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Issues and Challenges of the Health Sector in India

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ABSTRACT

Human capital is considered as one of the determinants of economic growth. The stock of human capital increases through better education, higher levels of health and new learning and training procedures. A country may not be able to maintain a state of continuous growth without having labor force with the minimum levels of education and health. Underdeveloped countries like India have lower levels of human capital and therefore face difficulties in competing with developed countries. There is a two way relationship between better health and economic growth. Better health increases workforce productivity and in this way supplements economic growth and development. On the other hand, improving the health and longevity of the poor is an important goal of economic development. Though there has been significant improvement in health indicators in the last two centuries yet the country still lags behind on these indicators from that of developed countries. This paper shows how health plays an important role in the economic development of a country. While good health enhances productivity and hence improves earnings, higher income also exerts a positive influence on health. The paper also discusses the impact of several health programmes implemented by the policy makers on India's health indicators. The challenges faced by this sector have also been discussed in this paper. The paper suggests that underdeveloped countries can reduce poverty and inequality by investing more in the Health sector.

Keywords: Human capital, education, life expectancy, mortality rate, productivity

Health is an important determinant of economic growth. It is a prerequisite for increases in productivity. There is a two way relationship between health and economic growth. Causality runs in both directions. Improvement in health reduces poverty and leads to long-term economic growth whereas economic growth results in better health. Poor health means diseases implying heavy amount of expenditure in curing these diseases which acts as an impediment to economic growth. Improved health and education help families escape some of the vicious cycles of poverty in which they are trapped. At the same time the most important root cause of poor health in developing countries is poverty itself. Child mortality rates in developing countries remain more than ten times higher than those found in rich countries. Moreover, many children who survive nonetheless suffer chronic problems of malnutrition, debilitating, parasitic infections and other recurrent illness. Every second child is malnourished in India. Child malnutrition is one of the main reasons responsible for India's burden of disease.

Health and education are closely related in economic development. On the one hand greater health capital may improve the return to investment in education in part because health is an important factor in school attendance and in the formal learning process of a child. A longer life raises the return to investment in education. On the other hand, greater education capital may improve the return to investment in health, because many health programs rely on basic skills learned at school like personal hygiene and sanitation. A more highly educated, healthier workforce can easily create and adapt new technologies. The distribution of health within countries is as important as income distribution because for example life expectancy may be quite high for better off people in developing countries but far lower for the poor.

Environmental sanitation improves health of the community by providing clean environment and preventing from diseases. Poor sanitation systems are one of the major causes of the spread of preventable diseases in developing nations. India is a populous country and

more than half of the population has no access to toilets. Though substantial gains have been made in increasing access to improved sanitation in India; yet only 31 per cent of India's population uses improved sanitation by 2008. Open defecation in India is much more common than in even much poorer countries. Majority of population in the rural areas and slum dwellers in urban areas are forced to defecate in the open areas.

According to the UNICEF/WHO Joint Monitoring Programme estimates, 61 per cent of rural population in the country defecates in open in 2015. This practice is a major threat to human health. It spreads germs into the environment, and therefore makes growing children sick. Moreover, poor Sewerage systems create a lot of problem in urban areas. Due to inadequate wastewater treatment facilities, this untreated wastewater mixes with streams and rivers and pollutes their water. The contaminated water spreads various diseases like diahorea, Jaundice, Malaria etc. The World Health Organization estimates that 50 percent of malnutrition is associated with repeated diarrhea or intestinal worm infections from unsafe water or poor sanitation or hygiene. It is estimated that one in every ten deaths in the country in villages is linked to poor sanitation and hygiene. India is still lagging far behind many countries in the field of environmental sanitation. The country adopted National Urban Sanitation Policy 2008 to rapidly promote sanitation in urban areas of the country. Government of India has come up with strong sanitation campaign emphasizing on Information, Education, and Communication (IEC), capacity building and hygiene education for effective behavior change with involvement of panchayati raj institutions (PRIs), community-based organizations and nongovernmental organizations (NGOs), etc. The main goal of the government of India (GOI) was to eradicate the practice of open defecation by 2010.

Many organizations have adopted an integrated approach to improve water, sanitation, and hygiene, known as WASH programs. One of the United Nation's Millennium Development Goals was to halve the proportion of the population without sustainable access to safe drinking water and basic sanitation by 2015. The responsibility for provision of sanitation facilities in India is decentralized and rests with local government bodies- Gram Panchayat in rural areas and municipalities or corporations in urban areas. The state and central governments facilitate these local bodies by formulating policies, providing financial and capacity-building support and monitoring progress. The solid waste management is the primary responsibility and duty of the municipal authorities. The Central Rural Sanitation Programme started in 1986 was one of India's first efforts to provide safe sanitation in rural areas. The focus of this programme was on providing subsidies for constructing sanitation facilities. However, later on it was realized that it is more important to raise awareness about sanitation as a whole rather than to just provide subsidies for construction. Therefore, a restructured Total Sanitation Campaign (TSC) was initiated in 1999 to create supply-led sanitation by promoting local sanitary marts and a range of technological options. The main objective of this campaign was to improve the health and quality of life in rural areas. Recently Prime Minister's Swachh Bharat Mission has been started with the objective to improve cleanliness and hygiene in rural as well as urban areas and ending open defecation as soon as possible.

India's sanitation crisis is a key reason for severe child malnutrition burden: rates of child malnutrition are higher in India than even in Sub-Saharan Africa. The absence of sanitation exposes children to infectious diseases such as typhoid and diarrhea, which reduces their ability to absorb nutrients. The difference in malnutrition rates across Indian states reflects the importance of sanitation. States like Kerala, Manipur, Mizoram and Sikkim, where 80 per cent or more of the rural population have access to toilets, have the lowest levels of child malnutrition. On the contrary, states like Uttar Pradesh, Bihar, Madhya Pradesh and Jharkhand where the vast majority of the rural population lack access to toilets child malnutrition rates are among the highest. Impact of poor sanitation and the resultant illnesses are costly to families, and to the economy as a whole in terms of productivity losses and expenditures. Poor families have had to make heavy expenditure on medicines and health care.

Malnutrition adversely influences health and has close association with diseases. It obstructs physical and mental development of children. Undernourished girls are likely to reach adolescence in disadvantaged physical condition. Stunted and/or anemic mothers are more likely to give birth to pre-mature or under-weight babies. Good nutrition at the time of pregnancy as well as till one year after giving birth not only helps in mother's recovery but also prevents them from many diseases. Moreover, it helps in the mental development and physical growth of a child. Despite many efforts made by the Indian Government to address the problem of malnutrition, the country still lags behind on several nutrition indicators. ICDS programme works towards improving the nutrition and health status of children and pregnant woman. Food

grains like wheat and rice are provided to poor people at affordable prices under Public Distribution System (PDS) to ensure food security. Under Mid-day Meal Scheme, food is served to Government schools' students to save them from malnutrition. Various rural employment programmes have been undertaken by the Government to enhance incomes of rural households and thereby enabling them better access to food.

Objectives

The paper has the following objectives:

1. To identify the role of health in India's economic development.
2. To determine the impact of health programmes on health indicators.
3. To find out the challenges faced by this sector and suggest ways to improve health status in the country.

REVIEW OF LITERATURE

Several theoretical and empirical researches have supported the thesis that health exerts a positive effect on wealth (income). There is a link between health and income. To the extent that health follows income, income growth should be the priority for developing countries. To the extent that income is a consequence of health, investments in health, even in the poorest developing countries, may be a priority. There is no divergence of opinion among the economists regarding the positive contribution of health in economic development. However, the problem lies in measuring the extent by which health influences economic growth and different indicators used in various studies to measure health. Life expectancy is one such measure. Secondly, since causality runs in both directions from income to health and health to income it is difficult to disentangle their separate influences. Thirdly, health affects productivity with lag of several years. Childhood health affects productivity in adulthood.

The relationship between development and health was shown by Samuelson Preston in 1975. He plotted health of nations as measured by life expectancy against the wealth of nations as measured by GDP per capita for a cross-section of countries for the years 1900, 1930 and 1960 and showed that up to a point there is a sharp increase in life expectancy for even the modest increase in GDP per capita. Then the curve suddenly flattens out implying that at high level of GDP per capita, a further rise in income will result in small incremental gains of life expectancy. In his study he estimated that only 10 to 25 per cent increase in life expectancy between 1930s and 1960s for the whole world was due to increase in GDP per capita whereas 75 to 90 per cent increase in life expectancy for the same period can be attributed to exogenous factors.

From the early nineties various studies have attempted to identify the determinants of economic growth. Human capital has been considered to be one of these variables. Prior to Nineties education and technical skills were considered as indicators of human capital. However, in Nineties several researches considered health as human capital and an important determinant of economic growth. Grossman (1972) in his work considers health as durable capital good that produces a flow of services over time. He suggested investing in human capital to improve outcomes in both the market (work) and non-market (household) sectors. W. Schultz (1979) considered population health as an important factor of production and therefore suggested to investing in health. He emphasized that population quality and knowledge matters. Fogel (1993, 1994, 1997) estimated that improvements in health and nutrition contributed to about one-third of income growth in Britain between 1970 and 1980. However, some economists have shown an inverted U-shaped relationship between life expectancy and economic growth on account of adverse effect of ageing of population as a consequence of improvement in health on economic growth.

Good health translates into improved levels of education by increasing levels of schooling and academic performance. It enhances cognitive functions and reduces school absenteeism and early drop-outs (Bleakley, 2007). Therefore, children with better health can be expected to reach higher educational attainments and be more productive in the future. Children having poor health often lag behind in receiving education which further comes in the way of getting employment and hence income. Besides, low level of education is a major determinant of poor health status. There has been divergence of opinion among the economists on the relationship between health and wealth (i.e. income). Many economists have theoretically and empirically supported the proposition 'Wealth is health' instead of 'Health is wealth'. Health of an individual determines his/her mental as well as physical capacity and also improves workers' productivity. If there is positive correlation between productivity and income this means good health

by improving productivity will result in higher income. Studies show that healthier people earn higher wages. They are also less likely to be absent from work because of illness (or illness in their family). Health and nutrition do affect employment, productivity and wages. Studies made by Fogel (1994), Barro and Sala (1995) and Barro (1996) examined the relationship between economic growth and health. Higher incomes promote better health through improved nutrition, better access to safe water and sanitation, and increased ability to purchase more and better-quality health care.

However, health may be not only a consequence but also a cause of high income. This can work through a number of mechanisms (Bloom and Canning, 2000). Health, in the form of life expectancy, has appeared in many cross country growth regressions, and investigators generally find that it has a significant positive effect on the rate of economic growth (Bloom & Canning, 2000, 2003). Angus Deaton (2013) explains that there is a sustained correlation between health outcomes and growth even after the bend in the Preston curve. It is generally argued that good health raises human capital levels and therefore the economic productivity of individuals and a country`s economic growth rate.

Gupta and Mitra (2003) found a two way positive relationship between growth and health while analyzing relationship between health, poverty and economic growth. Mahal (2005) found a strong positive impact of per capita income on health status (life expectancy and infant mortality rate) and also established the reverse causality, namely a positive and significant influence of life expectancy on state level domestic product.

METHODOLOGY

This paper analyses interrelationships between 'health' and 'economic development' using regression analysis. It has been assumed that Per Capita Gross GDP (PGDP) describes economic development and health status is assumed to be reflected by Life expectancy. Despite its several limitations as an indicator of economic development PGDP is widely used as a proxy for economic development. Life expectancy at birth shows long term health conditions of individuals. Initially life expectancy (LE) has been chosen as endogenous variable and Log of Per Capita Gross GDP (PGDP) is taken as explanatory variable (Equation 1). Since there is a two way relationship between health and economic development, in the second equation Log of GDP per capita has been regressed on Life Expectancy (Equation 2). The data for the analysis has been taken from World Bank Data for the period 1981 to 2014.

$$LE = \beta_0 + \beta_1 \ln(PGDP) \quad \ldots(1)$$

$$\ln(PGDP) = \beta_0 + \beta_1 LE \quad \ldots(2)$$

Health Expenditure in India

Financing of health care is one of the key factors in delivery of health care. Healthcare sector suffers from underfunding and bad governance in India. Public expenditure on health in India is incurred by three levels of the Government: the Central Government, the State Governments and the local bodies. Besides directly spending on health, the Central Government provides grants-in-aid to State Governments for incurring health expenditure. The State Governments make health expenditure out of grants-in-aid provided by the Central Government and also directly by their own resources. The State Governments also transfers funds to urban and rural local bodies which local bodies utilize in making health expenditure in addition to expenditure made by them with their own resources. Public health expenditure involves the expenditures made by all three levels of the Government.

Public spending on health as a per cent of GDP has been an indicator of the priority accorded to health in the planning process of the country. The low level of public spending on health has been a widely discussed issue in India in recent times. Though the country has made huge improvements since independence but majority of the effort has been made by the private sector. The private sector expenditure is more than double the government spending. Had it not been for the private sector the health spending in India would have looked even worse.

Health spending tends to rise with incomes, and generally countries with higher GDP per capita also tend to spend more on health. India's health expenditure is far below when compared to other countries. Table 1 shows India's health expenditure as per cent of GDP in the last decade. This health expenditure is the sum of public and private health expenditure. It covers the provision of health services (preventive & curative), family planning activities, nutrition activities and emergency aid designated for health but does not include provision of water supply and sanitation. Table shows that health expenditure as per cent of GDP was around 3 to 4 per cent in the last decade. Considering public spending as per cent of GDP it comes around 1-1.5 per cent. This reflects low level of public spending on health

implying that a large part of expenditure on health is born by households from their private resources-income and savings. It also means that majority of population accesses its healthcare needs from private providers. People are forced to remain dependent on more expensive private providers which ultimately mean the poor are disadvantaged. Poor persons are more likely to suffer from a variety of diseases than the rich because they are more exposed to factors responsible for illness like unsafe and unclear drinking water, poor hygiene conditions, inadequate health facilities, malnutrition and hunger. Moreover, there is overlapping of various health schemes run by the Government. Schemes like Janani Suraksha Yojna (JSY), Janani Shishu Suraksha Karyakram (JSSK) and Indira Gandhi Matritva Sahyog Yojna (IGMSY) end up focusing on the same beneficiaries.

Though India's health expenditure as per cent of GDP is less as compared to other countries yet there is need to analyze the achievements in health outcomes at the current levels of spending. It has been found that India's achievements in health outcomes have been slower than the countries with similar levels of spending. This implies that mere increase in spending does not guarantee improvement in health outcomes.

Table 1: Health Expenditure as Per cent of GDP in India

Year	1991	2001	2005	2010	2011	2012	2013
Expenditure as% of GDP	4.1	4.5	4.3	3.8	3.8	3.8	4.0

Source: *World Bank*

Impact of Health Programmes in India

Indian Government launched several health programmes which have been greatly successful over the years. The National Health Policy shows the determination of the Government to influence economic growth to achieve health outcomes and a realization that better health contributes to improved productivity as well as equity. The first National Health Policy was formulated in 1983 with the objective of 'Health for All by 2000'. The policy focused on primary health care, infrastructure development and increase in the number of health care professionals. Failing to meet the objective of health for all by 2000, a new National Health Policy with more practical approach was initiated in 2002 to improve the health standards of people. The Policy recommended an increase in public health expenditure from 1 per cent of GDP to 2 per cent of GDP within a period of ten years and incurring at least 50 per cent of health expenditure on primary health care. This policy clearly laid out the targets to be achieved within the next ten years. Despite its recommendations public expenditure on health remained stationary for the next decade. Though this policy achieved success in meeting some of the targets like improvement in maternal and child health yet it failed to achieve others like meeting the requirement of qualified health care professionals, securing equitable access to health care services for the poor etc. The National Health Policy, 2015 is different in many ways. The policy has recognized that health priorities are changing, health care industry is showing robust performance in terms of growth and increasing health care costs is one of the major contributors to poverty. In fact increasing health care costs can neutralize the benefits of income increases and Government efforts to reduce poverty. The primary objective of the National Health Policy, 2015 is to inform, clarify, strengthen and prioritize the role of the Government in shaping health systems in all its dimensions.

To improve health status of the rural people in the country, National Rural Health mission (NRHM) was launched in 2005 and for urban areas, the National Urban Health Mission (NUHM) was initiated in 2013 and later on both were merged and renamed as National Health mission (NHM). The NHM strengthened the capacity of public health infrastructure, human resources and supply through a number of changes in organization of health services, its financing and governance. Moreover, Rashtriya Swasthya Bima Yojana (RSBY) and some other financial protection schemes initiated since 2007-08 are intended to provide financial coverage to people below poverty line. There is need to examine effectiveness of publicly financed insurance schemes at national and state level.

Like Millennium Development Goals (MDGs), Sustainable Development Goals (SDGs) also comprise goals pertaining to health. It consists of achieving universal health coverage, access to quality essential health-care services, medicines and vaccines for all. Universal Health Coverage implies provision of quality health care services to all those who need, without any financial hardship. Till now, the health system had been too much geared towards provision of reproductive, maternal and neonatal health services and the performance of health system was reviewed in terms of coverage of these only. However, Universal Health Coverage gives equal importance to the provision of general curative care.

Due to improved nutrition, better sanitation, strengthened public infrastructure there has been remarkable progress in health indicators all over the world in twentieth century. Average life expectancy in developing countries increased from 40 years in 1950 to 63 years in 1990 (World Bank, 1993).

Due to high infant mortality and maternal mortality rate, Indian policy makers focused attention on reduction of the same through Reproductive and Child Health Programmes. Immunization programmes on massive scale were initiated to reduce infant mortality and thereby increasing life expectancy. Fig. 1 shows that there has been continuous decline in maternal mortality and infant mortality ratio. Maternal mortality ratio (per 100,000 live births) declined from 538 in 1991 to 174 in 2015 whereas infant mortality (per 1000 live births) declined from 86 to 38 during same period. This is appreciable on a global scale as maternal mortality ratio and infant mortality ratio were 47 per cent and 40 per cent above the international average respectively in 1990. The country has also shown improvement in stabilizing its population with a decline in decadal growth rates. The Total Fertility Rate at all India level has declined from 2.9 to 2.4 in the last decade.

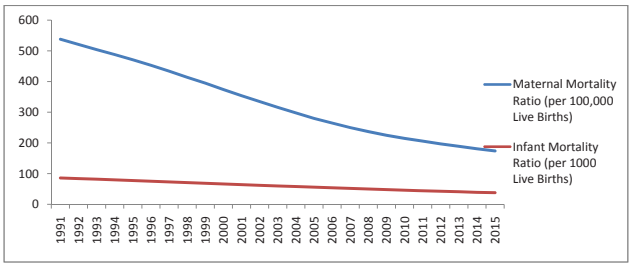

Fig. 1: Maternal Mortality and Infant Mortality Ratio in India

Source: *World Bank Data*

Issues and Challenges

Though there has been sharp decline in infant and maternal mortality rate in the last two decades as a consequence of various programmes run by Indian Government yet it lagged far behind the global averages in 1990. However, these rates were marginally better than the global average by 2015. Realizing that maternal health casts a long shadow on an individual's cognitive development and life chances, the National Food Security Act 2013 legislated a universal cash entitlement for pregnant women of at least 6,000 Rupees. This programme provides an opportunity to help improve nutrition during pregnancy. However, it is doubtful that these funds will go into the hands of pregnant women and will be utilized in more, better food and rest.

Despite achievements in health outcomes this sector still faces some challenges. Provision of quality health care services is still an issue. NSSO data shows that people prefer to avail health services from private providers rather than public providers as the latter does not provide quality services, waiting time is long and facilities are located at distances among other reasons. The heavy amount of health expenditure incurred by households on private providers pushes millions of people into poverty. To ensure quality assurance at public Health Facilities the Government of India has launched a National Initiative to give awards 'KAYAKALP' to those Public Health Facilities that demonstrate high levels of cleanliness, hygiene and infection control.

The NRHM and other public health systems interventions in the last two decades have been able to control many Communicable diseases to some extent and there has been significant reduction in deaths due to such diseases. However, an increasing proportion of mortality is due to non-communicable diseases (NCDs). NCDs (39.1%) and injuries (11.8%) now constitute the bulk of the country's disease burden. The absence of primary health care to address non-communicable diseases (NCDs) is a cause for serious concern. The Government has initiated National Disease Control Programmes against NCDs but these are not universal. Since NCDs are not covered by public health systems, people had to switch over to private health care thereby increasing households' health care expenditure. The biggest challenge in delivering health care is inadequate human resources and lack of required skills.

There is persistence of high degree of inequity in health outcomes and access to health care services between rural and urban areas as well as across different states. The NRHM was intended to strengthen State Health Systems to cover all health needs; however it remained confined to National Health Programme priorities. The level of investment and human resources required for strengthening State health systems were insufficient. So far as urban health is concerned, many cities and towns lack primary health care arrangements. The NUHM, 2013 focused on strengthening primary health care.

The high health care cost is another issue which needs to be addressed. More than 63 million persons are faced with poverty every year due to health care costs alone as there is absence of financial protection for the vast majority of health care needs. A number of publicly financed health insurance schemes were introduced to improve access to hospitalization services and to protect

households from high medical expenses. The Rashtriya Swasthya Bima Yojana was a such scheme initiated in 2008. With the introduction of such schemes there has been improvement in the utilization of hospital services. However, lack of awareness among beneficiaries regarding such schemes is one problem.

Health of an individual is also influenced by the environment. Therefore, emphasis is being given on reducing air pollution, sanitation, solid waste management, availability of safe drinking water etc. However, the problem of open defecation particularly in rural India is a major challenge. Evidences from a variety of sources show that the challenge in rural India is behavioural. Swachh Bharat Abhiyan Campaign is a good move in this direction.

Data Analysis & Interpretation

The following regression results have been obtained using least squares method:

$LE = 18.11 + 6.90\ ln(PGDP)$

$t = (5.748)\ (13.749)$ $\qquad r^2 = 0.855$

p value $= (0.000)\ (0.000)$

$\ln(PGDP) = -1.34 + .124\ LE$

$t = (-2.420)\ (13.749)$ $\qquad r^2 = 0.855$

p value $= (0.021)\ (0.000)$

The above regression results show that per capita GDP has positive influence on life expectancy and an increase in the per capita GDP of 1 per cent was, on the average, followed by an increase in the life expectancy of about 0.069 years during 1981 to 2014. Regressing per capita GDP on life expectancy it has been found that life expectancy influences per capita GDP positively. An increase in life expectancy by one year increased per capita GDP by 12.4 per cent during 1981 to 2014. The value of r^2 is significant in both cases.

CONCLUSION

Health is a direct source of human welfare and also an instrument for raising income levels and thereby facilitates economic growth. Despite increase in health expenditure in India over the years it is still very less as compared to other countries. There is need to raise the level of public spending on health in India from around one per cent to 2 to 3 per cent of GDP. Since sanitation and safe drinking water supply plays an important role in maintaining health of a child and it prevents them from various preventable diseases. There is need to improve sanitation systems in the country. Government should make further efforts in rural areas so that people are not forced to defecate in open.

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