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The Impact of Health on Economic Development: An Indian Perspective

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ABSTRACT:

Economists began to place greater emphasis on the role of human capital as a determinant of productivity and growth in the early 1990s. Since then, the importance of health and education in economic growth has received much attention (both theoretical and empirical), and a strong consensus has emerged in the last decade that human capital accumulation is an important determinant of economic growth. Health has a great significance from economic point of view. Healthy population is an asset for an economy while ill and aged population is a burden. From the point of view of an individual, health performs dual functions. On the one hand, good health represents a value of its own target that needs to be reached as closely as possible. On the other hand, there are other aims in life as well such as good health gives good income in labour market. In a developing economy like India, human capital can play a significant role in lifting people out of poverty and enabling them to lead a healthy and productive life. In statistical analysis revealed that, whether the nation is developed, developing or under developing there are strongly positive correlation between health expenditure and GDP.

KEY WORDS: Human capital; economic growth; health expenditure; capital accumulation; labour productivity.
JEL Classification: J24; H51; I15; N15; O15.

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INTRODUCTION:

The adequacy of physical and mental capacity of a person to enjoy life to the fullest possible extent and to reach his maximum level of productive capacity is known as Health. It may be defined in terms of various health indicators such as life expectancy, infant mortality, crude death rate, etc. It is one of the fundamental rights of every citizen. Developing countries, including India, bear a disproportionate burden of disease due to lack of clean water, sanitation, food, shelter, employment, education and gender equality.

The development of the society shows status of health also. It is influenced by different indicators like employment, income, educational attainment, social groups, level of awareness, accessibility to health care and availability of health services. Poor health leads to deficiency in human capabilities and it also shows the level of deprivation among the people. There is a close linkage between health and poverty and health and development but the relationship is very complex. As 'vicious circle of poverty' theory explains clearly "a nation is poor because it is poor" Nurkse[1].

Health has a great significance from economic point of view. Healthy population is an asset for an economy while ill and aged population is a burden. From the point of view of an individual, health performs dual functions. On the one hand, good health represents a value of its own target that needs to be reached as closely as possible. On the other hand, there are other aims in life as well such as good health gives good income in labour market[2].

DATA:

This study aims to reveal there is correlation between healthcare expenditure and economic growth. The data are annual observations of gross domestic product and health expenditure from 2009 to 2018. The study based on secondary data compiled from the World Bank's database, WHO Statistics, RBI bulletin, economic surveys, Government of India budget, CMIE etc.

MODEL:

Correlation is a statistical device to measure the amount of similarity i.e. the degree of association between series of pairs of observations of two or more variables and the direction of the relationship. In terms of the degree of relationship; the value of the correlation coefficient varies between +1 and -1. A value of ± 1 indicates a perfect degree of association between the two variables. As the correlation coefficient value goes towards 0, the relationship between the two variables will be weaker. The direction of the relationship is indicated by the sign of the coefficient; a + sign indicates a positive relationship, a – sign indicates a negative relationship and 0 value shows absence of correlation. It is useful in finding how much a variable changes corresponding to the

average amount of change in the other variables. Karl Pearson had given a formula to measure correlation known as coefficient of correlation denoted by small 'r'[3].

$$r = \frac{\sum xy - n\bar{x}\bar{y}}{\sqrt{(\sum x^2 - n\bar{x}^2)}.\sqrt{(\sum y^2 - n\bar{y}^2)}}$$

OBJECTIVES OF THE STUDY:

- To study the health status in India.
- To study the impact of health on economic development in India.
- To study the correlation between health and GDP in India.

LITERATURE REVIEW:

Bloom et. al.[4] revealed that the labour productivity effects of health on economic growth where improvements in health lead to an increase in per capita income directly as each individual is able to produce more per unit of labour input.

David et. al.[5] used a sample of 104 countries over the period 1960–1990 to examine the relationship between health and economic growth they noticed that good health had a positive and statistically significant effect on economic growth. They highlighted that, the life expectancy effect in growth regressions appeared to be a real labour productivity effect other than life expectancy proxies for workers experience.

Bakare and Sanmi[6] investigated the relationship between health care expenditures and economic growth in Nigeria. Their results showed a significant and positive relationship between health care expenditure and economic growth. They suggested that Nigerian policy makers should continuously increase the percentage of budget allocated for health every year.

According to Sen[7], "Development involves reducing deprivation or broadening choice". He revealed overcoming deprivations or "unfreedoms" are not just ends or constituent components of development but are also important means to development and freedom is central to development. Unfreedoms include hunger, famine, ignorance, an unsustainable economic life, unemployment, premature death, violation of political freedom and basic liberty, threats to the environment, little access to health, sanitation, clean water and labour contract, etc.

GLOBAL HEALTH STATUS:

In 2015, about 303000 women worldwide died due to maternal causes. Almost all of these deaths (99%) occurred in low and middle-income countries. However the world has made remarkable progress in reducing child mortality, with the global under-five mortality rate dropping from 93 per 1000 live births in 1990 to 41 per 1000 live births in 2016. Similarly, 36.9 million people were living with HIV at the end of 2017. An estimated 0.8% of adults aged 15–49 years

worldwide are living with HIV, although the burden of the epidemic continues to vary considerably between countries and regions. The WHO African region remains most severely affected, with nearly 1 in every 25 adults (4.1%) living with HIV and accounting for nearly two-thirds of the people living with HIV worldwide. TB is one of the top 10 causes of death and the leading cause from a single infectious agent (above HIV/AIDS). In 2017, TB caused an estimated 1.3 million deaths among HIV-negative people and there were an additional 300000 deaths from TB among HIV-positive people. In 2016, about 41 million deaths occurred due to non-communicable diseases (NCDs), accounting for 71% of the overall total of 57 million deaths. The majority of such deaths were caused by the four main NCDs, namely: cardiovascular disease (17.9 million deaths; accounting for 44% of all NCD deaths); cancer (9.0 million deaths; 22%); chronic respiratory disease (3.8 million deaths; 9%); and diabetes (1.6 million deaths; 4%)[8].

The average national percentage of total government expenditure devoted to health was 11.7% in 2014, ranging from 8.8% in the WHO Eastern Mediterranean Region to 13.6% in the WHO Region of the Americas. At least half of the world's population do not have full coverage of essential health services. Among those who were able to access needed services, many suffered undue financial hardship. In 2010, an estimated 808 million people 11.7% of the world's population spent at least 10% of their household budget (total household expenditure or income) paying out of their own pocket for health services. For 179 million of these people such payments exceeded a quarter of their household budget[9].

Functioning health systems require a qualified health workforce that is available, equitably distributed and accessible by the population. According to the latest available data for the period 2007¬2016, 76 countries reported having less than one physician per 1000 population, and 87 countries reporting having fewer than three nursing and midwifery personnel per 1000 population. In many countries, nurses and midwives constitute more than half of the national health workforce[9].

Table1 Shown the Global Health Status. It is clearly show that all developed nation have sound health indicators as compared to developing and under developed countries.

Table 1: Global health status

Country/ Region	Total population (000s) 2016	Life expectancy at birth (years) 2016			Current health expenditure (US$) 2016	Maternal mortality ratio (per 100 000 live Births) 2016	Under-five mortality rate (per 1000 live births) 2016	Neo-natal mortality rate (per 1000 live Births) 2016	New HIV infections (per 1000 uninfected population)	Tuberculosis incidence (per 100 000 population) 2016	Malaria incidence (per 1000 population at risk) 2016	Universal Health Coverage Service coverage index 2015	Probability of dying from any of CVD, cancer, diabetes, CRD between age 30 and exact age 70(%) 2016	Population with household expenditure on health > 25% of total household expenditure or incomes (%) 2007-2015	Proportion of population using safely managed drinking water services (%) 2015	Proportion of population using safely managed sanitation services (%) 2015
		Male	Female	Both												
Global	7 430 261	69.8	74.2	72	822	216	40.8	18.6	0.26	140	90.8	64	18.3	2.6	71	39
African Region	1 019 922	59.6	62.7	61.2	115	542	76.5	27.2	1.24	254	239.6	44	20.6	2.6	26	NA
Region of the Americas	992 155	73.8	79.8	76.8	974	52	14.2	7.5	0.16	27	11.3	78	15.1	1.9	82	43
South-East Asia Region	1 947 632	67.9	71.3	69.5	176	164	38.9	22.6	0.08	240	16.5	55	23.1	2.8	NA	NA
European Region	916 315	74.2	80.8	77.5	2 192	16	9.6	5.1	0.25	32	0	73	16.7	1	91	67
Eastern Mediterranean Region	664 336	67.7	70.7	69.1	557	166	51.7	27.7	0.06	114	20.5	53	22	1.4	56	NA
Western Pacific Region	1 889 901	75	78.9	76.9	920	41	12.9	6.5	0.05	95	4.2	75	16.2	3.9	NA	57

Source: Compiled from World health statistics 2018: monitoring health for the SDGs, sustainable development goals, World Health Organization[16].

ROLE OF HEALTH IN ECONOMIC DEVELOPMENT:

Health is both causes and effects of economic development. Investment in health is recognised as an important means of economic development. As the Commission on Macroeconomics and Health of the World Health Organization (WHO) has shown, substantially improved health outcomes are a prerequisite if developing countries are to break out of the circle of poverty. Good health contributes to development through a number of pathways:

1) ***Higher worker productivity:*** Healthier labours are more productive, earn higher wages, and neglect fewer days of work than those who are ill. This increases output, increases turnover in the workforce, and increases enterprise profitability and agricultural production.
2) ***Higher rates of domestic and foreign investment:*** Increased labour productivity creates incentives for investment. Besides, controlling endemic and epidemic diseases, such as HIV/AIDS, is likely to encourage foreign investment, both by increasing growth opportunities for them and by reducing health risks for their personnel.
3) ***Improved human capital:*** Healthy children have better cognitive potential. As health improves, rates of absenteeism and early school drop-outs fall, and children learn better, leading to growth in the human capital base.
4) ***Higher rates of national savings:*** Healthy people have more resources to assign to savings. These savings in turn provide funds for capital investment.
5) ***Demographic changes:*** Improvements in both health and education contribute to lower rates of fertility and mortality. After a delay, fertility falls faster than mortality, slowing population growth and reducing the "dependency ratio" (the ratio of active workers to dependants). This "demographic dividend" has been shown to be an important source of growth in per capita income for low-income countries.
6) ***Improved Utilisation of Natural Resources:*** Health investment contributes to better deployment of economic resources of a nation. Many developing economies waste huge sum of money on treatment of various diseases rather than their prevention. This leads of wastage of resources. Eradication of diseases also enhances labour productivity. The investment made in treating disease can be diverted to other productive uses.
7) ***Multiplier Effect of Health Expenditure Extending to Next Generation:*** Good health at the initial stage of life, i.e. among children from 1-6 years of age is a pre-requisite for future development of these children. A child who is physically and mentally fit at the age of 5 or 6 years is more likely to enrol for school and will develop a strong foundation through active

learning and regularity in class. Again it is a well established fact that a healthy and educated individual certainly generates more income than an uneducated individual, thereby making contribution to the national income of the nation.

8) ***Long run Reduction in Cost of Medical Care:*** Spending in healthcare for short run prevents and reduces the incidences of diseases in long run and results in giant savings in treatment costs. The expenditure pays for some diseases even when all the indirect benefits such as higher labour productivity, reduced pain and suffering are ignored for example Polio. In America prior to the eradication of polio showed that investing $220 million over 15 years to eliminate the disease would prevent 22,000 cases and save between $320 million to $1.3 billion in annual treatment costs[10].

In addition to their beneficial macro-economic impact, health improvements have intergenerational spill-over effects that are clearly shown in micro-economic activities, not least in the household itself. The "demographic dividend" is particularly important for the poor as they tend to have more children, and less to "invest" in the education and health of each child. With the spread of better health care and education, family size declines. Children are more likely to escape the cognitive and physical consequences of childhood diseases and to do better in school. These children are less likely to suffer disability and impairment in later life and so are less likely to face catastrophic medical expenses and more likely to achieve their earning potential. Then, as healthy adults, they have more resources to invest in the care, health and education of their own children.

HEALTH STATUS IN INDIA:

According to census 2011, India's population stood at 1.21 billion with a decadal growth rate of 17.7 per cent. There are 31.14 per cent of the population lives in urban areas, the rest lives in rural areas. The Sex Ratio (number of females per 1000 males) in the country has 943 in 2011. In rural areas the sex ratio has 949 in urban areas it has been 929. Kerala has recorded the highest sex ratio in respect of total population (1084), rural population (1078) and urban (1091). The lowest sex ratio in rural areas has been recorded in Chandigarh (690). About 28.5% population of India lies between 0-14 age group, only 8.3% are above the age of 60 years. However birth rate, death rate and natural growth rate are showing a declining trend. Birth rate declined from 25.8 in 2000 to 20.4 in 2016 while the death rate declined from 8.5 to 6.4 per 1000 population over the same period. The natural growth rate declined from 17.3 in 2000 to 14 in 2016. Total Fertility Rate the average number of children that will be born to a woman during her lifetime in 12 States has fallen below two children per woman and 9 States have reached replacements levels of 2.1 and above. Delhi, Tamil Nadu and West Bengal have lowest fertility among other countries in 2016. The infant mortality in Kerala is 6

per thousand live births, but in Uttar Pradesh it is 64. The life expectancy at birth has increased from 49.7 years in 1970-75 to 68.6 years in 2017. The infant mortality rate has declined from 74 per 1,000 live births in 1994 to 37 per 1,000 live births in 2015. In 2016, the infant mortality rate was estimated to be 34.6 per 1,000 live births. The below five mortality rate for the country was 113 per 1,000 live births in 1994 whereas in 2018 it reduced to 41.1 per 1,000 live births. The maternal mortality ratio has declined from 212 per 100 000 live births in 2007-09 to 167 per 100 000 live births in 2011-13. However, the differentials for state Kerala (61) and Assam (300) as of 2011-13 are still high. In 2013, the maternal mortality ratio was estimated to be 190 per 100 000 live births. There are noteworthy improvements in health indicators such as life expectancy, infant mortality rate and maternal mortality rate due to increasing penetration of healthcare services across the country, extensive health campaigns, sanitation drives, increase in the number of government and private hospitals in India, improved immunisation, growing literacy etc. Initiatives such as Janani Shishu Suraksha Karyakarm, Janani Suraksha Yojana, Reproductive, Maternal, New-borns, Child and Adolescent Health Services and national programmes to curb incidences of diseases such as polio, HIV, TB, leprosy etc have played pivotal roles in improving India's health indicators. India has attained significant progress in achieving immunization coverage through Universal Immunization Programme which provides prevention against six vaccine preventable diseases. In 2013, India along with South East Asia Region, declared commitment towards measles elimination and rubella/ congenital rubella syndrome (CRS) control by 2020. Mission Indradhanush aimed to fully immunize more than 90% of newborns by 2020 through innovative and planned approaches. A total of 528 districts were covered during the various phases of Mission Indradhanush launched by the Government of India, have been playing crucial roles in tackling several serious health concerns, communicable and non-communicable diseases, over the last two decades. Malaria has been a problem in India for centuries, at one time a rural disease, diversified under the pressure of developments into various ecotypes. Both the cases reported and deaths due to malaria have come down over the years. The malarial death rate in India declined to 0.01 deaths per lakh population in 2016 from 0.10 deaths per lakh population in 2001. The cost of treatment has been on rise in India and it has led to inequity in access to health care services. The government sparing just 1.3 per cent of the GDP for public healthcare, way less than the global average of 6 per cent, there remains a severe scarcity of doctors in the country and people continue to incur heavy medical expenditure across rural and urban hospitals. Besides India has less than one doctor for every 1000 population which is less than the WHO standard. The Centre: State share in total public expenditure on health was 31: 69 in 2015-16. The share of Centre in total public expenditure on health has been declining steadily over the years except in 2017-18[11]. Health insurance in India is a growing segment. In the

country health insurance pays for only inpatient hospitalization and for treatment at hospitals in India. In 2000 government of India liberalized insurance and allowed private players into the insurance sector.

Table-2 shows the health indicator of developed and developing countries it is clearly indicated that developed nation have sound health indicator related to economic development while less developed countries have low health indicator related to less economic development.

Table 2: Health indicator of developed and developing countries

Country/ Region	Total population (000s) 2016	Life expectancy at birth (years) 2016			Current health expenditure per capita (US$) 2016	Maternal mortality ratio (per 100 000 live Births) 2016	Under-five mortality rate (per 1000 live births) 2016	Neo-natal mortality rate (per 1000 live Births) 2016	New HIV infections (per 1000 uninfected population)	Tuberculosis incidence (per 100 000 population) 2016	Malaria incidence (per 1000 population at risk) 2016	Universal Health Coverage Service coverage index 2015	Probability of dying from any of CVD, cancer, diabetes, CRD between age 30 and exact age 70(%) 2016	Population with household expenditures on health > 10% of total household expenditure or incomes (%) 2007-2015	Diphtheria tetanus pertussis (DTP) immunization coverage among 1-year (%) 2016	Density of physicians (per 1000 population) 2007-16	Density of nursing and midwifery personnel (per 1000 population) 2007-16
		Male	Female	Both													
Global	7 430 261	69.8	74.2	72	822	216	40.8	18.6	0.26	140	90.8	64	18.3	11.7	86	NA	NA
USA	322 180	76	81	78.5	9 536	14	6.5	3.7	NA	3.1	NA	≥80	14.6	4.8	95	2.6	NA
UK	65 789	79.7	83.2	81.4	4 356	9	4.3	2.6	NA	9.9	NA	≥80	10.9	1.6	94	2.8	8.4
Japan	127 749	81.1	87.1	84.2	3 733	5	2.7	0.9	NA	16	NA	≥80	8.4	6.2	99	2.4	11.2
France	64 721	80.1	85.7	82.9	4 026	8	3.9	2.4	0.09	7.7	NA	≥80	10.6	NA	97	3.2	10.6
India	1 324 171	67.4	70.3	68.8	63	174	43	25.4	0.06	211	18.8	56	23.3	17.3	88	0.8	2.1
China	1 411 415	75	77.9	76.4	426	27	9.9	5.1	NA	64	<0.1	76	17	17.7	99	1.8	2.3
Brazil	207 653	71.4	78.9	75.1	780	44	15.1	7.8	0.24	42	6.7	77	16.6	25.6	86	1.9	7.4
Thailand	68 864	71.8	79.3	75.5	217	20	12.2	7.3	0.1	172	1.6	75	14.5	3.4	99	0.5	2.3
Nigeria	185 990	54.7	55.7	55.2	97	814	104.3	34.1	1.23	219	349.6	39	22.5	24.8	49	0.4	1.5

Source: Compiled from World health statistics 2018: monitoring health for the SDGs, sustainable development goals, World Health Organization[17].

HEALTH AND ECONOMIC DEVELOPMENT:

It is considering, health to be a crucial aspect of human capital, and therefore a vital ingredient of economic growth. In order to explain the relationship between health and economic growth, it is necessary to understand the concept of health in a broad sense. Health is not only the absence of illnesses; it is also the ability of people to develop to their potential during their entire lives. It is an asset individuals possess, which has intrinsic value as well as instrumental value. In instrumental terms, health impacts economic growth in a number of ways. For example Healthier workers are physically and mentally more energetic and robust. They are more productive and earn higher wages. They are also less likely to be absent from work because of illness (or illness in their family). Illness and disability reduce hourly wages substantially, with the effect especially strong in developing countries, where a higher proportion of the work force is engaged in manual labour than in industrial countries.

Health performance and economic performance are interlinked. Wealthier countries have healthier populations for a start. And it is a basic truth that poverty, mainly through infant malnourishment and mortality, adversely affects life expectancy. National income has a direct effect on the development of health systems, through insurance coverage and public spending, for instance. As per WHO Commission on Macroeconomics and Health[11] for a panel of 167 countries, while health expenditures are determined mainly by national income, they increase faster than income. The effects of health on development are clear. Countries with weak health and education conditions find it harder to achieve sustained growth. Indeed, economic evidence confirms that a 10% improvement in life expectancy at birth is associated with a rise in economic growth of some 0.3-0.4 percentage points a year. Disease hinders institutional performance too. Lower life expectancy discourages adult training and damages productivity. Similarly, the emergence of deadly communicable diseases has become an obstacle for the development of sectors like the tourism industry, on which so many countries rely.

CORRELATION BETWEEN HEALTH AND ECONOMIC DEVELOPMENT:

Health has a positive and statistically significant effect on economic growth. A one year improvement in a population's life expectancy contributes to a 4 percent increase in output[12]. Health is not only an important element of well being in developing countries, like India, where physical jobs tend to be in abundance but also more important than education in determining labour productivity.

Table-3 shows correlation between health expenditure and GDP during 2009-2018. In this table the coefficient of correlation of India, USA and Nigeria are 0.922, 0.996 and 0.990

respectively. Data shows highly positive correlation between health expenditure and GDP of the countries.

Table 3: Correlation between health expenditure and GDP during 2009-2018

Year	GNP in India (US$ billions)	Growth Rate (%)	Health Expenditure India (US$ billions)	% to GDP	GNP in USA(US$ billions)	Growth Rate (%)	Health Expenditure USA (US$ billions)	% to GDP	GNP in Nigeria (US$ billions)	Growth Rate (%)	Health Expenditure Nigeria (US$ billions)	% to GDP
2009	1365.4	-	19.1	1.4	14418.7	-	2494.4	17.3	221.7	-	7.8	3.5
2010	1708.5	25.1	22.2	1.3	14964.4	3.8	2603.8	17.4	369.1	66.5	12.2	3.3
2011	1823.1	6.7	21.9	1.2	15517.9	3.7	2684.6	17.3	411.7	11.5	13.6	3.3
2012	1827.6	0.25	23.8	1.3	16155.3	4.1	2794.9	17.3	461	12	15.2	3.3
2013	1856.7	1.6	22.3	1.2	16691.5	3.3	2870.9	17.2	515	11.7	17.5	3.4
2014	2039.1	9.8	24.5	1.2	17427.6	4.4	3032.4	17.4	568.5	10.4	18.8	3.3
2015	2102.4	3.1	23.1	1.1	18120.7	4	3207.4	17.7	481.1	-15.4	17.3	3.6
2016	2273.6	8.1	34.1	1.5	18624.5	2.8	3333.8	17.9	404.7	-15.9	NA	NA
2017	2602.3	14.5	36.4	1.4	19386.8	4.1	3509	18.1	375.8	-7.1	NA	NA
2018	2690.1	3.4	35	1.3	20103	3.7	3658.7	18.2	397.5	5.8	NA	NA
Pearson's Correlation			r = 0.922				r = 0.996				r = 0.990	

Source: Budget Documents of Union and State Governments and Reserve Bank of India[18,14,15,].

- Expenditure on 'Health' includes expenditure on 'Medical and Public Health', 'Family Welfare' and 'Water Supply and Sanitation'.
- GDP data from 2011-12 are as per the new base year 2011-12. GDP for 2016-17 and 2017-18 are provisional estimates and advance estimates respectively.

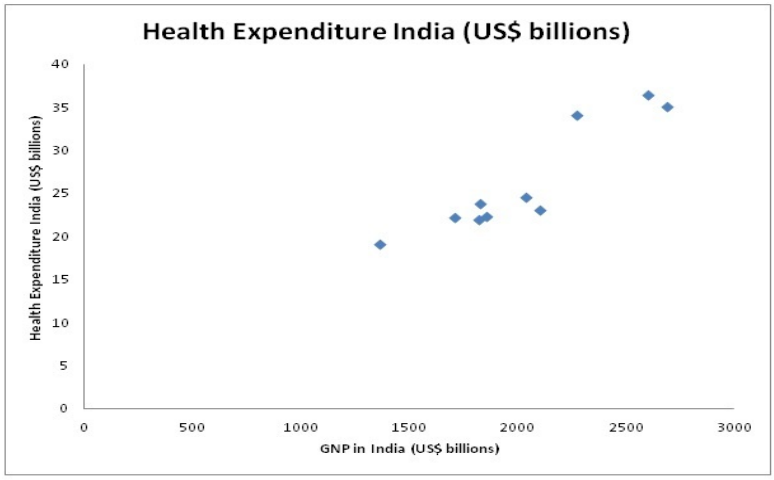

Figure 1: Health Expenditure India (US$ billions)

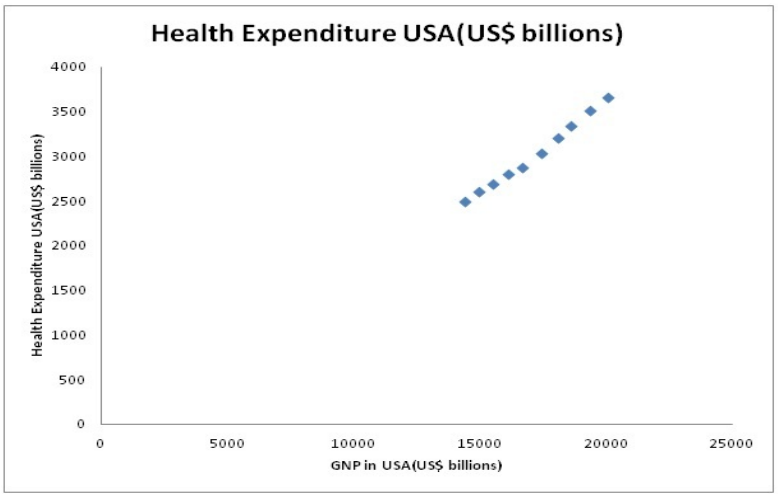

Figure 2: Health Expenditure USA (US$ billions)

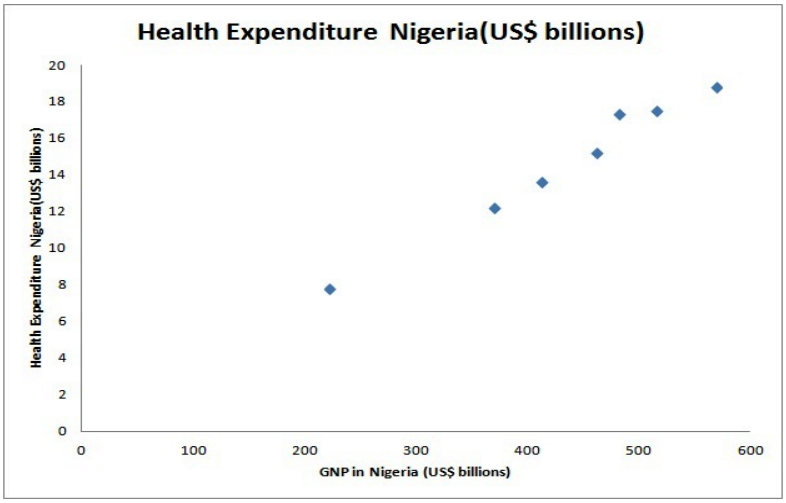

Figure 3: Health Expenditure Nigeria (US$ billions)

CONCLUSION:

Nobel Laureate Professor Amartya Sen[13] postulates that health is among the basic capabilities that gives value to human life. The wealth of any nation can be measured by the health status of its citizens. This is in true confirmation of the popular adage which that "Health is Wealth". According to World Bank[15] fifty percent of economic growth differentials between developed and developing nations are attributed to ill-health and low life expectancy. The world's central framework for reducing poverty is expressed in UN's eight Millennium Development Goals. Three of these eight goals pertain to health: reducing child mortality, improving maternal health and combating HIV/AIDS, malaria, and other diseases. These potentially huge improvements in health are extremely important goals in themselves, and they serve as instruments for achieving economic growth and reducing poverty. Therefore, health is a fundamental driver for economic growth and development. Together with education, they are the most important sectors where public attention should be focused in order to ensure greater human development.

In a developing economy like India, human capital can play a significant role in lifting people out of poverty and enabling them to lead a healthy and productive life. Even though a significant progress in Human Development Index (HDI) scores over the years, India's rank in HDI at 130 out of 189 countries as per Human Development Report[14] leaves much to be needed. On the Global Hunger Index[14], India ranks 103 out of 119 developing countries with prevalence of stunting among children aged below 5 years at around 39 per cent, a serious cause of concern. In this scenario, India requires valuable investments in social infrastructure in order to achieve the Sustainable Development Goals. To attain the goals of economic development, India should improve her health standards such as life expectancy of population and reduce infant mortality rate and maternal mortality rate. Good health enables a person to earn more and create additional resources to maintain

his health. Health promotes development through increase in productivity and therefore improvement in the health status of people is essential for social and economic development.

In statistical analysis revealed that, whether the nation is developed, developing or under developing there are strongly positive correlation between health expenditure and GDP.

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