

Does Improvement in Health Leads toward Economic Growth: A Case of SAARC Countries

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Abstract

Health is one of the most central possessions a human being has. It permits us to fully widen our capacities. There exists a two-way relationship between better health and economic growth. Health and other forms of human and physical capital increases the per capita GDP by increasing productivity of existing assets united with resource gathering and technical change. Our study consists on SAARC countries. The objective of this study is to check the impact of health on economic growth in SAARC countries. Variables include in this study are health, GDP, life expectancy and fertility rate. We use secondary data period from 1985-2010. Method that is used for this study is Panel EGLS (Cross-section random effects). Estimation shows that there is positive relationship between health and economic growth. There is negative relationship between life expectancy and economic growth because when life expectancy increase aged persons increase and burden on economy increase and economic growth decrease.

Introduction

Health is one of the most central possessions a human being has. It permits us to fully widen our capacities. If this quality erodes or it is not developed entirely, it can cause physical and emotional dwindling, causing obstacles in the lives of people. Human capital plays fundamental role for sustainable economic Growth. As different growth, theories suggest the role of human capital as a significant for growth process. The consequence of economic growth on health is well known. Because the demand for health care is income elastic, rising per-capita income leads to increasing expenditures on health care and improved health status.

Nowadays, it is possible to say every person could suppose to live a long and healthy life. We could say its economic value is enormous and health gains had the economic cost of general economic growth and flee of ill-health traps in poverty (World Health Organization, 1999). Health problems could be reflected as reductions and obstacles for economic advancement. Ainsworth and Over (1994) have studied the impact of AIDS on African economic development, stating the disease is rampant among young workers, disturbing efficiency and domestic savings rates.

There has been a growing interest to intensify the relationship between health and economic growth, catalyzed in significant extent by a 1993 World Bank report on health (World Bank 1993). Barro (1996) remarks health is a investment productive asset and an locomotive of economic growth. Using this squabble, we can consider health as a determinant of human capital.

In an early realistic review of the impact of health on economic development, Sorkin (1977) accomplished that health, seen through reductions in mortality, had an important impact on economic growth during the early twentieth century. However, he remarks increases in the health status of the population of developed nations will have little impact on economic growth, but the impact could be different for developing nations. For this matter,

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he points out few ways how health programs could have an impact on economic development on developing nations.

There exists a two-way relationship between better health and economic growth. Health and other forms of human and physical capital increases the per capita GDP by increasing productivity of existing assets united with resource gathering and technical change.

Our study consists on SAARC countries. The South Asian Association for Regional Cooperation (SAARC) was formed in December 1985. It is an organization of south Asian countries which includes Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. Afghanistan joined the organization in 2005. Purpose of the organization is collective economic, technical, social, and cultural development of member states. The Headquarter of SAARC is in Kathmandu, Nepal.

Economic development results in improved nutrition, better sanitation, innovations in medical technologies; all this increases the life expectancy, reduces the infant mortality rate. World Development report 2007 depicts the situation is by concluding that Average life expectancy at birth worldwide rose from 51 years to 65 in less than 40 years. Similarly Average life expectancy in developing countries was only 40 years in 1950 but had increased to 63 years by 1990 (World Bank 1993). Preston (1976) has analyzed various determinants of life expectancy and emphasized that economic development is the most important factor.

Literature Review

Numerous studies were conducted on the association between human capital development and economic growth.

Bloom et al (2004) finds that life expectancy and schooling have a positive and significant effect on GDP. Improvements in health increase the output not only through labor productivity, but also through the Capital growth. Study also finds that improvement of one year in a population's life expectancy resulted into an increase of 4% in output.

Weil (2001) finds that health is an important determinant of income variations in different countries. Approximately 17-20 % of the cross-country variation in income can be explained by cross-country differences in status of health.

Arora (2001) uses the life expectancy at birth, at ages five, ten, fifteen, or twenty, and structure of adulthood as health indicators for 10 industrial countries. Study concludes that improvement in health status has increased the pace of long-term economic growth by 30-40 %. It also concludes that high rate of disease prevalence and deaths are among the main reasons for poor long-term growth in developing countries.

Lorentzen et al (2005) analysis the impacts of adult mortality rate on economic growth. Study finds that high mortality rate reduce the economic growth by curtailing the time perspective. Resultantly people take actions that yield short-term benefits at the long-term cost. Study also concludes that fertility, investment in physical and human Capital, are the channels by adult mortality rate affects economic growth.

Scheffler (2004) argues that health may not be treated as output (life expectancy, adult survival rate etc.) but it needs to be treated as input (health expenditure). Study finds that elasticity of health care spending with respect to GDP is greater than one. This means that if GDP increases by 10 percent then healthcare spending goes up by more than 10 percent. Consequently, developed countries spend more on health as compared to developing countries.

Tallinn (2006) uses adult mortality rate, fertility rate and life expectancy to analyse the economic costs of ill health along with economic benefits from improving it for Estonia. Study finds that fertility rate and adult mortality rate have a significant and negative impact in

both OLS and Fixed effect model specification. Moreover By using survey data Study also concludes that ill health has a statistically robust and negative impact on labour supply and productivity at the individual level.

Zon (2001) concludes that good health is a necessary condition for people to be able to provide labor services. Study finds that an increase in the demand for health services caused by an ageing population will negatively affect the economic growth.

Schultz (2005) examines the impact of health on total factor productivity. Study finds that better health human capital have a significant and positive impact on wages and workers productivity. Study finds the developing countries often lack the resources for investment in health; on the other hand poor health status slows down the economic growth. Developing countries seems to be in a vicious cycle resulting in constant underdevelopment.

Variables and Definitions

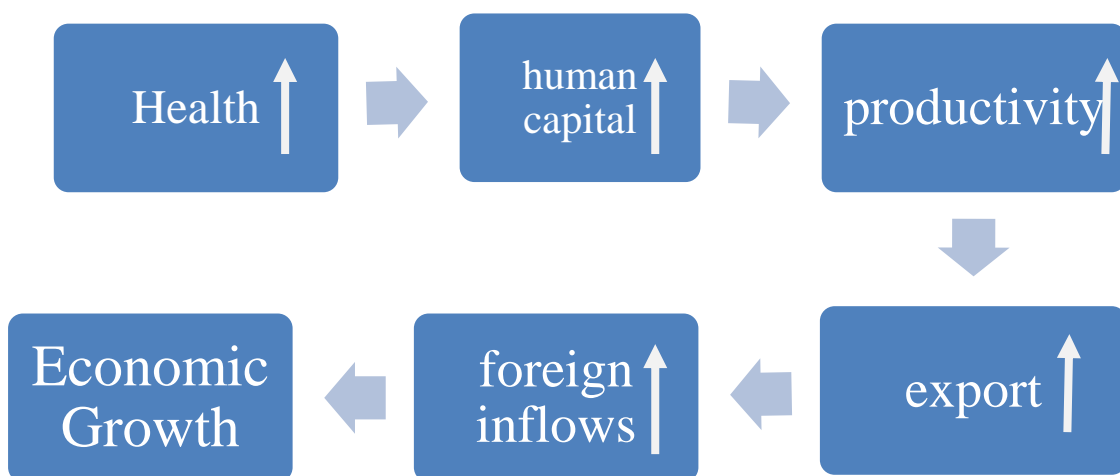
Health: Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. The state of being hale, sound, or whole, in body, mind, or soul especially, the state of being free from physical disease or pain.

GDP: The monetary value of all the finished goods and services produced within a country's borders in a specific time period, though GDP is usually calculated on an annual basis. It includes all of private and public consumption, government outlays, investments and exports less imports that occur within a defined territory. **GDP = C + G + I + NX**

Fertility rate: Total fertility rate represents the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with current age-specific fertility rates.

Life Expectancy: Life expectancy is the expected (in the statistical sense) number of years of life remaining at a given age. The probable number of years remaining in the life of an individual or class of persons determined statistically, affected by such factors as heredity, physical condition, nutrition, and occupation.

Theoretical link



Health is very important for any economy. Health increase life expectancy increase and mortality rate decrease, due to increase in life expectancy and decrease in mortality rate

human capital increase, productivity increase, production increase than exports increase, inflows increase and economic growth increase.

Source of data

We collect data related to our study from different publications. Statistical data is collected from World Bank and IMF.

Methodology and Empirics

Methodology used for this study is Panel EGLS (Cross-section random effects). GDP is dependent variable. Health and life expectancy is independent variable. Time period is 1986-2010 (25 years) and cross-sections included 7.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXPEC	-0.167056	0.081186	-2.057705	0.0420
HEALTH	0.611208	0.234453	2.606950	0.0104
C	12.50764	5.974125	2.093635	0.0387
Effects Specification				
			S.D.	Rho
Cross-section random			1.064980	0.2352
Idiosyncratic random			1.920483	0.7648
Weighted Statistics				
R-squared	0.140879	Mean dependent var	1.612095	
Adjusted R-squared	0.116791	S.D. dependent var	2.104195	
S.E. of regression	1.977380	Sum squared resid	418.3736	
F-statistic	5.848621	Durbin-Watson stat	1.704011	
Prob(F-statistic)	0.000974			

Discussion/interpretation

Health and life expectancy are independent variables and GDP is dependent variable. Significance of overall model checks through F-STATISTIC which shows that model is significant. Probability is also significant. R –squared show 14% variation. Empirical analysis shows that there is positive relationship between health and economic growth. There is negative relationship between life expectancy and economic growth because when life expectancy increase aged persons increase and burden on economy and economic growth decrease. Hypothesis are (1) Health impact on economic growth positively (2) Life expectancy impact on economic growth negatively. Empirics show those hypotheses are accepted.

Conclusion

Health is one of the most central possessions a human being has. It permits us to fully widen our capacities. If this quality erodes or it is not developed entirely, it can cause physical and emotional dwindling, causing obstacles in the lives of people. Human capital plays fundamental role for sustainable economic Growth. As different growth, theories

suggest the role of human capital as a significant for growth process. There is positive relationship between health and economic growth. There is negative relationship between life expectancy and economic growth because when life expectancy increase aged persons increase and burden on economy and economic growth decrease. Economic development results in improved nutrition, better sanitation, innovations in medical technologies; all this increases the life expectancy, reduces the infant mortality rate. World Development report 2007 depicts the situation is by concluding that Average life expectancy at birth worldwide rose from 51 years to 65 in less than 40 years. Similarly Average life expectancy in developing countries was only 40 years in 1950 but had increased to 63 years by 1990 (World Bank 1993). Preston (1976) has analyzed various determinants of life expectancy and emphasized that economic development is the most important factor.

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