

**ON SOME IMPLICATIONS OF THE FINANCING
OF HEALTH CARE**

*Dissertation submitted to the Jawaharlal Nehru University in partial
fulfillment of the requirements for the award of the degree of*

MASTER OF PHILOSOPHY

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CERTIFICATE

This is to certify that the dissertation entitled “**On Some Implications of the Financing of Health Care**” submitted by me in partial fulfillment of the requirement for the award of **MASTER OF PHILOSOPHY** has not been previously submitted for any other degree of this or any other university.

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Chapter I

Introduction

In the twentieth century, the world has witnessed tremendous changes which have affected social and economic development. As development is a multidimensional entity, it is very problematic to choose an appropriate yardstick by which development should be measured and evaluated. Amartya Sen defines social and economic development as “freedom from all forms of social deprivations”. Deprivations may be defined in terms of the failure of certain human capabilities that must be ensured for a person’s well-being. According to him –

“Development requires the removal of major sources of unfreedom: poverty as well as tyranny, poor economic opportunities as well as systematic social deprivation, neglect of public facilities as well as intolerance or over-activity of responsive states. Despite unprecedented increases in overall opulence, the contemporary world denies elementary freedoms to vast numbers - perhaps even the majority - of people. Sometimes the lack of substantive freedoms relates directly to economic poverty, which robs people of the freedom to satisfy hunger, or to achieve sufficient nutrition, or to obtain remedies for treatable illness, or the opportunity to be adequately clothed or sheltered, or to enjoy clean water or sanitary facilities. In other cases, the unfreedom links closely to the lack of public facilities and social care, such as the absence of the epidemiological programs, or of organized arrangements for health care or educational facilities, or of effective institutions for the maintenance of local peace and order”¹.

Throughout all discussion, serious emphasis on public action has been given to free people from all forms of deprivations. “If a person does not have the capability of avoiding preventable mortality, unnecessary morbidity, or escapable undernourishment, then it would almost certainly be agreed that the person is deprived in a significant way”². People can free themselves from these deprivations by increasing some basic capabilities. These basic capabilities are not promoted only by persons’ incomes but also by social facilities (such as public health etc.). Thus the State can provide various types of social facilities by creating a strong social security system. Amartya Sen considers

¹&² Amartya Sen (1999): Development As Freedom, Oxford University Press. (pp 3-7)

this 'social security' as using of social means to prevent deprivation and vulnerability. Social means are divided in two broad groups: direct and indirect means.

The most immediate social means are to provide direct support to the ability of the vulnerable to acquire the means to basic capabilities. Provisions of free food to the poor or providing foods in controlled prices, providing unemployment insurance, free health services and basic education, etc. are such direct support. The social means could also be indirect. For example, creating the social conditions of economic growth may take substantial - and lasting - contribution to eliminate deprivation, if growth involves widespread participation of the population in the process of economic expansion.

The 'protection' and 'promotion' are the two different aspects of social all types of social securities. The former is concerned with the task of preventing a decline in living standards as might occur in a sudden economic crisis say, an economic recession, famine, natural catastrophe etc. 'Promotion' refers to the enhancement of general living standards and to the expansion of the basic capabilities of the population, and will have to be seen primarily as a long run challenge.

In principle, two contrasting approaches to the removal of precarious living conditions are relevant here. One approach is to promote economic growth and take the best possible advantage of the potentialities released by greater general affluence. It will expand not only the private incomes but also an improved basis for public support. This may be called the strategy of 'growth-mediated security'. Another alternative is to resort directly to wide ranging public support in domains such as employment provision, income redistribution, health care, education, and social assistance in order to remove destitution without waiting for a transformation in the level of general affluence. Here success may have to be based on a discriminating use of national resources, the efficiency of public resources, and a redistributive bias in their delivery. This may be called the strategy of 'support-led security'.

It is very much debatable which one of these two types of social security, growth-mediated or support-led security, is suitable for a country. In fact suitability of these securities varies from country to country, depending on the political, social and economic situation. Historically, all over the world, states have played a major role in eliminating persistent deprivation of a large section of people irrespective of the countries either it is developed or underdeveloped.

Though there is a huge debate, still in the twenty first century, in most of the developing countries as well as in the developed countries 'support-led security' is slowly being established as having the greater role in development.

• Across the world there are a number of evidences in favour of direct support of the government, which succeeded tremendously in social sectors like health, education etc. In the twentieth century, necessity of government intervention in health sector was first recognized during the First World War, when it was discovered that in Britain, almost half the potential recruits to the army had to be rejected on grounds of poor health. In this context, the Beveridge Committee was established and that was the blue-print for the state intervention in health care across the globe. This committee was inspired by the extraordinary advances in health made by the Soviet Union. Again in the period of great depression, when the Keynesian revolution attempted to resurrect the worldwide shattered economies through state intervention, it was felt that state could intervene in health care without impinging on the rights to private property and profits. It was felt also in the capitalist countries that they would be benefited through higher productivity and the muting of working class struggle by providing the universal health care by the state. Lastly, even among the neo-classical economists, it is well recognized that certain unique characteristics of health care leads to market failure and government intervention is necessary to provide socially optimal level of health care provision.

It is recognized that in all the developing countries where extreme poverty, social and economic backwardness, and inequitable social structure are deeply rooted, more direct role of the governments are desirable for overall development. But after the first oil

shock of 1973, mainly all the developing countries (first the Latin American countries immediately followed by the African and South Asian countries) experienced a severe crisis. Their external debt burden continued to rise and growth rates fell. In 1997, the total external debt of the developing countries was US \$ 2173 billion. Out of this, India accounted for US \$ 94 billion (HDC 1999). In this situation all these countries were forced to adopt the policies of International Monetary Fund (IMF) and World Bank (WB) for 'reconstruction and development' because these two were the main sources of credit. The countries were compelled to cut government expenditures from all social sectors in the name of Structural Adjustment Programmes (SAP) along with the rolling back of the role of the State. So, basically in SAP, more emphasis was given on 'growth-mediated security' rather than the 'support-led security'. But role of the support-led security was more important precisely in those countries where a contrary policy was being advocated. All these countries deviated from their goals of 'Health for All through Primary Health Care by 2000 AD' stated in the Alma Ata Declaration in 1978. Immediate negative impact on health was seen in African and Latin American countries as they adopted those policies first. These countries saw an alarming reversal of in the post-war improvements of many health indices. Besides, some communicable diseases reappeared in African countries. In most of the Asian countries, the SAP was adopted in health sector in 1980s.

In a welfare state, where a minimum standard of living for all citizens is an objective and no one is denied an essential service which might be available to others, the role of the State is very important in facilitating the social development of the Nation. It is also important to see how it is influencing social development and especially so in case of health care provision. In 1946, the Bhore Committee was set up for shaping of health services in independent India. Though it is very old, its relevance is not lost today. The guiding principles adopted by the Bhore Committee were:

(i) no individual should be denied adequate medical care because of inability to pay for it; (ii) the health programme must, from the beginning, lay special emphasis on preventive work; (iii) medical relief and preventive health care must be urgently provided as soon as possible to the vast rural population of the country; (iv) the health services centers should be located as close to the people as possible to ensure maximum

benefit to the communities served; (v) the active cooperation of the people must be secured in the development of health programmes.

In the independent India, initiatives were taken for ensuring protection and promotion of health and nutrition of all people by placing it in the Directive Principles for the State Policy in the Constitution of India. Again India was a signatory to the Alma Ata Declaration, whose goal was 'Health for All through Primary Health Care by 2000 AD'. In spite of all these initiatives, we are far behind the goals which have been set from time to time.

One of the major causes behind this state of affairs, as we shall see, is the serious neglect of public health care services. Another reason is the lack of adequate resources in the health sector. In India 0.9 percent of GDP is spent on health by the government of India; by way of comparison, the average expenditure on health in developing countries is around 2.8 percent of GDP. So, government expenditure on health in India is abysmally low even compared to the other developing countries. Again in the era of reform, the expenditure on health has declined even further. Immediate impact of the expenditure cut in health sector resulted in deteriorating health status. Evidence from Indian National Sample Registration Scheme shows that in some major states of India, such as Kerala, Karnataka, Gujarat, Maharashtra, Andhra Pradesh, Punjab as well as Madhya Pradesh, Orissa and Assam, the infant mortality rate in 1998 has risen above the levels recorded in 1996 and 1997. If the achievements in health sector are considered on the ground of equity, then the success is very limited. There are huge gap in terms of different health indicator between rural and urban areas and also across states.

It should be noted that India, where 83 percent of all health expenditures are private, is the most privatized country in terms of percentage of private expenditure of total health expenditure. Further, policies were proposed in National health policy 2002 to promote private sector initiatives in secondary and tertiary health care.

There is another noticeable phenomenon which has been observed from the different round of NSS data; there has been a substantial increase in the household health expenditures both in rural and urban areas and this increase in health expenditure is more severe in rural areas.

In this context, in the subsequent study, I would like to examine the effects of such policies. First of all, I look at the cross country trend of public and private expenditures on health and their impacts on individuals' direct health care expenditures and health status of a country. I also examine the role of the State in India in this conclusion.

Chapter II

Financing of Health Care

II.1: Introduction:

World Health Organization defines health as “*a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity*”. Health is thus a crucial aspect of human capital, and therefore, must be considered to be a critical ingredient of economic growth because healthier workers are physically and mentally more energetic and robust and they are more productive. “Good health has a positive, sizable, and statistically significant effect on aggregate output which helps a country to achieve a higher growth rate” (Canning, Bloom & Sevilla, 2001). Regardless the stage of development or level of income, people of every country desire an improvement in their state of health, greater access to a wide range of health and health related services, and to enjoy the benefits of scientific and technological advances that will assist these aims. To ensure good health of every citizen is considered to be one of the main objectives of state policy.

Health Economics can be broadly defined as the application of the theories, concepts, and techniques of economics to the health sector. For every country resources are limited while needs for health care unlimited. Therefore an economic analysis of health care is needed to indicate how the limited resources can be used efficiently to achieve the higher level of health care services. Health Economics is thus concerned with such matters as the allocation of resources between various health-promoting activities; the quantity of resources used in health service delivery; the organizing and funding of health service institutions; the efficiency with which resources are allocated and used for health purposes; and the effects of preventive, curative, and rehabilitative health services on individual and the society. Since health problems are so great and resources are so scarce, it is of great importance that the measures the countries take to improve health should be both effective and economical in their resource use, and equitable in their design and impact.

II.2: Health Care as an Economic Commodity and Market failure:

Health care, which is a bundle of goods and services whose primary purpose is to improve or prevent deterioration in health, is an economic commodity. There is

consensus among economists that health care is different from other goods and services; this difference is manifested in the way in which market failure may occur in such markets. Consequently these differences have to be understood before formulating public policy in the health sector. This distinctiveness is rooted in four characteristics of health care: (I) a significant portion of demand for health care is a derived demand (for health); (II) presence of externalities; (III) informational asymmetries between providers and patients; and (IV) uncertainty with respect to both the need for and effectiveness of health care.

II. 2.1: Derived Demand for Health Care:

Health care is one of many determinants of health and from an economic perspective, it is simply an input into the production of health. Health care generates utility in two ways. Firstly, it generates utility in a direct way like other consumer goods. Again, health care augments utility through producing good health. So, health care is also consumed to produce health, which is the desired good. Demand for health care is thus derived from our demand for health itself (Grossman, 1972). Following Evans (1984), suppose an individual's utility depends on general goods and services, X ; health care (HC); and health status (HS), which is produced by health care and other determinants of health (Z); then utility is

$$U = U(X, HC, HS(HC, Z)).$$

The effect of health care on welfare then depends upon $\partial U/\partial HC$, the direct effect on welfare of consuming health care; and $(\partial U/\partial HS)(\partial HS/\partial HC)$, the contribution of health care to health status, combined with the contribution of health status to welfare.

The first term, $\partial U/\partial HC$, is the direct effect of health care on utility just like that found for standard consumer goods. Of more general analytic importance is the effect of health care on welfare through its effect on health status. This depends on two factors: (i) the marginal contribution of improvements in health status to utility, $\partial U/\partial HS$, which is subjective and known only by the individual; and (ii) the marginal productivity of health care in producing health, $\partial HS/\partial HC$, which is a technical relationship that can, in principle, be established by scientific research and is knowable by third party. To the extent that a

health care service is consumed to improve health, a positive marginal product of health care in producing health is a necessary condition for a service to improve welfare.

II. 2.2: Externality:

If a good or service benefits not only those who purchase this good but others as well, then there is said to be a positive externality in its consumption. For such a good or service, the market would be unable to decide how much to produce or consume. The supply of such goods, if left to the vagaries of market forces, would be sub-optimal production or consumption. If resources were to be diverted from elsewhere to the production of these goods, it would result in a rise in the society's welfare.

Except for physical health externalities, most arguments regarding the presence and nature of externalities for health care services are based on introspection and the broad public support to increase citizens' access to health care. The first attention by economists to externalities associated with health care services arose in the early and middle 1960s in the context of a debate regarding the potential efficiency of heavy public involvement in health care finance and delivery, particularly as represented by the British National Health Services. Culyer and Simpson (1980) documented different phases in the evolution of economic analyses of externalities in the health sector.

In the first phase, economists argue that external effects were small or non-existent for general health care services such as physician and hospital care. Policy relevant externalities were limited to physical health effects associated with interventions targeted at communicable diseases, passed either directly among humans or indirectly through the physical environment. An action taken by one person (e.g. ensuring clean, safe water, immunizing oneself against, or seeking treatment for, a communicable disease) generates direct health benefits for other individuals (i.e. reduce rates of disease). Market exchange, which ignores such positive external effects, yields less than socially optimal levels of such activities.

In the second phase emphasis shifted to general health care services which are the source of policy relevant external effects. Externalities were modeled as being generated by good specific utility interdependencies in which others' consumption of health care services enters a person's utility function. The interdependency was

modeled in a variety of ways, but generally the interdependency related to either the absolute level of health care consumption by others (e.g. Pauly, 1970) or the relative levels of consumption, with a particular concern for the extent of inequality in health care consumption (e.g. Lindsey , 1969). The welfare maximizing policies derived from such frameworks were price subsidies by the government to encourage the consumption of health care services, such as derived from standard analyses of policies to correct for consumption externalities.

Thus under the presence of externalities, the market mechanism breaks down and we have a case for government intervention. As health care has positive externality, government intervention is essential.

II. 2.3: Informational Asymmetry:

Informational asymmetries pervade the health sector and cause market failure in both health care and health care insurance markets. The principle informational asymmetry in the health care sector is that between the service provider and patient. Optimal health care consumption depends on utilizing effective health care to improve health to the extent that health is valued by an individual (relative to other activities to improve well-being). Within the simple framework set out earlier, patients know best how improvements in the health affects their well-being ($\partial U/\partial HS$), while providers have better information regarding both the causes of ill-health and the effectiveness of alternative health care services in restoring health or preventing the further deterioration of health .

The asymmetry between the patient and the provider regarding both the nature of the illness and the effectiveness of alternative treatments may cause market failure. The opportunities for learning from experience are very limited in health care. Demand side policies attempt to correct the market failure by providing consumers with relevant information. Such policies are generally advocated by economists with a stronger allegiance to neo-classical methods, who do not perceive asymmetries to be severe, who judge health care to be “not that much different” from “standard” commodities and who generally favour market-oriented approaches to resource allocation (Pauly,1978, 1988).

On the other hand, there are supply side policies to reduce competitive market pressure that might induce providers to give primacy to self-interest rather than patient interest. Providers and physicians in particular, have been protected from competitive pressures through supply side regulations such as licensure (which restricts entry), limitation on advertising, and other professional norms that reduce competition among providers. These supply side policies claim also to have another rationale – to prohibit low quality. Supply side approaches in correcting market failure induced by informational asymmetry attempt to balance their counteracting forces. On the one hand, it can be welfare enhancing to specify minimum quality levels. On the other hand, it can be welfare reducing to grant monopoly powers to providers and to create work contexts that allow providers discretionary scope to pursue professional and other objectives not consistent with patient needs, preferences or an inefficient use of resources. Within traditional public-utility approaches to regulation, the balance is to be maintained by the regulator who monitors the behaviour of the regulated. In most settings governments have granted health care providers and physicians in particular, broad powers of self-regulation.

Informational asymmetries are at the root of what has been one of the most prominent debates within health economics: supplier-induced demand. Providers, acting as agents for their patients, have a major influence in “demanding” the services they will supply for the patient. This influence violates the assumption of neo-classical economic theory (both positive and normative) that the demand and supply sides of a market are independent. If consumer ignorance and provider influence pervade the markets for health care services, then the area under the demand curve for health care will not represent a valid measure of consumer welfare.

Lastly, to correct the informational asymmetry that is related to Research & Development of different types of medicine, government intervention is also necessary. Across the globe MNCs and TNCs are the main producers and suppliers of different essential drugs. They invest huge amounts of money to Research & Development of different drugs. Sometimes for self interest they don't disclose the side effects of their drugs and they introduce a number of hazardous, irrational and ineffective drugs. This process is widespread where regulatory systems are weak; mainly most of the developing

countries. The drug producing lobby all over the world is so strong that only government can mitigate this problem to some extent through effective monitoring agency and implementing strict laws against this.

II. 2.4: Uncertainty:

Arrow (1963) identified two types of uncertainty associated with health care: uncertainty in the demand for health care and uncertainty regarding the effectiveness of treatment, which is inherent in health sector. The economic efficiency of market arrangements therefore depends on the ability of a competitive system to create a full set of risk bearing (e.g. insurance) markets. If a full set of markets is not created, market failure results and non-market arrangements may improve efficiency. Missing markets in risk bearing may explain a number of the non-market institutional forms observed in the health sector. Although health care insurance exists for many types of health care expenditures, insurance markets themselves suffer from market failure. In the presence of uncertainty risk-averse individuals can often make themselves better off by risk pooling. Risk pooling reduces risk because, although an event is unpredictable for any single individual, the number of such events that will occur in a large group of individuals can be predicted. Given that insurance is welfare-improving for individuals, the critical issue from a policy perspective is how best to organize insurance markets to provide such insurance. This is particularly challenging because insurance markets are subject to a number of types of market failure, the most prominent of which arise from adverse selection, and moral hazard. We consider them one by one:

II. 2.4.1: Risk Selection:

Risk selection arises from informational asymmetries between the insured and insurers. Adverse selection, a process whereby low-risk individuals drop out of the insurance pool leaving only high-risk individuals, arises when the individuals purchasing insurance have better information regarding their risk status than does the insurer. An insurer that cannot distinguish low-risk and high-risk individuals must base the premium on a risk pool that includes both high and low risk individuals. Low-risk individuals (who know they are low-risk) will not

purchase insurance because the premium does not reflect their risk status. Since this leaves high-risk individuals in the pool, the premium revenue of the insurer would be insufficient to cover expected losses. If the insurer raises premiums to reflect the increased risks remaining in the pool, another segment of low-risk individuals will exit, again leading to losses. In the limit, adverse selection can make insurance markets unsustainable. The most prominent strategy to combat adverse selection is to define risk pool in ways that retain individuals from all risk levels, such as through compulsory public insurance or by basing risk-pool membership on a group, such as employee-sponsored plans, that requires all members to participate.

A second risk selection problem is **cream-skimming**, which occurs when insurers have better information on an individual's status than does the individual. Under cream-skimming, an insurer generates higher profits by purposefully selecting low-risk individuals for coverage whose expected losses are below the premium charged. Insurers can cream-skim in a number of ways including designing policies with deductibles³ and co-insurance⁴ provisions that prompt individuals to self-select into risk categories, selling insurance in settings where low-risk individuals predominate, and other creative strategies. Cream-skimming is normally combated through their regulatory approaches to control risk selection behaviours or through the risk-adjusted premiums, which reduce the incentive to risk-select by better matching the premium to an individual's risk-status.

II. 2.4.2: Moral Hazard:

Moral hazard refers to the tendency for insurance coverage to induce behavioural responses that raise the expected losses that are insured, because it increases either the likelihood of a loss or the size of a loss. Of more importance in the health sector is moral hazard associated with the fact that once an insurable event occurs, because an insured individual does not have to pay for the full cost of treatment, the individual may incur higher total costs than in the absence of

^{1,2} Co-insurance and Deductibles are different forms of cost sharing when health care is financed through health insurance. Basically these are the share of the total health expenditure which is paid by the patient.

insurance. The increased expenditures associated with such moral hazard result from the behavioural responses of either patients or providers: patients, whose care is subsidized may (and would be expected to) demand a greater quantity of services; providers, knowing that patients do not bear the full cost services, may increase the quantity of treatments recommended and/or the prices of those services. Moral hazard has the potential to limit the range of insurance contracts that can be offered, decreasing the allocative efficiency. To remain in business, an insurance organization has to set a premium based on ex post losses in the presence of insurance, but individuals may make their consumption decisions on the basis of ex ante expected losses. Individuals willing to purchase an insurance contract based on ex ante losses, find such contracts unavailable. Hence, moral hazard can lead to missing, or at least incomplete markets, for risk-bearing. A second type of allocative efficiency loss arises from “excess” utilization generated by insurance, which creates an excess burden. To mitigate this problem the insurance converges are designed with deductibles, coinsurance provisions, maximum limits on benefits, and a host of more specific explicit and implicit benefit limitations.

So, insurance market can fail due to individual behaviours (risk selection & moral hazard). On the other hand the market can fail to offer individuals insurance against the occurrence of many illness (cream-skimming). Thus, equity in health care can't be ensured if health care is financed through insurance. Again the insurance raise the health expenditure (for moral hazard) enormously which has been already experienced by the OECD countries. In the developing countries where poverty is widespread, a large number of people have not even the ability to pay the premiums. Again, in the developing countries where social security systems (old age security, unemployment benefit etc) are very weak or non-existing, insurance can't be the possible alternative to the public provision of the health care because a large number of aged people and unemployed people can't afford the cost insurance. Cross country data shows that larger portion of all private insurance are purchased through the workplace. But in the developing countries large numbers of people are engaged in the unorganized sectors. In India where 93 percent of total workforce is employed in the unorganized sector, there

is the least possibility of success to provide mandatory health insurance through workplace.

II.2.5: Experiences of Health Insurance in USA:

Among OECD countries, only USA has the greater share of private health insurance and it is the classic example of failure of insurance market to give universal coverage though all the prerequisites for implementing health insurance are available in USA i.e. very high per capita income, large organized sector where a larger portion of workforce are employed. So the situation is ideal for buying insurance individually for high income or to give insurance coverage to the employed through employer. Yet, approximately 75 million people – nearly one out of three Americans who are not eligible for Medicare⁵ – are uninsured for some period of time⁶. The Institute of Medicine estimates that every year about 18,000 Americans die prematurely and unnecessarily because they do not have health coverage⁷. That is about two deaths per hour. According to the U.S. Census Bureau, 45 million (around 20% of non-elderly people) Americans have no health insurance at all, including more than 8 million children. Eight out of 10 uninsured Americans either work or are in working families. Nearly one in six Americans has lacked health care coverage for a full year, and millions more go without coverage for months at a time. As the price of health care coverage continues to rise, fewer individuals, families, businesses, and government programs can afford to pay for coverage. Again, self financing of health care is almost impossible for a large number of people for health care costs which is highest in the world. Dependency on insurance for health care financing is one of the major causes behind the increasing costs of treatments because administrative costs, which are collected through higher premiums, for proper functioning of insurance markets are very high. Though other OECD countries also face the problem of higher health care costs caused by health insurance, the problem is not so much severe their case because they are not so dependent on health insurance.

⁵ Medicare is one type of government health insurance for the elderly people.

⁶ Kathleen Stoll, *Going Without Health Insurance: Nearly One in Three Non-Elderly Americans* (Washington: Families USA, March 2003).

⁷ Institute of Medicine, *Hidden Costs, Value Lost: Uninsurance in America* (Washington: National Academies Press, 2003), p. 107.

Therefore from both the efficiency and equity grounds there, is no alternative to the public provision of health care. Even for the success of the insurance system, increased public health spending and reforming of public health facilities are obligatory. So before considering any other alternative, good public health care facilities are prerequisite which needs a substantial amount of expenditure in the health sector through direct intervention by the government.

Individually each of these features of health care as a commodity, that is, derived demand, presence of externalities, informational asymmetries, and uncertainty can be found in other commodities. But there is no other commodity which has all of these features to the extent found in health care. It is the combination of these features that poses such a challenge for sound economic analysis and sound health policy. There is consensus among the economists that these distinctive features of health care cause failure of market to function efficiently.

II.3: Efficiency:

Once resources are allocated to different levels of care it is important to evaluate how they are used. In the health sector efficiency can be viewed from different perspectives. Technical efficiency in health sector is concerned with the combination of certain resources (such as equipment, staff and drugs and medical supplies) to produce the greatest output. Unfortunately, due to a lack of reliable data, thorough evaluation of the technical efficiency of clinics and community health centers is not possible. Generally, allocative efficiency occurs when the resources are devoted to right activities while technical efficiency is achieved when a given health intervention or outcome is obtained through few resources (WHO, 1999). Misallocation of resources between the primary, secondary and tertiary sectors gives rise to allocative inefficiency where as an imbalance between installed capacity and recurrent resources to maintain it lead to technical inefficiency. In this context some inefficiency exists in all levels of health care.

If we move toward improving universal access to health care, it will improve equity and it might equally be understood as a tool for improving health status as well as allocative efficiency. In this equity perspective, public health sector are more efficient than that of private health care. In another way, the efficiency of public health care system is reflected in the utilization of the services by the people for whom they are intended.

II.4: Equity:

There is another major concern in the health care is **equity**. Equity is the central issue for decisions of allocation, provisioning and financing of the health sector. With the advent of technology and very fast growth of private service delivery in health, access as well as equity is the issue not merely in developing country like India but also in the developed countries. Equity in health as well as health care provision is important not merely from the point of social justice but it also means bringing an overall economic prosperity. Equity in access of health care is often considered as an indicator to assess the standard for health care system. Fundamentally, provision of health is a role of the state, to make it accessible to all sections of the society. Access has been defined as “freedom or ability to obtain or make use of”. Equal access, then, implies that everyone in society is equally able to obtain or make use of health care. It pertains to the ability or capacity to do something, and not to whether it is actually done; it is independent of demand or utilization. Two common notions relating to the equality of access to health services are very crucial. Firstly, the physical access (largely a supply side issue), which suggests that people should have access to the same level (and quality) of services regardless of their geographical locations. Second notion of equality of access is related with social access that implies that health care should be available to each individual regardless of considerations of caste, class, gender, ability-to-pay, social status etc.

But market can't ensure equity in providing health care services as ability-to-pay is the main criterion to access private health care services. Profit is the goal in the workings of private organizations. But the motive to maximize the profit can't be the goal in the health sector. So the markets do not deliver socially desirable outcomes.

II.5: Redistribution of Income Aspect:

An important justification for public intervention is the positive impact on the distribution of well-being in the community because the distribution of welfare without government action is not satisfactory. Redistribution of income has been one of the accepted notions of economics. The direct way to redistribute income is cash transfers. But many economists have shown that this redistribution brought about by provision of certain goods would yield more returns and in many cases it would be more feasible both politically and socially. To some extent, redistribution of income in the society can be achieved through the direct provision of health care and financing the health care through progressive taxation. It helps to attain equity not only in health care sector but also in the whole economy.

II.6: Some facts of Financing of Health Care:

It has been established throughout the discussion that in health sector government intervention is necessary everywhere. Now government intervention may be viewed as taking two forms. The first and somewhat indirect intervention can be described as serving an “enabling function”, in which the government adjusts the environment in which private economic agents make decisions. This may occur through the introduction of taxes and subsidies that alter private incentives or through other forms of regulation of individual activity. The second and more direct kind of intervention is characterized by public provision of resources that are not provided at correct levels by the private sector. Here role of State in health improvement can be seen in terms of “support led security” as propounded by Amartya Sen (1989) and public policy irrespective of economic development can be a mechanism of improving the performance of social indicators. In all the countries across the globe the provision of health care is done by both the government and the private sector but the extent of public and private provision differs from country to country. Whether in a developed country or in a developing country, the duty of the government to provide some level of basic health care facilities and the infrastructural facilities; this constitutes the direct intervention by the government. A substantial amount of government expenditure is necessary to provide such facilities. If we look at the human development approach, where enabling basic human capabilities is

given a thrust, the state has a very important role in provision of health care. Health expenditure is one such form of support led security, to improve the living condition of not only the people at large but particularly the poor. Thus public expenditure on health has basically two broad objectives - efficiency and equity.

From long past, one of the most contentious issues in the health economics is the health care financing by the government. During the 1980s the global economy suffered serious disruptions in its long-term growth as a result of significant energy price changes and the buildup of unsustainable levels of debt. To adjust to these changes, many countries undertook policy initiatives aimed at restructuring their economies. One question that aroused considerable debate in this process was whether country governments needed to provide and finance all types of health care despite the increase in expenditures in health. This question gained further attention following the widespread pledges made at the Alma Ata Conference in 1977 to achieve health for all by the year 2000 through a strategy of primary health care. Many countries have not been able to sustain their prior commitments to either the provision or the financing of health care. They have been focusing increasing attention on alternative financing options, notably insurance. Indeed some governments have viewed this option as an alternative to direct support for health sector via the public budget. (Dunlop, et al., 1995). In the above context, the main argument behind this mechanism of financing health care through insurance is that if insurance mechanism is appropriately configured then it might also make it possible to maintain private initiatives in the health sector and at the same time reduce the inequity of access to health care. But the situation is not so simple because insurance has some special features such as risk selection, moral hazard etc which can cause market failures and to correct it government intervention is the only way which has been established in the earlier discussion.

On the other hand it is unanimously accepted among the economists that resource allocations that are likely to be suboptimal, in social sense, might be improved by the government intervention. It has been clear from the above discussion that the characteristics of health care cause market failure. Again, equity can't be ensured if health care is provided by the private organizations. Therefore if both of these aspects are considered, then there will be no ambiguity that government intervention is necessary for

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proper functioning of health care sector as well as to ensure equality in the access to health care for every citizen of a country.

II.7: Conclusion:

In all types of health care policy analysis **efficiency** and **equity** are considered as two important objectives. It is clear from the above discussion that if the health care is financed through insurance then individual behaviours like risk selection and moral hazard cause market failure which leads to a suboptimal provision of health care. So, efficiency criterion is not satisfied. Again equity norm is violated as a large number of diseases are not covered by insurance (cream-skimming) and a large section of population, who are unable to pay the premiums, remains outside the insurance scheme. Again health insurance is more effective for the formal employment. “The poor could afford meaningful insurance coverage only with public subsidy” (Musgrove, 2002).

To provide health care to such people, public provision of health care is necessary. In addition, health care has positive externality; if government does not intervene then provision of health care will be less than the socially optimal level. In the developing countries, where income distribution is highly skewed, direct provision of health care by the government has a more important role to ensure equity in health sector. The developing country like India where we have mixed health care system, and the structural adjustment of the economy is being done during last two decades, public policy in health will have a very important role in reducing the inequities in health between the poor and non poor.

“It is the general social consensus, clearly, that the laissez-faire solution in medical sector is intolerable” (Arrow, 1963).

Chapter III

Health Expenditure Across Countries: The Role of Public Expenditure

III.1: Introduction:

An understanding of the financial dimensions of health care systems is increasingly recognized as being crucial to an understanding of the nature of health policy development. Efficient and effective health care system (by which we shall mean all activities involved in the provision of goods and services necessary to improve the health status of the population) is determined by the structure of the health care financing system. Thus the financing of health care is an important determinant of the success of the whole health care system of a country. Theoretically, in any country, health care may be financed either through the public expenditures or by means of private expenditure or by a mix of both. In the real world, in every country (even in the socialist countries) only public or only private sector financing of health care does not exist.

Though in all countries the total health expenditures are made up of both public and private expenditures, there are wide variations across the countries in terms of the share of the public and the private sectors. It may appear that a country can improve its overall health status through either by the public or private expenditures, but we shall argue that for an efficient provision of health care is primarily due to government sector activities.

III.2: Categorization of Total Health Expenditure⁸:

Now the definition of health expenditures is limited to those expenditures whose primary function is to improve or promote the health of the population. Total expenditure on health is the sum of both public and private spending on health goods and services. The public and private expenditures themselves are disaggregated on the basis of the source of financing.

III.2.1: Public Expenditure on Health:

It is unlikely that any single definition of what constitutes Public Health Expenditure will fit neatly with the health systems or national budgeting structures of

⁸ All types of health expenditures are defined here in accordance with the National Health Accounts (NHA) data prepared by World Health Organization (WHO).

each country. It is necessary however to make some decisions defining both what should be included as 'health expenditures' and what institutions will be included in the public sector. The institutions that are being included in the public sector are those at all levels of government that have health expenditures, as well as institutions that might be classified as semi public due to their legal status and ownership, like social security systems. Total public expenditure on health is broadly divided into two categories - **Government Health Expenditures, Social Security System Health Expenditures.**

III.2.1.1: Government Health Expenditures:

Government Health Expenditure consists of the following components: Central Government Health Expenditure, State, Provincial, or Regional Government Health Expenditures, Local or Municipal Government Health Expenditures.

Central Government health expenditures will include all expenditures on health made by the central authority, not only through the Ministries of Health or their equivalent, but also through other branches of government that typically have health expenditures such as Ministries of Defense, Education, Agriculture, Police, Mines, etc. These will even include expenditures on private insurance for employees of central government agencies.

State/Provincial and Local/Municipal health expenditures will include the expenditures that these government bodies make from their own budgets and under their own authority to the health sector. These funds would include transfers from the central authority to the local level that were then spent in health.

These government health expenditures are mainly the tax-funded health expenditures that means health expenditures, which is made by the government, are financed by the revenue collected from different type of taxation, cess etc.

III.2.1.2: Social Security Health Expenditures:

Social Security systems are taken to be all public social security institutions, and publicly mandated social security systems. The expenditures of these systems are considered public even though the revenues may be largely from mandatory contributions by employees and employers. In some countries, contributions to insurance funds are mandatory, but workers have the option to choose between public and privately managed funds, or the funds are privately held and managed. Where this is the case, as it is in Chile for example, the private funds are not included in Social security, but in private indirect expenditures.

Besides these two types of public health expenditures, some external resources are also mobilized on account of the health sector through the government. But the roles of these external resources are very much limited as its share in total health expenditure is very small in most of the countries. In addition, the contribution of these external aids is also limited among only some middle-developed and low-developed countries. The very crucial roles of external resources have been recognized particularly for extremely poor countries.

III.2.2: Private Expenditures in Health:

There are three major components of Private Health Expenditures such as household direct health expenditures, indirect health expenditures and other private health expenditures. Out of these three categories of private spending, household direct expenditures make up the bulk of private spending.

III.2.2.1: Household Direct Health Expenditures:

Household direct health expenditures are the direct spending of households to purchase health care services and products. This is also termed as **out-of-pocket** expenditure. Since most countries survey their populations only periodically, and because there are many countries with no household survey data on health expenditures, the data for household direct expenditures is a mixture of actual survey data, adjusted

figures from previous surveys and estimations based on country specific data. Nevertheless, the figures for household health expenditures come largely from data available in surveys, or in studies based on survey data. The surveys used included household income and expenditure surveys, national health surveys, other multipurpose surveys, and surveys of living conditions. This type of private expenditure is made at the time health care services are provided. The two large components of out-of-pocket expenditure are costs of health care service provided and costs of medicines.

III.2.2.2: Indirect Health Expenditures:

Indirect health expenditures are the spending by households and firms on health insurance or prepaid health coverage. Although there has been a significant growth in private health insurance and prepaid health coverage across the countries, there is still relatively less information within countries on the size of this market, or on the levels of expenditures generated under these systems.

This is largely due to the difficulties associated with the collecting this information. Since health insurance companies and prepaid coverage systems are private enterprises this information is considered proprietary, and regulatory bodies usually do not require any publication of how and what these companies spend on health. As a result, about half of the information on indirect expenditure is derived from household surveys, but this creates other problems. In general, health insurance premiums are paid in part by employers, and in part by employees. Thus, when household surveys provide information on health insurance expenditures, they typically capture only the employee's contribution. In another sense, this data is lacking because it is only a proxy for the health outlays of these companies. It reveals the revenues of the insurance firm, but gives no information on what share of these revenues is spent by the company to cover the medical costs of beneficiaries. For these reasons, the private indirect expenditures should be viewed with caution. Nevertheless, the evidence of a growing number of health insurance companies, the increasing number of those with some private coverage, and the existing evidence from surveys combine to suggest that these figures are more likely to under-represent the size of this market than to over estimate it. . However private pre paid

plans or health insurance is not widespread and is available only some particular wealthy countries. In the National Health Accounts several adjustments have been made to mitigate these problems.

III.2.2.3: Other Private Health Expenditures:

Other Private Health Expenditures consist of spending by NGOs, charities, and firms' purchase of health care services. As with indirect expenditures, relatively little data exists on the levels of health expenditures by NGOs, charities, and expenditures by firms either directly purchasing health care for employees, or for on site health clinics, and company physicians and nurses. Anecdotal evidence suggests that these sources of health expenditure are not insignificant for many countries in the region, but little hard data exists. Only a few countries were able to provide any information on the size of this component of health expenditures.

Among the above mentioned different components of the total health expenditure of a country, the government health expenditures, government social security health expenditures and household direct health expenditures (out-of-pocket expenditure) are the major components and these three have the most crucial role for shaping the health policy of a country.

III.3: Health Spending across Countries:

To assess the impact of different types of health expenditures on health status of a country, cross country analysis is necessary because comparisons of health expenditures across different countries permit a systematic investigation of the impact of different institutional regimes and other explanatory variables. To draw some reliable inference from a dataset, large number of sample is preferable. When a cross-country analysis is exercised, say for a particular variable, a large number of observations are available if all countries are considered. As cross country analyses maximize the number of observations, and cover a wide range of incomes, the data set may reflect some more accurate general trend. Over the years, several regression analyses based on cross-section

and panel data have been used to explain the international differences in health expenditure. A common result of these studies is that aggregate income appears to be the most important factor explaining health expenditure variation between countries.

To analyze a variety of health policy questions, good national data on the sources and uses of funds in the health system is necessary; preferably data comparable across countries would be helpful. But there is a severe problem on health data especially in the developing countries. Despite significant data problems, some international organization like WHO, UN, IMF, World Bank etc have some database on various dimension of health and this is used to draw attention to global patterns of health care financing, the variation in public and private roles in paying for the health sector, and considered the linkage between finances and health system performance.

With such data, it is possible to begin considering questions such as what are the best ways of allocating limited resources with an aim to improve health or what level of funding is needed in particular epidemiological and demographic context. Such data can be useful to decision making in many different contexts. For example, many OECD countries are asking whether they are spending too much on health. Countries that provide grants or loans would like to know how much of these funds are being allocated to health and whether they are being used effectively. Middle per capita income countries ask how much they can afford in terms of better health services, and how best to allocate their limited funds; while many of the poorest countries need to document the gap between available resources and those required to provide basic health care.

Since 1999, the World Health Organization has been undertaking a systematic exercise to develop health expenditure data for all of its 191 member States. Except health expenditure of different countries, data on different health indicators are also available. Based on the data available in World Health Report 2003 (which is the most complete data set that I have currently access to) some significant conclusions, which are going to be presented below, may be drawn.

Health expenditure is highly unequal across the globe. The OECD countries spend the most on health per person. National Health Accounts (NHA) estimates (1998) showed that these countries contain 19% of the world's population but account for over 85% of world spending on health. By contrast, the poorest three-quarters of the world's population accounted for only 7% of world health expenditures. At one extreme, Africa contains 10% of the world's population, yet uses 3% of the world's health spending. In Asia and the Pacific (the region including China), 25% of the world's population accounts for only 2% of world health spending. These health expenditure figures expose the highly unequal distribution of health expenditure across the countries.

Table: 3.1: Health Expenditures and Health Indicators in some selected Countries.

HDI Rank	Country	Health Exp. as % of GDP (2001)		Per Capita Exp. on Health (PPP US \$)	Out-of-pocket Exp. as % of Pvt. Exp. (2001)	Life Expectancy at Births (2001)	Infant Mortality Rate Per 1000 live Births (2001))	Per Capita GDP (\$) (2001)
		Public	Pvt.					
1	Norway	6.9	1.2	2,920	96.8	78.7	4	36974
2	Iceland	7.6	1.6	2,643	55.2	79.6	3	27032
3	Sweden	7.5	1.3	2,270	100	79.9	3	23680
4	Australia	6.2	3	2,532	59.6	79	6	19054
7	USA	6.2	7.7	4887	26.5	76.9	7	34946
8	Canada	6.8	2.8	2,792	52.3	79.2	5	22385
9	Japan	6.2	1.8	2,131	74.9	81.3	3	32540
11	Denmark	7	1.5	2,503	90.8	76.4	4	30265
13	U K	6.2	1.4	1989	55.3	77.9	6	24186
18	Germany	8.1	2.7	2,820	42.4	78	4	22418
21	Italy	6.3	2.1	2,204	82.1	78.6	4	18928
25	Cyprus	3.9	4.3	941	98	78.1	5	11566
47	Croatia	7.3	1.6	726	100	74	7	4558
52	Cuba	6.2	1	229	76.8	76.5	7	2234
55	Mexico	2.7	3.4	544	92.4	73.1	24	6150
58	Malaysia	2.1	1.8	345	92.8	72.8	8	3748
59	Panama	4.8	2.2	458	81.2	74.4	19	3383
65	Brazil	3.2	4.4	573	64.1	67.8	31	2888
64	Colombia	3.6	1.9	356	65.2	71.8	19	1924
86	Maldives	5.6	1.1	263	100	66.6	58	1947
88	Georgia	1.4	2.2	108	99.7	73.4	24	601
89	Azerbaijan	1.1	0.5	48	97.7	71.8	77	679
96	Turkey	3.6	1.5	294	98.8	70.1	36	2131
99	Sri Lanka	1.8	1.9	122	95	72.3	17	849
104	China	2	3.4	224	95.4	70.6	31	918
112	Indonesia	0.6	1.8	77	91.8	66.2	33	678
109	Vietnam	1.5	3.7	134	87.6	68.6	30	413
120	Egypt	1.9	2	153	92.2	68.3	35	1425
127	India	0.9	4.2	80	100	63.3	67	462
131	Myanmar	0.4	1.7	26	99.6	57	77	1027
139	Bang'desh	1.6	2	58	93.2	60.5	51	332
143	Nepal	1.5	3.6	63	93.3	59.1	66	231
144	Pakistan	1	3	85	100	60.4	84	401
140	Congo	1.4	0.8	22	100	48.5	81	777
163	Zambia	3	2.7	52	71.8	33.4	112	344
165	Chad	2	0.6	17	80.9	44.6	117	198
169	Ethiopia	1.4	2.1	14	84.7	45.7	116	93

Source: World Health Report 2003, Human Development Report 2003 & UNTCAD Report 2002.

The share of income that countries spend on health is greater for higher income countries which can be seen from the **Table 3.1** above. Per capita income approximates the amount of resources available for consumption of different goods and services, and health spending is one important use of those resources. Per capita health spending is highly correlated with per capita national income (2001 data shows the correlation coefficient as 0.92) though health spending does not necessarily have to rise in a same proportion with income.

Health expenditures, both in terms of percentage of GDP spent on health and per capita health expenditure is much higher in developed countries (Table: 3.1). Share of GDP spent on health ranges from very low, around 1.6% in Azerbaijan to a very high, 13.9% in USA. Similarly there is a very wide variation of per capita health expenditure across countries. Per capita health expenditures in developing countries are extremely low comparing with the highly developed countries. In Ethiopia annual per capita health expenditure is \$14, which is abysmally low when compare with USA, where annual per capita health expenditure is the highest, \$4877. Besides this, there is OECD countries where per capita health expenditures vary within the range from \$2000 to \$3000 while in a large number of African and Asian countries this range varies only from \$10 to \$100⁹ which is highly inadequate to provide the required level of health care provision.

A rough idea that can be obtained from the data set above is that in most of the developed countries; larger share of total health expenditure comes from the public sector. Comparing with public expenditure, the share of private expenditure on health is very small except for a very few countries. On the other hand, in middle developed and low developed countries, either private expenditure is dominating or there are very little differences between the share of private and public expenditure. But it is a fact that in low developed countries both the public and private expenditures are very low. Because in the highly developed countries income is very high compared to the underdeveloped countries, and consumption of health improving goods increases with the increase in income. So, health expenditures are higher in the highly developed countries. On the

⁹ Source: World Health Report, 2003 (pp 170-181) & Human Development Report, 2003 (pp 208-212).

other hand, many studies (for example Gertler and van der Gaag, 1990) have shown a positive correlation between income and health status, both on cross-sectional basis and longitudinal basis. So, developed countries have higher health status through higher health expenditure which is achieved through higher income. Another evidence is perfectly clear from the data that the direct private expenditure or the out-of-pocket expenditure has dominated share of the total private expenditure irrespective of countries whether they are developed or underdeveloped. Data shows that there are little discrepancies, in terms of out-of-pocket expenditure as percentage of total private health expenditure, among developed and developing countries.

III.3.1: Some Aspects of Out-of-Pocket Expenditures:

The most problematic aspect of high shares of health care financed through out-of-pocket spending is that the burden falls on a small portion of households, and, relative to income, the burden is much heavier for the poor than for the rich. As financing health care through out-of-pocket spending is regressive by nature and hence are associated with pro-rich redistribution, which has important macroeconomic policy implications, Government can redistribute income within an economy by controlling the amount of out-of-pocket expenditures. If the government wants to redistribute some portion of income to the poor, the policies to decrease the out-of-pocket payments may be taken. On the other hand, if the government wants to reduce the macroeconomic pressures on public budget, then the fraction of public financing have to substitute out-of-pocket payments or private insurance. But with this substitution there should be a limit to how much out-of-pocket-expenditures can be increased if the goal of equity is to be fulfilled. So, the equity in the health care, which is one of the most important policy objectives, can also be maintained by controlling the out-of-pocket expenditure. Out-of-pocket spending accounts for a much greater share of health expenditures in poor countries than rich ones. This is important in the case of regions with very high private shares of spending, like South Asia. But it is also large in all middle and low income countries. Everywhere the health policies are taken in a way such that direct private expenditure (out-of-pocket) is minimized. So for proper policy purposes, the factors that affect the out-of-pocket expenditure as well as their magnitudes must be identified.

From the following models (Model: I & Model: II), the factors that may have impact upon out-of-pocket expenditure can be identified. Some further inference may be drawn particularly for the developing countries from Model: II.

III.3.1.1: Regression Data & Methodology:

National Health Accounts (NHA) data prepared by World Health Organization (WHO) which is available in World Health Report (WHR), 2003 have been used here. In the WHR, 2003, health financing data in terms of total health expenditure as percentage of GDP, per capita health expenditure, government expenditure and private expenditure as percentage of total health expenditure, percentage of out-of-pocket expenditure as percentage of total private expenditure are given. From the data, we have divided it into public and private expenditure on health as percentage of GDP and also the out-of-pocket expenditure as percentage of GDP were calculated. Per capita GDP in terms of PPP US \$ has taken from relevant Human Development Reports.

In the following models out-of-pocket expenditure as percentage of GDP has been regressed on percentage of public & private GDP spent on health, per capita health expenditure and per capita GDP. Public expenditure and private expenditure both are affected by the per capita expenditure on health. On the other hand public expenditure, private expenditure and per capita health expenditure all are vastly affected by the per capita GDP. So, in this model per capita health expenditure and per capita GDP are taken as control variables. Therefore out-of-pocket expenditure is taken as dependent variable and the rest are independent variables. The only difference between Model: I & Model: II is that in the first model, data on all countries (developed & developing countries) has been taken. But in Model: II only developing countries have been considered. According to the Human Development Index Rank 2001, first 55 countries are considered as the developed countries. So, in the Model: II data of those countries whose ranks are more than 55 are considered. There are wide variations in per capita health expenditure and per capita GDP across countries. For example, annual per capita health expenditure varies

from \$14 to \$4887 and for the per capita GDP the range of variation is from \$93 to \$36974 (Table: 3.1). So, in the regression models, natural logarithms of values of all variables, which can reduce the high skewness of the variables, has been taken.

The variables in the regression are defined as follows:

Log (Out-of-Pocket Expenditure as percentage of GDP):	[ln(OOP Exp)]
Log (Public Expenditure on Health as percentage of GDP):	[ln(Pub GDP)]
Log (Private Expenditure on Health as percentage of GDP):	[ln(Pvt GDP)]
Log (Per Capita GDP):	[ln(PC GDP)]
Log (Per Capita Health Expenditure):	[ln(PC H Exp)]

Therefore, the regression equation for both the models can be expressed as follows:

$$[\ln(\text{OOP Exp})]_i = \alpha + \beta_1 [\ln(\text{Pub GDP})]_i + \beta_2 [\ln(\text{Pvt GDP})]_i + \beta_3 [\ln(\text{PC GDP})]_i + \beta_4 [\ln(\text{PC H Exp})]_i + \epsilon_i$$

Here i denotes the countries and ϵ is the error term.

III.3.1.2: Regression Results:

From the correlation Tables: 3.2 and 3.3 below, it has been observed that the correlation coefficient between out-of-pocket expenditure and private expenditure on health is 0.86 when data on all countries are considered. But this correlation coefficient is 0.68 (calculated form the dataset separately which is not in the tables below) and 0.89 for developed and developing countries respectively. These imply that in developing countries the relationship between out-of-pocket expenditure and private expenditure on health are stronger than developed countries. This conclusion can be further established by the following regression models.

Table 3.2: Correlation Coefficients between the Variables in Model: I.

	ln(OOPGDP)	ln(PubGDP)	ln(PvtGDP)	ln(PCGDP)	ln(PCHExp)
ln(OOPGDP)	1.00				
ln(PubGDP)	-0.17**	1.00			
ln(PvtGDP)	0.86*	-0.02	1.00		
ln(PCGDP)	-0.13	0.58*	-0.01	1.00	
ln(PCHExp)	-0.02	0.71*	0.14	0.94*	1.00

* Significant at 1% level of significance. ** Significant at 5% level of significance.

Table: 3.3 Correlation Coefficients between the Variables in Model: II.

	ln(OOPGDP)	ln(PubGDP)	ln(PvtGDP)	ln(PCGDP)	ln(PCHExp)
ln(OOPGDP)	1.00				
ln(PubGDP)	-0.18**	1.00			
ln(PvtGDP)	0.89*	-0.06	1.00		
ln(PCGDP)	-0.09	0.33*	-0.02	1.00	
ln(PCHExp)	0.09	0.54*	0.20**	0.86*	1.00

* Significant at 1% level of significance. ** Significant at 5% level of significance.

The values of R^2 s in Model: I & II, 0.7696 and 0.8084 respectively, imply that the variables together explain 76.96% and 80.84% variations of dependent variable in Model: I and Model: II respectively. The F statistics (for both the model Prob > F = 0.000) suggests that the whole model is also significant (Table: 3.4).

In the cross- section data analysis, there may be the problem of hetroscedasticity. Regression disturbances whose variances are not constant across observations are heteroscedastic. Hetroscedasticity arises in both the cross-section and time-series data. Hetroscedasticity poses potentially severe problems for inferences based on least squares.

Breusch and Pagan (1979) has devised a Lagrange Multiplier (LM) test of the hypothesis that $\sigma_i^2 = \sigma^2 f(\alpha_0 + \alpha' z_i)$, where z_i is a vector of independent variables. Here σ_i is the variances of the observations α is a constant. The model is homoscadastic if $\alpha = 0$. The test can be carried out with a simple regression:

$LM = \frac{1}{2}$ explained sum of squares in the regression of $e_i^2 / (e'e/n)$ on z_i . Here 'e' is the residuals.

Under the null hypothesis of homoscedasticity, LM is asymptotically distributed as chi-squared with degrees of freedom equal to the number of variables in z_i .

In the Breusch-Pagan test for heteroscedasticity, the hypotheses are taken as -

Null Hypothesis H_0 : Constant Variance; and

Alternative Hypothesis H_A : Variance is not constant.

As the Model: I & II, are the cross-section study, we tested the 'heteroscedasticity problem' for efficient estimator. For Model: I, Breusch-Pagan test for heteroscedasticity, the test result shows that the chi-square value is 0.49 with degrees of freedom 1. Here afore-mentioned z_i is the variable that predicts dependent variable in the model. Result implies that the null hypothesis has not been rejected at 5% level of significance (Prob > chi-square = 0.4860). So we find there is no need for correction, due to different variation of error terms in the model.

In the similar way Model: II, where the chi-square value is 0.00, also the null hypothesis has not been rejected at 5% level significance (Prob > chi-square = 0.9716).

Both models show that the public expenditure has a negative relationship with out-of-pocket expenditure and private expenditure has a positive relationship with out-of-pocket expenditure and for both the models these results are highly significant. Therefore, it is plausible to conclude that if a country's public expenditure on health is increased then the out-of-pocket expenditure will be decreased. This implies that direct health expenditure burden on individuals will be decreased. Just the opposite will happen if private expenditure is increased. In addition, this situation is more prominent in developing countries.

Table: 3.4 Regression Results of Model: I & II.

Dependent Variable: [ln (Out-of-Pocket expenditure as percentage of GDP)].

Independent Variables	All Countries Model: I		Developing Countries Model: II	
	Coefficients (β_i)	t value	Coefficients (β_i)	t value
Ln(Public Expenditure as % of GDP) ; Ln[(Pub GDP)]	- 0.1540**	- 2.28	- 0.1733**	- 2.41
Ln(Private Expenditure as % of GDP) ; [Ln(Pvt GDP)]	0.8716*	19.56	0.9149*	17.90
Ln(Per Capita GDP); [Ln(PC GDP)]	- 0.0531	- 1.03	- 0.0419	- 0.72
Ln(Per Capita Health Expenditure) ; [Ln(PC H Exp)]	0.0380	0.55	0.0316	0.43
	R-squared = 0.7696		R-squared = 0.8084	
	Prob > F = 0.0000		Prob > F = 0.0000	

* Significant at 1% level of significance. ** Significant at 5% level of significance.

Estimated Equation in Model: I

$$(\text{OOP Exp}) = 0.208294 - 0.1540 [\ln (\text{Pub GDP})] + 0.8716 [\ln (\text{Pvt GDP})] - 0.0531 [\ln (\text{PC GDP})] + 0.0380 [\ln (\text{PC H Exp})]$$

Model: I show that for a 1% increase in the public expenditure, out-of-pocket expenditure will decrease by 0.15%; but out-of-pocket expenditure will be increased by 0.87% for 1% increase in private expenditure all other things remaining the same. It is quite natural that if government provides the health care free of cost or at nominal charges, then individuals' direct health care expenditure will decrease. Again if

government provides sufficient health care facilities for all, then the dependency on private health care will be decreased and consequently the individuals' direct expenditure on health. We infer the above from the fact is a significant negative relationship between government expenditure on health and out-of-pocket expenditure.

On the contrary, expansion of private expenditure implies increase in the dependency on private health care facilities. As the costs of health care services are higher in the private sector than the public sector, out-of-pocket expenditure will automatically be increased. Some times it is argued that health insurance can decrease out-of-pocket expenditure. But if insurance is considered, then out-of-pocket expenditure will be consisted of the costs of different inpatient and outpatient services, drug prices and the insurance premiums (it is also the out-of-pocket expenditure by definition) paid by the individuals. So, if insurance is implemented then also there will be increase in out-of pocket expenditure. Again, there are some conditionalities in all types of insurance agreements such as co-payment, deductibles etc. These are actually the portion of total health expenditure paid by the individuals and are out-of-pocket expenditure by nature. So, in spite of being a policy insurance holder individuals have to pay a substantial amount of health expenditure in terms of premiums, co-payments, deductibles etc. Ultimately, all of these push up the out-of-pocket expenditure. So it is plausible that there will be a significant increase in out-of-pocket expenditure with the increase in the private health expenditure.

For developing countries the absolute values of the coefficient are higher and these decrease and increase of out-of-pocket expenditures for public and private expenditures are 0.17% and 0.91% respectively that is observed from the Model: II.

Estimated Equation in Model: II

$$(\text{OOP Exp}) = 0.14328 - 0.1733 [\ln(\text{Pub GDP})] + 0.9149 [\ln(\text{Pvt GDP})] \\ - 0.0419 [\ln(\text{PC GDP})] + 0.0316 [\ln(\text{PC H Exp})]$$

So, from the above models it is clear that out-of-pocket expenditure is increased with increasing private health expenditure irrespective of countries either it is developed or underdeveloped. Results show that for Model: I & II, 1% increase in the private expenditure out-of-pocket expenditure increases by 0.87% and 0.91% respectively. Therefore, larger proportion of private health expenditure is spent as the out-of-pocket expenditure irrespective of development status of the countries.

But this effect of private health expenditure is slightly stronger in the developing countries. This is perhaps not surprising since the public health system is not widespread across all regions within the developing countries and the role of health insurance is extremely limited in almost all developing countries. All the health expenditures come directly from the individuals for the inadequate health care provision by the government. There is a common scenario in almost all the developing countries that the development in different sectors is mainly urban biased. All the good health facilities are centered around the urban areas. Rural areas are neglected in many ways. Government provided good health facilities are concentrated in urban areas. On the other hand large number of people lives in rural areas in the developing countries. To the rural people, opportunity costs of accessing the health facilities of urban areas are higher for the poor infrastructural facilities (like transports etc). So it is advantageous to the rural people to access the local privately provided health facilities. Again in the rural areas most of the poor people have no insurance at all. Poor countries and poor people that most need protection from financial catastrophe are the least protected by any form of prepayment or risk-sharing (Musgrove, 2002). Therefore people have to take help from the private medical facilities with higher costs which are out-of-pocket expenditure in nature. These may be the plausible explanation of the higher out-of-pocket expenditures in the developing countries.

In a cross sectional study done by Musgrove (2002), out-of-pocket expense as a percentage of total health expenditure was regressed on income which shows negative relationship between these two variables. This study further showed that share of public health expenditure as a percentage of total health expenditure rises with income across the countries. Public financing on health increases faster, as a share of GDP. Health takes an increasing share of total public expenditure as income rises, from 5–6% to around 10%. This confirms that countries with lower level of income will have higher level of out of pocket of expenditure. At low incomes, out-of-pocket spending is high on average and varies from 20–80% of the total; at high incomes that share drops sharply and the variation narrows.

Therefore if public expenditure on health is cut by the government then direct burden of health expenditure will increase and the most vulnerable section of the population, who have very low incomes and have not the capability of buying health care or health insurance and those who are far from the urban areas, will suffer more. This phenomenon is stronger in developing countries. So, the attempt to build a system with a deliberate balance of finance from public sources and private out-of-pocket payments is necessary to mitigate the problem.

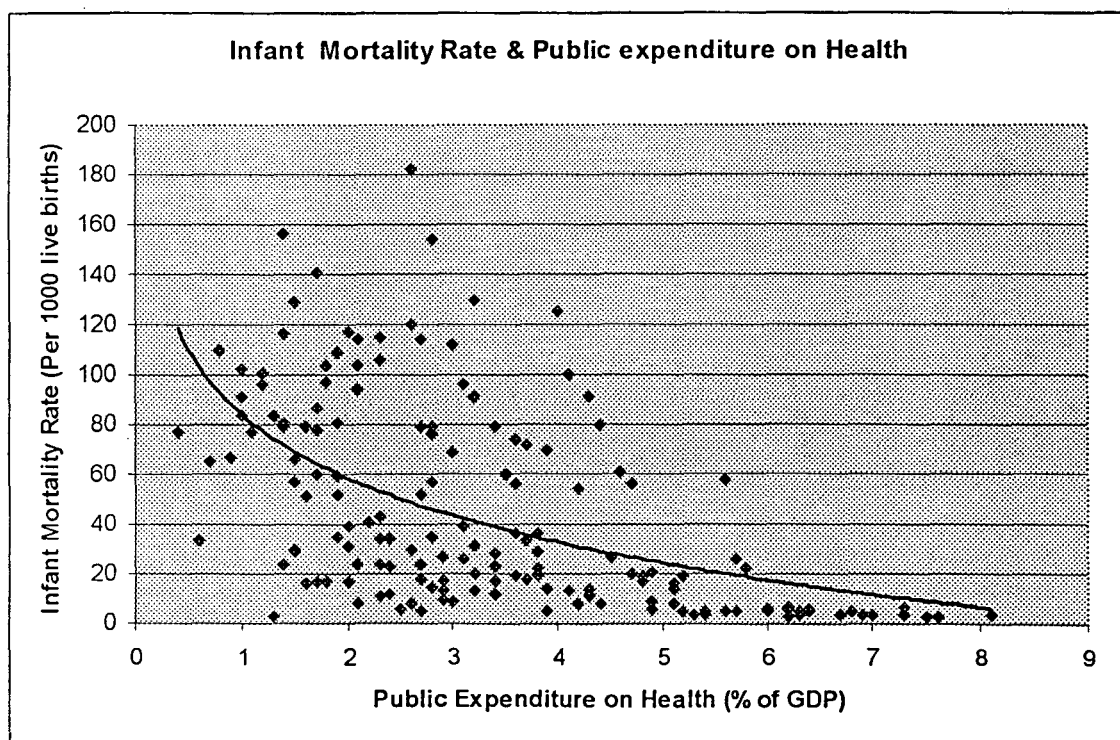
III.4: Relationship between Health Spending & Health Outcomes across Countries:

III.4.1: Graphical Presentation of Health Expenditures and some Health Indicators:

It is evident from the **Table: 3.1** that like the variations in health expenditures there is a wide disparity in health status among the countries. The countries that spend little on health also have poorer health conditions which are indicated by lower life expectancy or higher infant mortality rates. On the other hand higher spending countries have good health indicators. But there are evidences that some low spending countries also have achieved better health indicators although these are only the exception of the general tendency. In these cases the efficient mobilization of the resources and better management might be the plausible explanation. Though health spending can affect health conditions, it is important to note that the efficiency with which countries are able

to transform their spending into better health outcomes varies significantly. To observe the exact impact of different types of expenditure (on the basis of source of finance) on health status, total health expenditure data should be taken in segregated forms and relation between health expenditure and health status should be examined. Now one quick way of determining the relationship between health status and health expenditure is to graph them against each other. If the total health expenditure is segregated as the sum total of public expenditure and private expenditure as percentage of GDP and life expectancy at birth (in years) and infant mortality rate (at 1000 live births) are taken as health indicators then the relationship can be represented as follows¹⁰.

Chart: 3.1



In the **Chart: 3.1 & Chart: 3.2**, the relationship between health indicators (life expectancy and infant mortality rate) and public expenditure on health has been represented graphically. Apparently it can be said from the graphs that infant mortality rate and public expenditure has a negative non-linear relation and life expectancy and the

¹⁰ Human Development Report, 2003

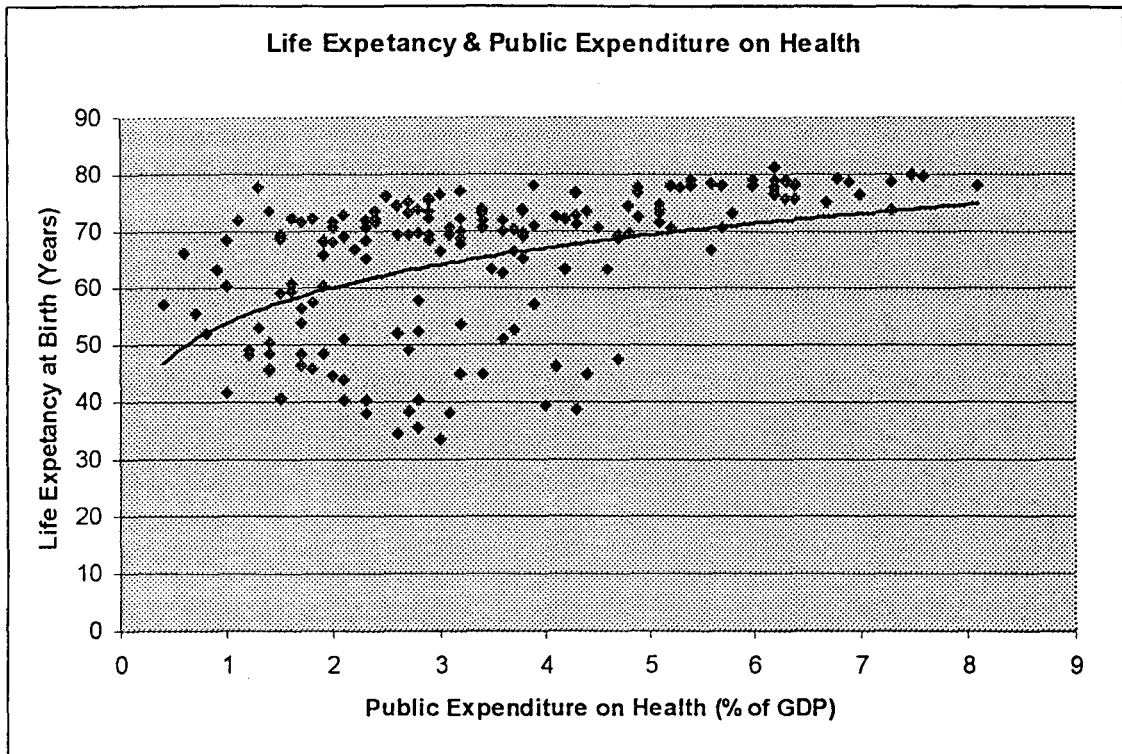
public expenditure has a positive non-linear relation. It can also be confirmed by the correlation coefficients which are - 0.54 and 0.5 between IMR and public expenditure and between life expectancy and public expenditure respectively. From the graphs it is evident that some countries have achieved a good health status using fewer resources. But some countries have failed to achieve the improved health status even mobilizing higher amount of resources from the respective governments. There may be many causes behind this. Firstly it can be argued that the first set of countries has used their resources efficiently but the second set could not. So there is a huge scope for the second set of countries to increase the efficiency in using the resources. Due to political instability, corruption, civil wars etc. some countries may not achieve the targeted level of health status in spite of mobilizing adequate resources to the health sector from the government.

Geographical locations also have great influence on health status. In chart: 1 some countries show very high level of child mortality although around 3% to 4% of GDP are mobilized through government. Most of these countries are either African or Asian and a few countries from Latin America. The African and Asian countries are tropical and sub-tropical countries which are more prone to disease only for their geographical location. Here different types of epidemics and diseases always exist. This causes the high child mortality. In African countries HIV/AIDS, which also cause low life expectancy, is another reason of high child mortality.

Chart: 3.2 show that in spite of spending around 3% to 4.5% of GDP only from the government source, life expectancy is very low for some countries. These are mainly the African countries where the HIV/AIDS have taken an epidemic form.

So, despite some exceptions it is plausible to conclude that for improving the overall health status of a country government funding for health is an indispensable instrument.

Chart: 3.2



The **Charts: 3.3 & 3.4** show that there is no general trend between health indicators and private expenditure on health. The correlation coefficients between IMR and private expenditure and between life expectancy and private expenditure are 0.0006 and 0.0015 (calculated from the dataset obtained from the WHR, 2003) respectively which confirm that the private expenditure has very little influence on health indicators. This is mainly because of the reason that behind the private provision of health care, profit is the main motive and there is no social motive. For this reason the private health provision is concentrated in only some particular pockets of areas where the people are rich enough to purchase the private health care. So by the private health care only a section of people, who can afford this, are benefited. So when the whole population of a country is concerned private sector has little influence to improve the health status. This may be the plausible explanation that is why the relationship between health status and private expenditure don't follow any general trend.

Chart: 3.3

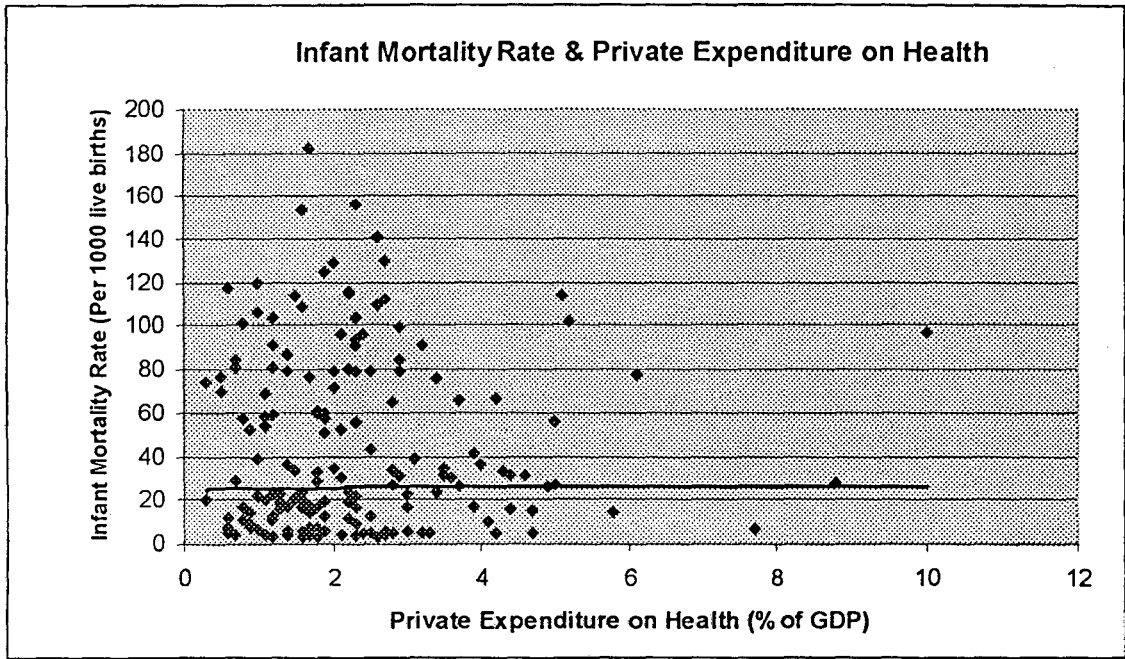
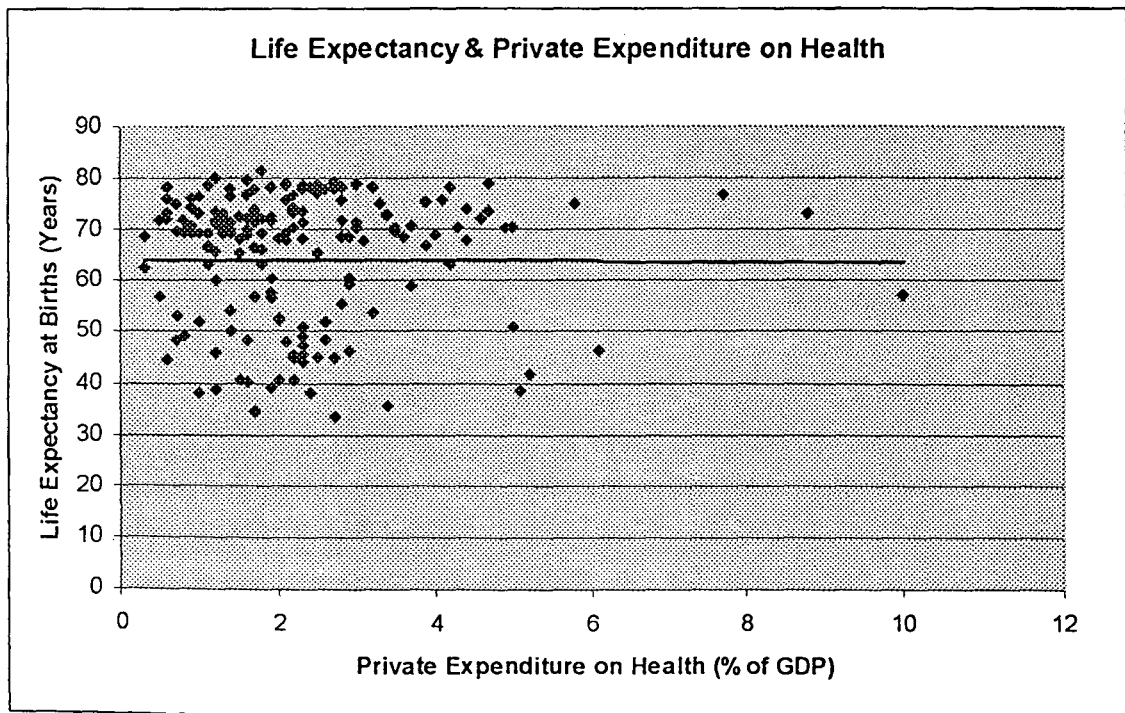


Chart: 3.4



Therefore from the **Charts: 3.1, 3.2, 3.3 & 3.4**, it may be concluded that for improvement of the countries overall health status, adequate amount of public expenditure is necessary. Private expenditure has little influence on overall health status; at least cross country data suggests these conclusions. In the above analysis health expenditure has been taken in percentage of GDP terms which is a too aggregate level data. But to get the exact magnitude of the effect of expenditure on health more segregated data should be taken and effect of some other variables also be examined simultaneously with regression analysis. Because, in terms of per capita health expenditure there may be huge discrepancies among some countries which spent same amount of health expenditure in percentage of GDP terms. Therefore, per capita health expenditure which is widely accepted as a good health expenditure indicator and can be divided into public per capita health expenditure and private per capita health expenditure can be used in the analysis. Again in the following analysis IMR will be taken as the health indicator because data on IMR is very much reliable and the factors which affect IMR also readily available. The graphical relationship between IMR and per capita public expenditure on health and per capita private expenditure on health are as follows.

Chart: 3.5

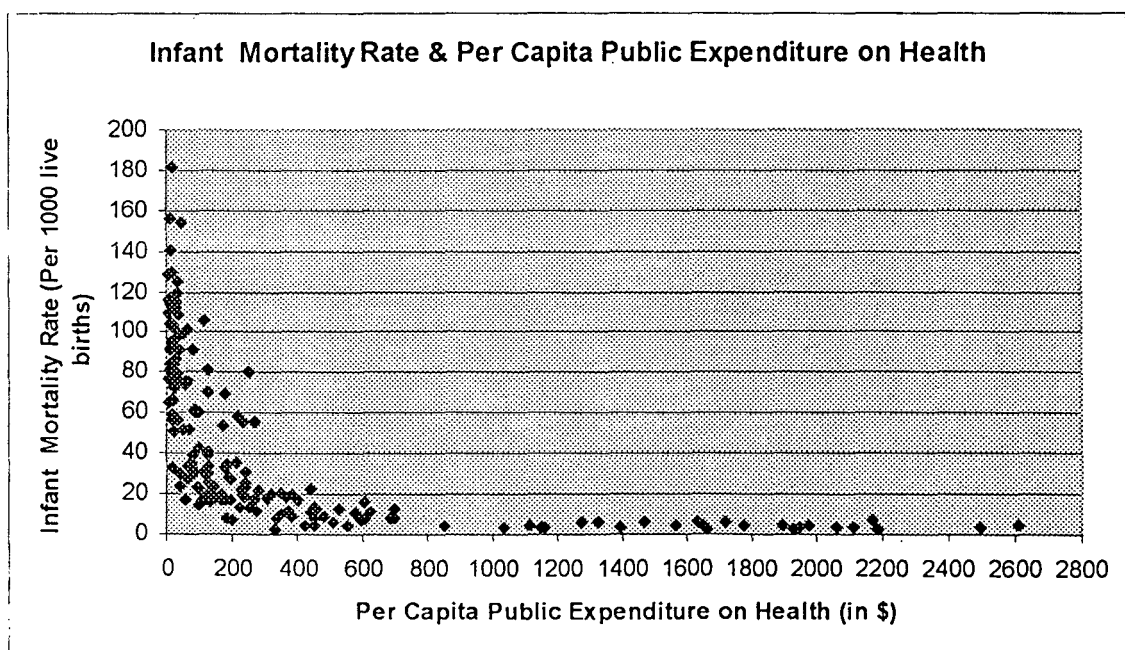


Chart: 3.6

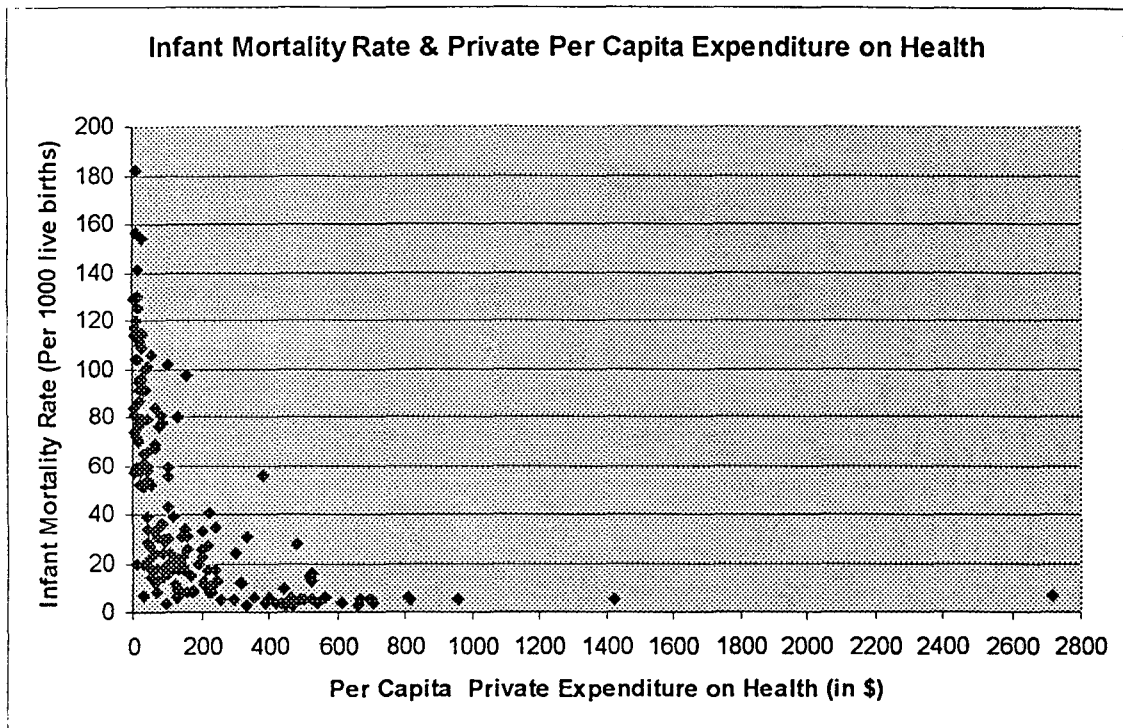


Chart: 3.5 represent the relationship between per capita public expenditure on health and infant mortality rate. The relationship clearly non-linear and the trend follow the asymptotic path. It implies that to keep the IMR below certain level some particular level of public expenditure is needed. Apparently it is seemed that the **Chart: 3.6** show the similar type of trend. But careful observation reveals that in the **Chart: 3.6**, the points are clustered in a particular area while in the previous chart the points are more arranged in a particular trend. Here IMR and per capita private health expenditure have no particular relationship which can be demonstrated by the following regression analysis also.

III. 4.2: Regression Data & Methodology:

The dataset of 2001, which has been used here, has been taken for World Health Report, 2003 and Human Development Report, 2003. In the following model, infant

mortality rate per 1000 live births is dependent variable. The independent variables are per capita government expenditure on health in PPP US \$, per capita private expenditure on health in PPP US \$, number of physicians per 100000 population, births attended by skilled health personnel, one-year-olds fully immunized against measles and population. The log values of all the variables are taken in the regression to mitigate the wide disparity of the variables among the countries. Variables in this model are defined as-

[log (infant mortality rate per 1000 live births)] :	(lnimr)
[log (per capita government expenditure on health, PPP US \$)]:	(lngvtpcexp)
[log (per capita private expenditure on health, PPP US \$)]:	(lnpvtpcexp)
[log (per capita gdp, PPP US \$)]:	(lnpcgdp)
[log (number of physicians per 100000 population)]:	(lnphys)
[log (births attended by skilled health personnel, %)]:	(lnbashp)
[log (adult literacy rate, %)]:	(lnlit)
[log (one-year-olds fully immunized against measles, %)]:	(lnimunz)

III.4.3: Regression Results:

Table: 3.5: Correlation Coefficients between the variables in Model: III

	lnimr	Ln gvtpcexp	Ln pvtpcexp	Ln pcgdp	Ln phys	Ln bashp	lnlit	Ln imunz
lnimr	1.00							
ln gvtpcexp	-0.89	1.00						
ln pvtpcexp	-0.80	0.85	1.00					
lnpcgdp	-0.89	0.94	0.87	1.00				
lnphys	-0.76	0.74	0.73	0.73	1.00			
lnbashp	-0.65	0.69	0.62	0.67	0.71	1.00		
lnlit	-0.65	0.65	0.61	0.62	0.74	0.74	1.00	
lnimunz	-0.55	0.55	0.50	0.45	0.58	0.54	0.56	1.00

Here every correlation coefficient is significant at 1% level of significance.

Model III

$$(\ln imr)_i = \alpha + \beta_1 (\ln gvtpcexp)_i + \beta_2 (\ln pvtpcexp)_i + \beta_3 [\ln(\ln pcgdp)]_i + \beta_4 [\ln(\ln phs)]_i + \beta_5 [\ln(\ln bashp)]_i + \beta_6 [\ln(\ln lit)]_i + \beta_7 [\ln(\ln imunz)]_i + \epsilon_i$$

Here i denotes the countries and ϵ is the error term.

Table: 3.6: Results of Model III.

Dependent Variable: $[\ln(\text{Infant Mortality Rate per 1000 live births})]; (\ln imr)$

Independent Variables	Coefficients (β_i)	t value
log (per capita government expenditure on health, PPP US \$); ($\ln gvtpcexp$)	- 0.2287*	-3.23
log (per capita private expenditure on health, PPP US \$); ($\ln pvtpcexp$)	0.0416	0.73
log (per capita gdp, PPP US \$); ($\ln pcgdp$)	- 0.3470*	- 4.88
log (number of physicians per 100000 population); ($\ln phs$)	- 0.1191*	-2.89
log (births attended by skilled health personnel, %); ($\ln bashp$)	0.1332	1.17
log (adult literacy rate, %); ($\ln lit$)	- 0.1274	- 0.71
log (one-year-olds fully immunized against measles, %); ($\ln imunz$)	- 0.3689**	- 2.20

No. of Observations 170; R-Square = 0.8451; Prob > F = 0.0000.

* Significant at 1% level of significance. ** Significant at 5% level of significance.

Estimated Equation in Model: III

$$(\ln imr) = 8.9058 - 0.2287 (\ln gvtpcexp) + 0.0416 (\ln pvtpcexp) - 0.3470 [\ln(\ln pcgdp)] - 0.1191 [\ln(\ln phs)] + 0.1332 [\ln(\ln bashp)] - 0.1274 [\ln(\ln lit)] - 0.3689 [\ln(\ln imunz)]$$

Thus per capita government expenditure on health, per capita GDP, number of physicians affects IMR at 1 % level of significance; allowing for 5% level of significance reveals the effect on IMR of immunization. Coefficient of per capita private expenditure is not significant. Results show that for 1% increase in per capita government expenditure

IMR decrease by 0.22% and this result is significant. Again the 84.5% variation in IMR has been explained in this model.

As this study is a across country, cross section study, we test the 'hetroscedasticity problem' in our model for efficient estimator. Breusch-Pagan test for heteroscedasticity gives the chi2 (1) value as 0.62. That means the test do not reject the null hypothesis (in favor of 'homoscedasticity') at 5 % level of significance. So we find there is no need for correction, due to different variation of error terms in the model.

So, if public and private expenditures are considered then these results also support that public expenditure is essential for improvement of the health status of a country. But there is no such support for the effect of private expenditure on health.

III. 5: Conclusion:

(I) For the betterment of the health status of the whole population adequate amount of public resources have to be mobilized. For the health sector public provision of health care plays a more effective role than private provision from the social point of view when overall health status is considered. Across the globe there are number of evidences where public provision of health cares are tremendously successful but without government support successful private provision of health care is rare.

(II) If public expenditure in the health is low, public health care facilities will not be adequate to serve all the people. Then there will be higher possibility to the private health care system to flourish because of the higher demand of health care and people will avail the private health care facilities. As a result direct burden of health expenditure on individuals will increase as the larger portion of total private expenditure is spent as the out-of-pocket expenditure which has been established from the regression models. This burden may impoverish especially the most vulnerable section of the population.

(III) Another important conclusion can be drawn from the Model: II that the developing countries (where social security system is very weak, health insurance is very

limited) government provision of health care is necessary. Because it will reduce the direct burden of health care. By definition, social security on health is the premiums paid by employees and employers for compulsory schemes of medical care and medical goods for a sizeable group of population. But this scope is very limited in the developing countries as larger share of the total workforce are employed in the unorganized sectors. “The poor could afford meaningful insurance coverage only with public subsidy” (Musgrove, 2002).

Chapter IV

Individual Health Care Burden in India

IV.1: Introduction:

The burden on an individual of health care in a country may be partly assessed through the extent to which households are protected from unforeseen expenditures on health care; the protection is mainly from the direct payments (out-of-pocket expenditure) that is the health expenditure made for utilization of health care services and purchase of drugs. Health care expenditures, which are largely unpredictable in nature, take a significant share of total household expenditure. When this share crosses certain threshold limit (it varies from country to country) then the level of health expenditure is called catastrophic; and then household consumption is disrupted and ultimately this effect (known as the catastrophic impact of health care) leads to impoverishment of the households. It has been observed in several studies that countries with a higher share of out-of-pocket expenditures are more likely to have a higher proportion of households facing catastrophic expenditures (Xu, et al. 2003). India has established itself as the most privatized economy in terms of total private health expenditure as percentage of total health expenditure of the country and out-of-pocket expenditures in India are highest in the world. Another dismal situation is that forty percent of hospitalized people in India are forced to borrow money or sell assets to cover expenses¹¹. Over 3.25 crores of Indians are pushed below the poverty line every year because of the catastrophic effect of out-of-pocket spending on health care¹². In spite of this state of affairs, the government spending in the health sector shows a declining trend over the years as a commitment to the Structural Adjustment Policies proposed by the World Bank (WB) and International Monetary Fund (IMF). On the other hand, an initiative in National Health Policy 2002 to encourage private initiatives to secondary and tertiary health care (which is also propounded by WB) gives the further impetus to the growing private health care sector. In the previous chapter, it has been established that out-of-pocket expenditure decreases with the increasing public expenditure on health and increases with the growing private expenditure on health. On the basis of the above, in the subsequent sections, we would like to focus on government expenditures on health in India, its effects on health care sector and household expenditures on health.

¹¹ N S S O, Department of Statistics, GOI. 42nd and 52nd Round.

¹² Garg & Karan, 2004.

During the last two decades, both in the developed and developing countries, the inability of governments to identify adequate financial resources, as increasing cost of health care creates financial pressure on government budgets, has made health care financing an important policy concern. On the basis of the policy prescriptions advocated by the World Bank (World Development Report, 1993), a number of developing countries cut the expenditures on health sector. As a result, welfarism has suffered a worldwide setback with investment in the social sector, especially in health. With the cut back on welfare expenditure, the issue of mobilizing alternate sources of finance for health care has become extremely important. But before shifting to any other way of financing, it is very important to find out whether there is any way to finance a substantial portion of health care by government. This is because of the government's crucial role for improving the health status of a country is well documented theoretically and amply supported by the empirical literature and as we have been in Chapter III. Now before discussing the health care policy analysis in India it will be better to give an overall picture of the health sector in India.

IV.2: Achievements in Health Sector in India after Independence:

In the post independence era, India has recorded some noteworthy successes in health sector over time. Some diseases have been eradicated from the country; polio is on the verge of being eradicated and some other diseases are expected to be eliminated in the foreseeable future. There has been a substantial drop in the total fertility rate and infant mortality rate. The successes of the initiatives taken in the health field are reflected in the progressive improvement of many demographic, epidemiological and infrastructural indicators which are shown in the tables below.

Table: 4.1 Demographic Indicators in different periods.

Demographic Indicators	1951	1981	2002
Life Expectancy (in years)	36.7	54	63.7
Crude Birth Rate (per 1000)	40.8	33.9	25.0
Crude Death Rate (per 1000)	25	12.5	8.1
Infant Mortality Rate (per 1000 live births)	146	110	67

Source: Health Information Statistics, GOI. & HDR, 2004.

Table: 4.2 Epidemiological Indicators in different periods.

Epidemiological Indicators	1951	1981	2000
Malaria (cases in million)	75	2.7	2.2
Leprosy cases per 10000 population	38.1	57.3	3.74
Small Pox (No. of cases)	> 44887	Eradicated	Eradicated
Guinea Worm (No. of cases)	-	> 39792	Eradicated
Polio	-	29709	265

Source: Health Information Statistics, GOI.

Table: 4.3 Infrastructural Indicators*

Infrastructural Indicators	1951	1981	2001
SC/PHC/CHC	725 (0.02)	57363 (8.39)	163196 (15.89)
Beds (Pvt. & Public)	117198 (32.46)	569495 (83.34)	914543 (89.04)
Doctors (Allopathy)	61800 (17)	397803 (47)	575137(56)
Nursing Personnel	18054 (5)	143887 (21)	805827 (78.46)

Source: Health Information of India; SC: Sub Centre, PHC: Primary Health Centre, CHC: Community Health Centre. * Numbers in the parenthesis indicate the respective indicator for per lakh population.

From the data presented above, it is clear that there has been a significant improvement in all the indicators compared to the early independence era. There is an enormous increase in life expectancy from 36.7 years in 1951 to 63.7 years in 2002. Infant mortality has declined by more than two-fold during the same period. There are

significant improvements in some other demographic indicators and some epidemiological indicators. Compared to the early periods of independence, there are some increases in the number of health centers, hospitals, doctors, nursing personnel etc. which has been given in the table: 4.3.

Despite these improvements in mortality and morbidity levels or improvements in epidemiological and infrastructural indicators, it is worrisome that infant and child mortality takes the lives of 22 lakhs children every year¹³ and there have been very little improvement in recent years. More serious is the fact that the rate of decline in infant mortality, which was significant in the 1970s and 80s, has slowed down in the 1990s¹⁴. Around 130,000 mothers die during childbirth every year. Around 6 lakhs children die each year from an ordinary illness like diarrhoea. While diarrhoea itself could be largely prevented by universal provision of safe drinking water and sanitary conditions, these deaths can be prevented by timely administration of oral rehydration solution, which is presently administered in only 27% of cases¹⁵.

The National Health Policy, 1983 target for 2000 was to reduce maternal mortality rate to less than 200 per 100,000 live births. However, 407 mothers die due to pregnancy related causes, for every 100,000 live births even today. In fact, as per the National Family Health Survey surveys, in the last decade, maternal mortality rate has increased from 424 maternal deaths per 100,000 live births to 540 maternal deaths per 100,000 live births.

India is experiencing a resurgence of various communicable diseases including malaria, encephalitis, kala-azar, Dengue and leptospirosis. The number of cases of malaria has remained at a high level of around 2 million cases annually since the mid eighties. By the year 2001, the worrying fact has emerged that nearly half of the cases are of falciparum malaria, which can cause the deadly cerebral malaria. The outbreak of dengue in India in 1996-97, saw 16,517 cases and claimed 545 lives. Meningitis outbreak

¹³ SRS Bulletin. Government of India. 1998.

¹⁴ Planning Commission, Government of India. Tenth Five Year Plan 2002-2007. Volume II.

¹⁵ National Family Health Survey II -1998

in Delhi recent past took several lives. We may argue that weakening public health systems have contributed to this resurgence.

In India the mortality and morbidity are still unacceptably high compared to the developed and even some developing countries, which have been presented in the Table: 2.1 in the previous chapter. In India infant mortality rate per 1000 live births and life expectancy at birth are 70 and 63.9 respectively in 2001 while in Sri Lanka these figures are 16 & 72.6 and China these are 31 & 71 respectively although there is a little difference in per capita income among these countries. In China and Sri Lanka maternal mortality rates are 55 and 90 per 100000 live births respectively while in India this figure is much higher at 540 per 100000 live births. There exist a number of such evidences where India is far behind in terms of health achievements comparing with some countries those have almost similar per capita income like India. These unsatisfactory health indices are, in turn, an indication of the limited success of the public health system, which will be confirmed in the subsequent sections.

IV.3: Achievements in Health from the Perspective of Equity:

The wide disparities in public health facilities and health standards in different parts of the country are not reflected through the national averages of the health indices. In the period when centralized planning was accepted as a key instrument of development in the country, the attainment of an equitable regional distribution was considered one of its major objectives. Despite this conscious focus in the development process, there are wide variations in health care facilities in rural and urban areas. The ratio of hospital beds to population in rural areas is fifteen times lower than that for urban areas. The ratio of doctors to population in rural areas is almost six times lower than the availability of doctors for the urban population. Per person, government spending on public health is seven times lower in rural areas, compared to government health spending for urban areas¹⁶. This wide disparity in the health care facilities are reflected through the

¹⁶ Central Bureau of Health Intelligence, Directorate General of Health Services, Ministry of Health and Family Welfare. Health Information of India, 2000 & 2001.

attainments of health indices which are very uneven across the rural and urban and across states that can be observed from the table below.

The table 4.4 shows that there is a wide variation in health achievements between rural-urban divide. Similar pattern can be observed when the health status is compared across states. Infant mortality rate in Kerala was 10 in 2002 while in Orissa it was 87. Maternal mortality in Kerala was 87 while this figure was 498 for the case of Orissa in the year 2000. In Bihar and Uttar Pradesh maternal mortality rate is extremely high at 707 per 100000 live births.

Table: 4.4 Health attainments across regions.

	IMR (Per 1000 Live Births) (2002)	< 5 Years Mortality Per 1000 (NFHS II)	Percentages of children (< 3 years) underweighted (2000)	MMR (Per Lakh) (2000)
India	64	94.4	47	408
Rural	69	103.7	49.6	-
Urban	40	63.1	38.4	-
Better Performing States				
Kerala	10	18.8	27	87
Maharstra	45	58.1	50	135
Tamilnadu	44	63.3	37	79
Low Performing States				
Orissa	87	104.4	54	498
Bihar	61	105.1	54	707
Rajsthan	78	114.9	51	607
UP	80	122.5	52	707
MP	85	137.6	55	498

Source: NFSH II & Health Information Statistics, GOI; IMR: Infant Mortality Rate; MMR: Maternal Mortality Rate.

The statistics bring out the wide differences between the attainments of health goals in the better performing states as compared to the low performing states. Given a situation in which national averages in respect of most indices are themselves at unacceptably low levels, the wide inter-state disparity implies that, for vulnerable

sections of society in several states, access to public health services is nominal and health standards are grossly inadequate.

The infant mortality rate in the poorest 20% of the population is 2.5 times higher than that in the richest 20% of the population. In other words, an infant born in a poor family is two and half times more likely to die in infancy, than an infant in a better off family¹⁷.

A girl is 1.5 times more likely to die before reaching her fifth birthday, compared to a boy. The female to male ratios for children are rapidly declining, from 945 girls per 1000 boys in 1991, to just 927 girls per 1000 boys in 2001¹⁸. This decline highlights an alarming trend of discrimination against girl children, which starts well before birth (in the form of sex selective abortions), and continues into childhood and adolescence (in the form of worse treatment to girls)¹⁹.

Table: 4.5 Differentials in Health Status among Socio-Economic Groups

	IMR/ 1000	Under 5 Mortality/1000	Percentage of Children under-weighted
India	70	94.9	47
Different Socio-Economic Groups			
Scheduled Caste	83	119.3	53.5
Scheduled Tribes	84.2	126.6	55.9
Other Disadvantaged	76	103.1	47.3
Others	61.8	82.6	41.1

Source: National Family Health Survey II

In the National Health Policy – 1983, initiatives were taken to meet the needs of public health services by establishing more public health institutions at a decentralized level. But still a large gap in facilities persists. Access to, and benefits from, the public health system have been very uneven between the better endowed and the more vulnerable sections of the society. This particularly true for the women, children and

¹⁷ NFHS II -1998

¹⁸ Census of India 2001

¹⁹ NFHS II -1998

socially disadvantaged sections of the society. The statistics given in Table 4.5 highlight socio-economic inequity in the health sector.

The above table shows that there are significant differences in health attainments among different socio-economic groups. Besides for some groups health indicators are far below the national averages. So, Table: 4.4 & 4.5 show the presence of highly inequitable levels in health attainments across rural urban areas and across different states and also some significant differences across socio-economic groups.

IV.4: Low and Inequitable Health Attainment in India: Related Financing Aspects:

So comparing with the developed and some developing countries health attainments are not satisfactory in India. Further on equity ground (which is one of the major concern in the health sector), India has failed to achieve satisfactory results. There are a number of reasons behind this. We feel that two most important causes of low health attainment and the inequity in health attainment are **inadequate resource provision to the health sector by the government and the simultaneous growth of the private health care sector** which has led to further inequity in health sector. We seek to establish this by focusing on the financing of health care.

Health care financing in India is characterized by very low level of public expenditure as a percentage of GDP with very high share of private expenditure which is made up by a very high proportion of out-of-pocket expenditure with a lower share of health care payments through insurance. World Health Report (2003) shows that in 2001 public expenditure in health in India was only 0.9 percent of GDP while private expenditure was 4.3 percent of GDP. A larger share of this private expenditure is direct household expenditure on health (out-of-pocket expenditure) and a very small share comes from the different prepaid (insurance) plans. Not only is it the case that government expenditure in India is abysmally low, it has also been declining over the years, which is shown in the Table: 4.6 below.

Table: 4.6 Expenditures of Centre and State Governments on Health

Years	Percentage of Gross Domestic Product*
1993-94	1.25
1994-95	1.22
1995-96	1.02
1996-97	0.95
1997-98	1
1998-99	1.11
1999-00	0.9

*Source: Centre for Monitoring of Indian Economy, * At Current Market Prices.*

Government expenditure on medical and public health, presented in the table below, also hasn't increased in the different plan periods. In the First Plan, the allocation to the medical & public health was highest and after that it is continuously decreasing in the subsequent periods except during the Ninth Plan where it was marginally more. On the other hand, allocation to Family Welfare shows an increasing trend from First to Ninth Plan. From the expenditure figures it can be concluded that more importance was given to family welfare while medical & public health has been neglected.

Table: 4.7 Pattern of investment on Health & Family Welfare in different plan periods in Public Sector, Centre, States and Union Territories.

	Medical & Public Health (Percentage of total Plan Expenditure)	Family Welfare (Percentage of total Plan Expenditure)
First Plan	3.3	0.1
Second Plan	3.0	0.1
Third Plan	2.6	0.3
Fourth Plan	2.1	1.8
Fifth Plan	1.9	1.2
Sixth Plan	1.8	1.3
Seventh Plan	1.7	1.4
Eighth Plan	1.7	1.5
Ninth Plan (Outlays)	2.31	1.76

Source: Planning Commission.

In the Directive Principles of our Constitution, it has been mentioned that the provision of health care is primarily the responsibility of respective states. So it is important to observe the expenditure patterns of the states also. The table below and the corresponding graph reveal that there too a declining trend may be seen.

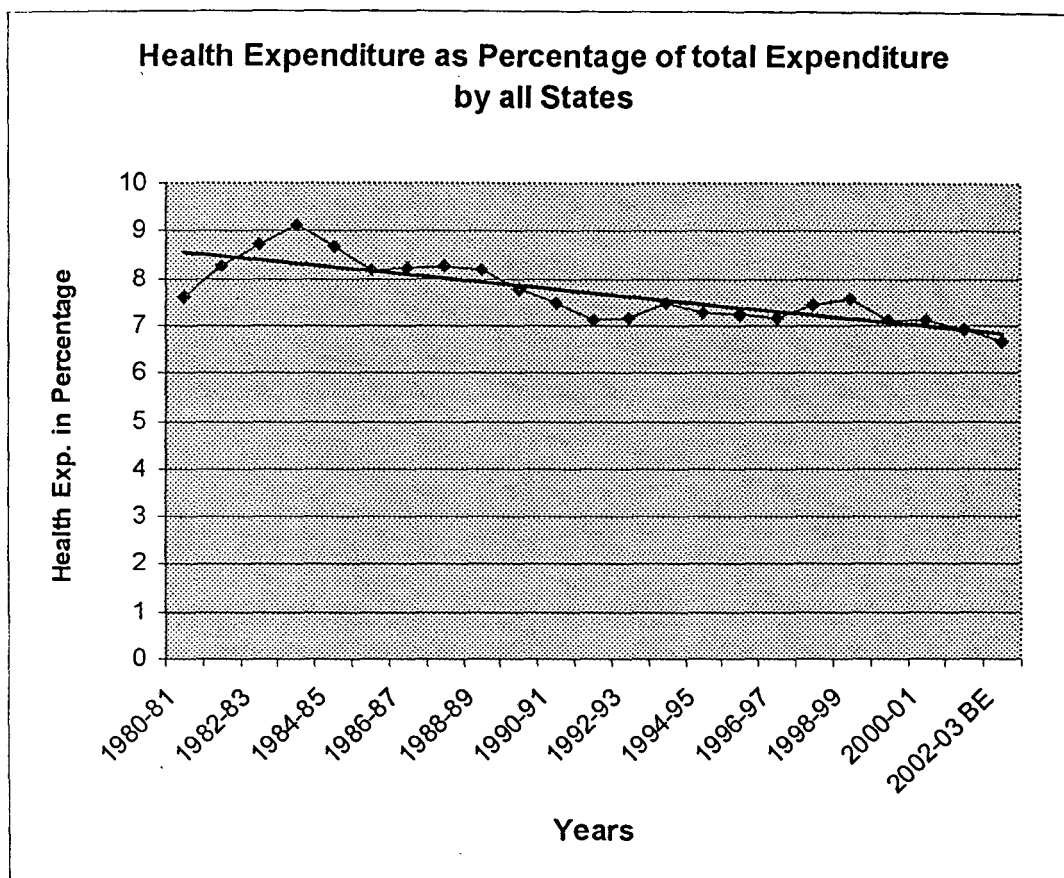
Table: 4.8 Total Expenditure by All States on Medical & Public Health (Rs. in Lakhs at Current Prices).

Year	Total Expenditure in (Rs. In Lakhs)	Total Health Expenditure (Rs. in Lakhs)	Health Expenditure as Percentage of total Expenditure
1980-81	2113644	160811	7.60
1981-82	2351843	194926	8.29
1982-83	2671721	232919	8.72
1983-84	3116714	284323	9.12
1984-85	3670113	318077	8.67
1985-86	4486659	367480	8.19
1986-87	5186134	426008	8.21
1987-88	5993419	496329	8.28
1988-89	6707806	548018	8.17
1989-90	7678122	596210	7.77
1990-91	9108805	681510	7.48
1991-92	10793045	767394	7.11
1992-93	11933465	856883	7.18
1993-94	13464855	1005161	7.47
1994-95	15877103	1159514	7.30
1995-96	17758371	1288375	7.26
1996-97	20276877.01	1452214.77	7.16
1997-98	22813478.22	1696400.44	7.44
1998-99	26636085.15	2022145	7.59
1999-00	31388880	2228773	7.10
2000-01	34719817	2467162	7.11
2001-02 RE	40157125	2780014	6.92
2002-03 BE	43093405	2873405	6.66

Source: Public Finance Statistics, RBI.

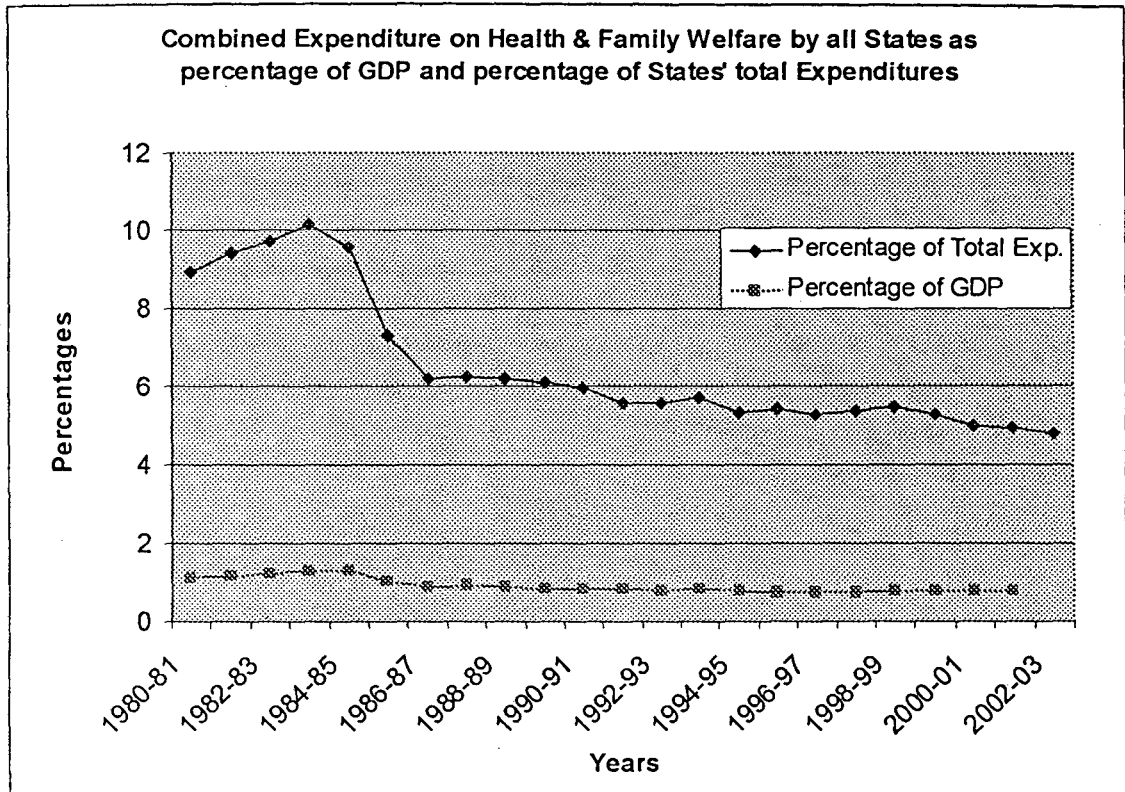
The graph shows an overall declining trend in states' expenditure on health though there are some fluctuations also. In the year 1983-84 the states' expenditure was highest at 9.12 percent of the total expenditure. Actually expenditure on public health started to decline in early '80s and in '90s this declining got impetus.

Chart: 4.1



If combined expenditures on health and family welfare by all states are considered, then there will also be a declining trend over the years, as shown in chart: 4.2. Total expenditure by all states on public health and family welfare has been declined both in terms of percentage of GDP and percentage of total expenditures by all states. Expenditures in terms GDP are almost stagnant over the periods. In 2001-02, it only 0.8 percent of GDP while in 1980-81 and 1982-83 these are 1.12 and 1.24 percent respectively. But in terms of share of states' total expenditures there is a huge reduction. In 2002-03, expenditure on health and family welfare is 4.77 of the total expenditure of all states while this figure was 8.93 and 10.13 in 1980-81 and 1983-84 respectively.

Chart: 4.2



The Bhore Committee suggested that government should be prepared to increase the money spent on health to at least 15%²⁰ of the total expenditure and this recommendation was well justified in the context of the situation in 1946 as well as in the present health scenario in India. The World Health Organization (WHO) standard for expenditure on public health is 5% of the GDP. So, comparing with both the Bhore Committee recommendation and WHO standard, it can be concluded from the expenditure scenario in India that government expenditure (both by central and state governments) on health never reached an adequate or satisfactory level.

The NDA Government has recently claimed that one of its signal achievements has been the allocation of 6% of GDP to health care. In reality, the government spent just

²⁰ At the time when the Bhore Committee Report was written, in the UK and USA the comparable figures were 20.4% and 13.8%.

0.9 % of the GDP on health care and the rest was spent by the people from their own resources. Thus only 17% of the total (public & private) health expenditure in this country is borne by the government — this makes the Indian public health system grossly inadequate and it is not surprising that it is unable to meet healthcare demands of its people. On the other hand it makes the health sector of India the most privatized in the world. Only five other countries in the world are worse off than India regarding public health spending (Burundi, Myanmar, Pakistan, Sudan, and Cambodia)²¹. The average spending today by Less Developed Countries is 2.8 % of GDP, but India presently spends only 0.9% of its GDP on public health, which is merely one-third of the less developed countries' average.

The effects of inadequate resource mobilization by government in health sector come from two directions. **Firstly**, inadequate financial support by the government makes it extremely difficult to provide universal health care by providing sufficient health care facilities across all regions. As a result, public health care facilities are concentrated in some particular areas and most of the times this concentration of health facilities are urban biased²². This leads to the inequity in health attainments across regions. **Secondly**, as the health sector is a capital intensive sector and there is the possibility of high returns, the limited public health facilities create the scope for the private health sector to flourish as the need for the health care is growing rapidly. This ultimately aggravates the persisting inequity in health. Besides this, the higher dependency on the private health sector might raise the direct expenditure burden on individuals. In a country where poverty²³ is very widespread, a poor individual may be affected by the catastrophic effect of out-of-pocket spending. In the subsequent sections this aspect will be elaborated upon.

It has been established in the previous chapter, that the direct health expenditure burden on individuals' increases with the increase in the private expenditure as the out-of-pocket expenditure moves in the same direction as private expenditure. For the poor

²¹ Source: World Health Report 2003.

²² NSS Data shows this.

²³ According to the NSSO (2000) 26.1% (1999-2000) people are below poverty line in India.

people, excess out-of-expenditure has a catastrophic effect. As income inequality is high in India, there are also high inequalities in consumption expenditure and health expenditure. An estimation in 1983-84 (by Giridhar et al, 1987) shows that the Gini coefficient for consumption expenditure was 0.3229, whereas it was much higher 0.4482 for health expenditure. The cause of this higher inequality in health expenditure, which creates inequity in health attainments, is mainly due to the very low level of government expenditure²⁴ on public health and the dominance of private health care provision and also the prevalence of high incidence of poverty.

In India, the share of private expenditure on health is already highest in the world. It is more perturbing that this private share is growing rapidly. According to the CSO estimates the private health care expenditures are as follows.

Table: 4.9 Private Expenditures in Health

Private Exp.	1993-94	1994-95	1995-96	1996-97	1997-98	2000-01	2002-03 (BE)
Rs. in Billion	195	279	329	373	459	892	1200
% of GDP	2.27	2.75	2.77	2.73	3.00	4.46	4.62

Source: CSO estimates on Consumption Expenditure 1985 series; BE = Budget Estimate

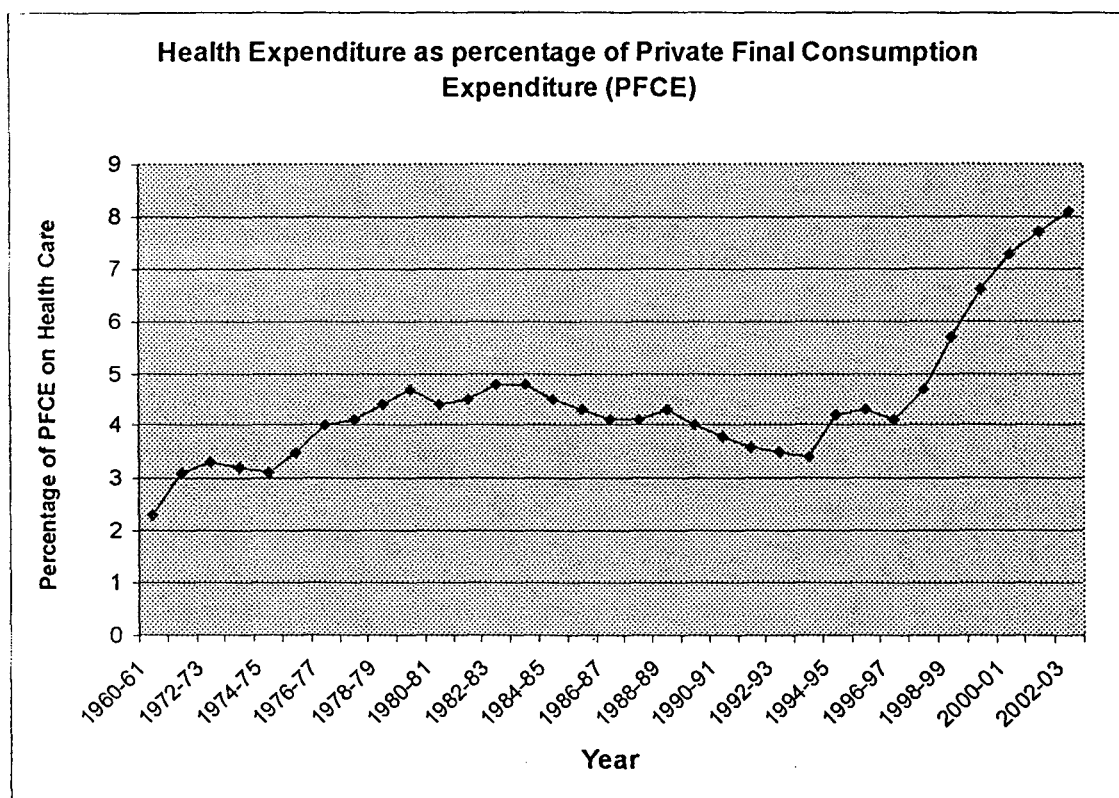
IV.5: Increasing Household Health Expenditures: Evidence from CSO and NSS Data:

It is reasonably certain that reliance on private provision of health care might create the higher inequity in the health care consumption, because of the prevailing higher inequity in the income distribution in our country. On the other hand, to meet the higher health cost, which is caused by the private provision of health care, the burden on the individual will also be increased. This can be established from the aggregate household consumption expenditure data of Central Statistical Organization (CSO) and the household consumption expenditure data of National Sample Survey Organization

²⁴ This is only 17% of the total health expenditure as we mentioned earlier.

(NSSO). Although there are some methodological differences, both the data show that private consumption expenditure of health care, as the percentage of total private consumption expenditure, has increased significantly. This increase is more significant in the period where private share of health expenditure increased enormously. From the following graph, which is plotted on the basis of CSO's private final consumption expenditure (PFCE)²⁵ data, it is evident that from 1993-94, the health expenditure measured as percentage of PFCE rose very steeply.

Chart: 4.3



Source: Central Statistical Organization

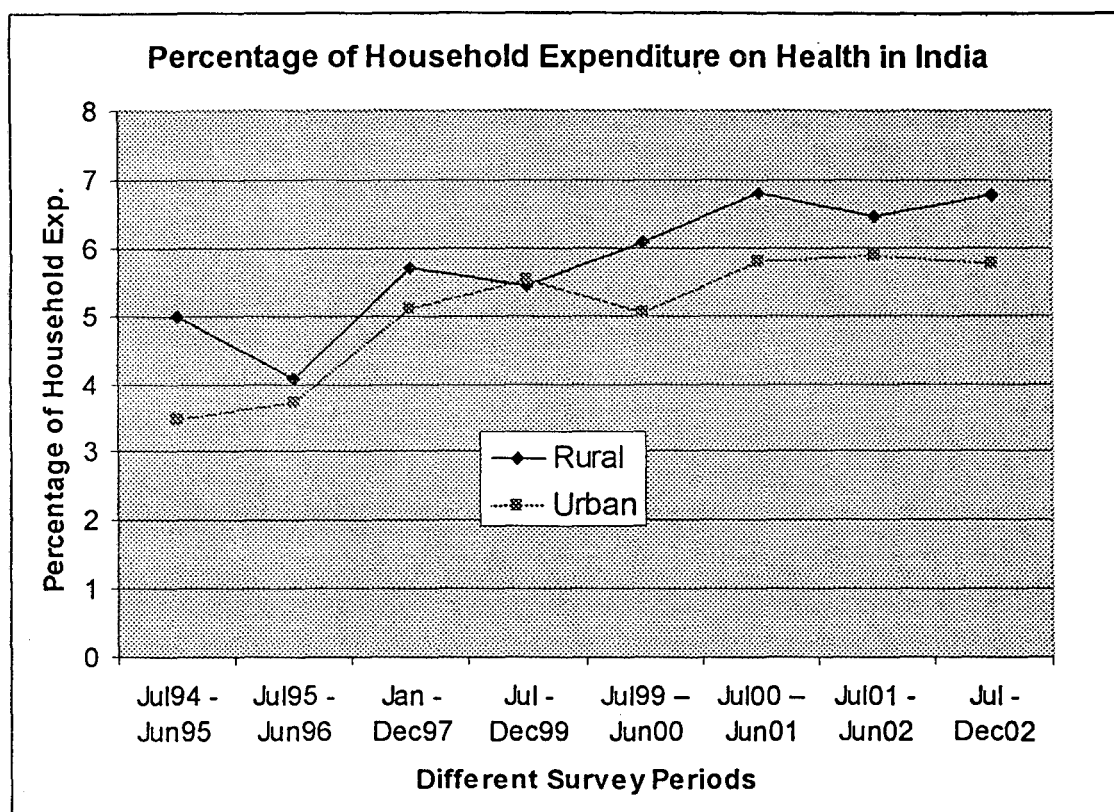
²⁵ Private Final Consumption Expenditure (PFCE) is basically the aggregate of household consumption expenditures.

Table: 4.10 Percentage of Household Expenditure on Health in Rural & Urban India.

	Jul94 - Jun95	Jul95 - Jun96	Jan - Dec97	Jul - Dec99	Jul99 - Jun00	Jul00 - Jun01	Jul01 - Jun02	Jul - Dec02
Rural	4.98	4.07	5.71	5.46	6.09	6.81	6.45	6.76
Urban	3.46	3.73	5.11	5.52	5.06	5.78	5.88	5.77

Source: NSSO 51st to 58th Round.

Chart: 4.4



The NSSO data also shows an increasing trend in the household health expenditure both in rural and urban areas. It has also been depicted in the Chart: 4.4 that the increases in the health expenditure in rural areas are higher than that of the urban areas. In between 51st (Jul94 -Jun95) to 58th (Jul -Dec02) Round, the health expenditure as percentage of total household consumption expenditure increased from 4.98 to 6.76 in rural areas. In urban areas this increase is from 3.46 to 5.77 during the same period.

IV.6: Sources of Outpatient and Inpatient Care:

The above mentioned phenomenon can be explained through the sources of outpatient and inpatient health care in rural and urban areas. The NSSO 42nd (1986-87) and 52nd (1995-96) Round Survey data show that dependency on private health care sources has increased in this period both for the outpatient and inpatient care.

Table: 4.11: Public & Private Sector Use for Outpatient Care: All India (%).

Sources of Treatment	Rural		Urban	
	1986-87 (42 nd Round)	1995-96 (52 nd Round)	1986-87 (42 nd Round)	1995-96 (52 nd Round)
Public Hospitals	17.7	11.0	22.6	15.0
PHC/CHC	4.9	6.0	1.2	1.0
Public Dispensary	2.6	2.0	1.8	2.0
ESI Doctors, etc.	0.4	0.0	1.6	1.0
All Govt. Sources	25.6	19.0	27.2	19.0
Private Hospitals	15.2	12.0	16.2	16.0
Nursing Home	0.8	3.0	1.2	2.0
Charitable Institutions	0.4	0.0	0.8	1.0
Private Doctors	53.0	55.0	51.8	55.0
Others	5.2	10.0	2.9	7.0
All Non-Govt. Sources	74.5	80.0	72.9	81.0
Total	100(Approx.)	100(Approx.)	100(Approx.)	100

Source: NSS 42nd & 52nd Rounds.

For outpatient care, the coverage from all government sources, in rural areas has been decreased from 25.6% to 19% and for urban areas this decrease is from 27.2% to 19%; and the coverage from private sources increased by the matching amounts in the respective areas. Again, in the rural areas, inpatient health care from government sources declined from 59.7% to 45.2% that decline is more than the decline in outpatient care. In the urban areas this figure declined from 60.3 % to 43.1% which is more than for the rural areas. Conversely, the use of private sources increased for both the rural and urban areas.

Table: 4.12: Public & Private Sector Use for Inpatient Care: All India (%).

Sources of Treatment	Rural		Urban	
	1986-87 (42 nd Round)	1995-96 (52 nd Round)	1986-87 (42 nd Round)	1995-96 (52 nd Round)
Public Hospitals	55.4	39.9	59.5	41.8
PHC/CHC	4.3	4.8	0.8	0.9
Public Dispensary	0.0	0.5	0.0	0.4
ESI Doctors, etc.	0.0	0.0	0.0	0.0
All Govt. Sources	59.7	45.2	60.3	43.1
Private Hospitals	32.0	41.9	29.6	41.0
Nursing Home	4.9	8.0	7.0	11.1
Charitable Institutions	1.7	4.0	1.9	4.2
Private Doctors	0.0	0.0	0.0	0.0
Others	1.7	0.8	1.2	0.6
All Non-Govt. Sources	40.3	54.7	39.7	56.9
Total	100	100(Approx.)	100	100

Source: NSS 42nd & 52nd Rounds.

IV.7: Quality of Government Health Care Services:

This increase in the dependency on private health care sources is mainly due to the deteriorating quality of the public health services, which is caused by the dismally low allocation of resources by the government to the health sector. As a consequence, almost all the government source suffers from the lack of funds and the quality of public health services declined. The primary health centers (PHC), which were set up to serve the poorest and the marginalized people suffered a lot. As a result, at present only 38% of all PHCs have the critical staff. Only 31% have the critical supplies (defined as 60% of critical inputs), with only 3% of PHCs having 80% of all critical inputs. In spite of the high maternal mortality ratio, 8 out of every 10 PHCs have no Essential Obstetric Care drug kit. Only 34% PHCs offer delivery services, while only 3% offer medical termination of pregnancy. A person accessing a community health center would find no obstetrician in 7 out of 10 centers, and no pediatrician in 8 out of 10. Almost similar types of problems can also be faced in the government hospitals except a few. There is the consensus that most public hospitals are inherently patient unfriendly and hopelessly mismanaged. If this is the situation of the government health care services then it is more

reasonable that people irrespective of their economic conditions will be compelled to prefer the private health care sources. As the concentration of most of private and public health care facilities are urban biased, the rural people suffer more. So they are compelled to use the private health care sources if feasible.

Again the private health care sector in India is immensely unregulated. So there are no fixed fees for particular treatments in different private health sources. They always charge higher prices which make the treatment unaffordable to most of the people in the country. The price differentials between public and private health care are given in the following table.

IV.8: Average Costs on Inpatient and Outpatient Medical Care:

In the NSS survey, the 'Medical Expenses' include expenditure on items like medicines, bandage, plaster etc., fees paid for medical and paramedical services, charges for diagnostic tests, charges for operations and therapies, charges for ambulance, cost of oxygen and blood, etc. Besides these there are 'Other Expenses' relating to the treatment of ailments like transport costs (except ambulance charges), lodging charges of the patient and his/her escort(s) etc. Total medical expenditure is the sum total of 'medical expenses' and 'other expenses'. Table: 3.13 gives the estimates of average total expenditure incurred for an event of hospitalization in different types of establishment for rural and urban populations of the country as a whole.

Table: 4.13 Average Total Expenditure (Rs.) on Outpatient and Inpatient Medical Care: All India

	Rural		Urban	
	1986-87	1995-96	1986-87	1995-96
Outpatient Care				
Public	73	129	74	166
Private	77	186	80	200
Average	76	176	79	194
Inpatient Care				
Public	320	2080	385	2195
Private	733	4300	1206	5344
Average	597	3202	933	3921

Source: NSS 42nd & 52nd Rounds.

There is a significant cost differences between public and private health care sectors for both inpatient and outpatient services. So, increases in the dependency on private health care services have increased the household health care expenditures. This leads to the increase in the direct burden of health care on individuals. This increasing health care burden may more adversely affect particularly the poor people. In the immediate effect of this, the untreated ailments might be increased to avoid the higher expenditures.

IV.9: Untreated Ailments:

It has been observed both in the 42nd and 52nd Round NSS survey that both in rural and urban areas certain proportion of ailing²⁶ persons were not treated in the reference period. In each of the surveys, the percentage of ailing persons treated was found to be higher in urban areas than the rural areas. Form the **Table: 4.14** it has observed that certain percentage of ailing persons went untreated.

Table: 4.14 Percentage of ailing persons treated during Reference period (15 days) in India

Gender	52 nd Round (1995-96)	42 nd Round (1986-87)
Rural		
Male	84	83
Female	82	80
Total	83	82
Urban		
Male	91	90
Female	90	88
Total	91	89

Source: NSS 42nd & 52nd Rounds.

The data (in Table: 4.14) do not indicate any perceptible gender bias. Moreover, the results of the two rounds do not reveal any perceptible change over time in the percentage of ailing persons treated. But a very important result may be obtained from

²⁶In different NSS Rounds, ailments, i.e. illness or injury, are defined to be any deviation from the state of physical or mental well-being.

the survey data on the reason associated with no treatment, which has been presented in the following table.

Table: 4.15 Percentage distributions of untreated ailments by reason for no treatment from NSS 42nd & 52nd Rounds.

Reason for No-Treatments	Rural		Urban	
	1986-87	1995-96	1986-87	1995-96
No Medical Facility	3	9	0	1
No Faith in Medicine	2	4	2	5
Long Waiting	0	1	1	1
Financial Reasons	15	24	10	21
Illness not Serious	75	52	81	60
Other Reasons	5	10	6	12

Source: NSS 42nd & 52nd Rounds.

With proportion of untreated ailments remaining more or less unchanged, it can be said that, as compared to 1986-87, a larger proportion of ailments in 1995-96 went untreated because the cost of treatment was higher than the household could afford. It is alarming that both in the rural and urban areas this significant increase in untreated ailments due to financial reasons have increased during this periods. It gives an indication that health care is already beyond the reach of a large section of population who are dependent on the public health services.

In some countries in Africa, the retreat of the government from providing health care services, untreated ailments was increased so much that overall health status of those countries started to deteriorate. There was resurgence of some communicable diseases which were thought to be eradicated. This situation may happen also in India if the government does not take immediate measures to improve the access and quality of the public health services and to increase the scale of public health care provision. We may note that India has already experienced a resurgence of some communicable diseases and the increase in the infant mortality rate in 1998 in some major states compared to the previous two years.

IV.10: Increasing Drug Prices and its Effects on Out-of-pocket Expenditures:

One of the major causes behind the increasing out-of-pocket expenditures is the increasing drug prices because the larger portion of health care expenditures is used for buying essential drugs. A household level study across the states (Garg & Karan, 2004), shows that expenditure on medicines constitutes the single most important part of the total out-of-payments both in rural and urban areas. The Table: 4.16 shows that both in rural and urban areas, the largest share of the out-of-pocket expenditure is due to the costs of medicines and this is several times more than the other expenses.

Table: 4.16: Average Share of Out-of-Pocket Expenditures of total Household Consumption Expenditures on Inpatient Care, Outpatient Care and Medicines.

Consumption Expenditure Quintile	Average Share of Out-of-Pocket Expenditures					
	Rural			Urban		
	Inpatient	Outpatient	Drugs	Inpatient	Outpatient	Drugs
Poorest 20%	0.09	0.31	2.60	0.17	0.37	2.84
2 nd Poorest 20%	0.17	0.45	3.32	0.28	0.52	3.34
Middle	0.26	0.50	3.92	0.49	0.62	3.39
2 nd Richest 20%	0.42	0.65	4.47	0.54	0.70	3.36
Richest 20%	0.94	1.02	5.97	0.90	0.92	3.34
All Households	0.37	0.59	4.06	0.48	0.63	3.28

Source: Calculated from NSS data (Garg & Karan, 2004)²⁷

The situation has been aggravated by the deregulation of the pharmaceutical industry and lax price controls on drugs. We have an annual pharmaceutical production of about 260 billion rupees, and we export a large proportion of these drugs while 80% of our people do not have access to all the drugs they require. For liberalization of imports, there is a proliferation of brand names with over 70,000 brands of drugs marketed in India. Further, the 2002 Drug policy recommends that only 25 drugs will be kept under price control while in 1979, the number of essential drugs under price control was 343. The result has already been experienced; many drugs are being sold in Indian market at

²⁷ Garg & Karan (2004): Catastrophic and Poverty Impact of Out-of-Payment for Health Care in India: A State Level Analysis; Working Paper No. 23, Institute for Human Development, New Delhi.

200 to 500 percent profit margin, and essential drugs have become unaffordable for the majority of the Indian population.

IV.11: Conclusion:

It is thus seen that over the years, particularly in the last two decades, expenditure on public health from all government sources has shown a declining trend. Almost everywhere in the country, the quality of public health facilities has deteriorated enormously due to inadequate funds which is the prerequisite for all types of improvements. Rural primary health care centers have been affected the most. It is more important that PHCs are strengthened to remove the inequity in health attainments across the regions. On the other hand, private health care sector is flourishing precisely because of the lack of government support to the public health. It is matter of great concern that, the National Health Policy (2002) has declared that in the secondary and tertiary health care, more private initiatives would be welcomed. Encouragement of growth of private secondary and tertiary hospitals through tax waivers, reduced import duties, subsidized land etc. has led to a further expansion of the unregulated private medical sector. All of these factors lead to an increase in the dependency on private health care. As private expenditure rises, the out-of-pocket expenditures as well as the share of household health expenditure as percentage of total consumer expenditure is increasing both in rural and urban areas (CSO & NSSO Data). The unaffordable drug prices exacerbate the situation for the vulnerable section. For the poor this leads to a catastrophic effect. Those who have no capabilities to access the private health care, abstain from the use of health care. Non treated ailments are increasing for financial reasons both in rural urban areas, and all these claims are well supported from the NSSO data. The dominance of the private sector not only denies access to poorer sections of society, but also tilts the balance towards urban biased tertiary level health services where profitability is overriding equity. This surely is socially unjust.

Chapter V

Conclusion

Article 25 of the Universal Declaration of Human Rights unequivocally states that health care for preservation and promotion of health is one of the most basic human rights. So, if any individual is deprived of accessing the necessary health care services, it will be considered as violation of Human Rights. But in the real world this human right is violated almost everywhere. A very few number of countries has succeeded to provide almost universal health care provision to all the citizens. In every country one of the major concerns of the respective governments is - how to provide a larger number of people to access the benefits of health care.

As ethics and equity are the major guiding principles everywhere in the health sector, 'the issue to ensure health care for all' can't be neglected by any government. It can't be left totally on the individual himself or on some profit making private sector. But government itself also has some limitations and the financial problem is the main constraint. In these circumstances the government should implement different policies so as to all the people can get at least some basic level of health care utilizing the limited resources, and so that the health care burden on individuals is minimized. In India, in the problematic areas mentioned below should be paid attention.

At present in India, a large number of people are deprived of even some very basic level of health care. Miserable situation of public health care services in vast regions, especially in rural areas, indirectly forced the people to access the private health care services. But everyone is not capable to afford the costly private health care services. Also a large number of people are being trapped in the catastrophic health expenditure. In 1999-2000, from the official documents (NSS Data), it has been found that the total increase in the poverty headcount ratio because of the out-of-pocket payments is 3.24 percent of total population in the country. Considering the total population of the country as one billion in 1999-2000 approximately 32.5 million plunge into poverty every year because of health care payments²⁸. The impact of out-of-pocket payments on poverty headcount ratio is higher in rural areas than in the urban areas. Besides these many poor households are pushed down into acute poverty. In this way, a

²⁸ Garg & Karan (2004).

number of families who are well above the poverty line are also plunged into deep poverty.

In this situation immediate actions should be taken by the government to directly support those people. But instead, the government is actually retreating from the provision of health care; which is clear from the data which shows a decreasing financial support to health sector by the government. By this way government creates space for increasing the private sector further. In this situation another issue, financing health care through insurance, has been emerged.

Whatever financing mechanism is adopted, government's active role is necessary and policy should be directed to reduce the health care burden to the individuals. Higher public expenditures or the risk pooling mechanism (payment through insurance) have been identified as important financing mechanism to bring down the share of out-of-pocket expenditures. Despite high health care costs, if households are covered even partly by tax financed revenues or through insurance, they are less likely to face catastrophic impact. But compared to financing through insurance, public financing through tax financed resources is considered a better mechanism as the former generally address only the part of the health care which is related to curative care only. Also the overwhelming number of people might stay outside the coverage of private health insurance, which is already experienced in USA. These problem can be mitigated to some extent if the universal health insurance given by the government. But in this case also a large amount of resource is necessary like the direct provision of health care by the government. So compared to insurance financing, public financing is better as it has the potential of addressing comprehensive health care; preventive as well as curative. Also, success of a number of Scandinavian countries such as Sweden, Norway, Iceland and the experience of UK, Canada etc. in public health care system, has demonstrated that for better health care provision there is no alternative to the government. This notion can also be amply supported by the success of government provision of better health care in Sri Lanka, Chile, Malaysia, and Cuba etc. with very less or equal amount of resources than India²⁹,

²⁹ Here India's total expenditures both public and private have considered.

although the per capita income of these countries are almost similar. So to ensure health for all, government must play an effective role. The government can't avoid responsibility on this account.

Although there are some inherent inefficiency problems in the public health care provision, it has to be addressed in other innovative ways but not in lieu of the retreat of the government. In the case of India, immediately government should increase its financial support to the health sector to rebuild the health infrastructures. Health man power resources in India are not the problem. The problem is to utilize these resources through proper planning and policy and providing adequate funds to health sector. Success of proper policy & planning and financial support as well as the key role of the government to the health sector can be demonstrated by the tremendous improvements in health in Kerala. Punjab with a per capita income that is more than Kerala's level, reports an IMR of 52 deaths per 1000 live births, more than five times higher than Kerala's IMR of 10 per 1000 live births in 2002. Proper functioning of public health can also retard the growing private health sector which is responsible for huge out-of-pocket expenditures. In short, we have substantial health care resources, but because of the privatized, unregulated and inequitable nature of the health care system, it is unable to ensure good quality health care for a majority of citizens.

It has been shown that increasing drug prices are one of the major causes for increasing out-of-pocket expenditures; this problem should be addressed properly and very seriously. Because, many bulk drug manufacturing units have closed down due to liberalized import and dumping as a result of the implementation of the WTO agreement and autonomous economic liberalization policies. Due to reduction of customs duty and increase of excise duty, imported drugs will become cheaper while local drugs will become more expensive. This situation has also been aggravated by the Drug Policy, 2002 which lax the price control over a large number of essential drugs. This may have some serious concern as may encourage further increase in drug prices which leads to the financial pressure on both the government budget as well as on the individual.

Inefficiency in the route of wastage of resources is a common phenomenon in our country. Resources are wasted in several ways both in our country for the lack of unregulated and quality health care. For example, due to irrational prescribing, an average of 63 per cent of the money spent on prescriptions is a waste³⁰. This means that nearly two-thirds of the money that we spend on drugs may be for unnecessary or irrational drugs. So if this problem can be addressed properly, there may be drastic fall in the out-of-pocket expenditure as well as government recurring costs on health care provision. All States must have an essential drugs and consumables list and all the drugs and consumables on this list must be under price control. Government should invest a larger amount of resources in Research and Development of drugs to avoid the inevitable adverse effect of WTO implemented TRIPS Agreements.

Other initiatives to regulate the private health sector, to adopt minimum standards, accreditation, standard treatment protocols, standardized pricing of services etc. all are essential for efficient functioning of health care system in our country.

Lastly we would like to focus on the alternatives of the existing system of health care provision. Except the existing government provision of health care system i.e. public financing and public delivery (i.e. the Beveridge Model), an alternative system of public financing and private delivery may draw some serious concern in context for providing health care for all. We leave out the possibility of private financing and public delivery system as it has been failed devastatingly in USA and also it has many other problems from equity perspective. The proposed model of public financing and private delivery (known as Bismarck Model) is actually the idealized national (public or social) health insurance scheme practiced in Canada, Germany, France, Japan, China etc., with minor differences in the mode of funding and delivery. Now this option is relevant because the 'Universal Health Insurance' is a contemporary issue in India.

³⁰ Phadke, A. "Drug Supply and Use. Towards a Rational Policy in India", Sage Publications, New Delhi.

International evidence suggests that the combination of public financing and private delivery is superior to the other approaches. The argument for the public financing arises from the recognition that single-payer systems tend to have lower costs than do public-private mix. According to William C Hsiao (1992) of Harvard University, who has made a comparative study of the UK, the US, Canada, Germany, Japan and Sweden, the public financing and private delivery system of health care, practiced in Canada scored highest from the point of view of performance, health outcome, public satisfaction, and access to health.

Experts think that India has necessary infrastructure – sizeable public hospitals, not-for profit hospitals, private hospitals, medical associations, enlightened charitable trusts, voluntary organizations – and experience in running public insurance schemes (such as, CGHS & ESIS) and the private delivery of health care which will help to implement national health insurance scheme. It has been estimated that the cost of implementing the scheme may not be more than what health care is costing now at all India level. In 1994, it was estimated that this cost would be 3.75 percent of GDP which was lower than the combined expenditures by public and private health care sectors³¹. If necessary, the experience of China – not much different from Canada, Japan, and Germany in form and slightly different structure – can be made use of.

But, above all the government can not avoid the responsibility of providing health care to all. Whichever financing mechanism is adopted, the government has to take the greater role for financing health care to improve health status of the overall population of our country.

³¹ Reddy, K.N.

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