420**

Source: http://health.mizoram.gov.in/

HEALTH INDICATORS

In spite of the above deficiencies in the management and delivery of health services in the state, Mizoram has a commendable picture of health indicators to exhibit. The following table shows a clear picture of the health indicators and other related variables of Mizoram in comparison to that of the nation as a whole.

Health & Other Related Variables (2011)

Health Indicator/Related Variable	Mizoram	India
Population (2011 Census)	1091014	1210193422
Decennial Growth Rate (2001-11)	22.78	17.64
Average Annual Exponential Growth Rate (2001-11)	2.07	1.64
Density	132	382
Sex Ratio	975	940
Crude Birth Rate (SRS 2008)	17.80	22.80
Crude Death Rate (SRS 2008)	5.10	7.40
Infant Mortality Rate (SRS 2008)	37	53
Literacy Rate	91.58	74.04
Below Poverty Line (%)	19.47	26.10

Source: Compiled from

http://www.mohfw.nic.in/NRHM/State%20Files/Mizoram.htm
Staistical Handbook of Mizoram 2012

Except in population growth, Mizoram scores better than the national average in all other health indicators. Especially, with lower birth rate, death rate, infant mortality rate and sex ratio Mizoram clearly shows its better performance in health care services.

CONCLUSION

Apparently, it can safely be expected that, the favourable health indicators coupled with high literacy rate, Mizoram can well build up a strong human capital conducive for economic development. But, the high literacy rate in the statedoes not correspond to such an encouraging number of highly educated/specialised manpower. Moreover, health infrastructure and health delivery service is also seen to be skewed towards the bigger urban centres. So, the state needs to take steps with a twin objective of filling the gap between high literacy rate and less educated/specialised manpower, and ensuring even distribution of health care services between the rural and the urban areas. The success of all or any governmental initiative lies with the cooperation from the people's side. Hence, a concerted effort from the NGOs and the educated folk is needed to convert the human beings into human resources through the provision of improved health and specialised education.

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