

Influence of Health Care Amenities and Health Expenditure to Enhance the Economic Growth in Pakistan

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Abstract

The present study is conducted to examine the role of paramedical staff and government expenditure in the health field to enhance the economic growth of the Pakistan. Time series data is utilized which is comprises from 1961 to 2014, which is collected from Handbook of statistics. Co-integration technique has been used to explain the long run relationship among paramedical persons, expenditure and economic growth in Pakistan. Results indicated that there is long run relationship exist among the expenditure, paramedical persons and economic growth. Furthermore study applied VECM to detect the short run adjustment in variables to attain equilibrium in the long run.

1. Introduction

Developed countries spend a high proportion of their Gross Domestic Product (GDP) on Health Care because they believe that their resident health can serve as a major driver for economic activities and development. It is said that there is a mutual interaction between health and economic growth. Maintaining a sustainable level of growth provides people significantly better nutrition and disease treatment opportunities along with wider access to preventive medical technology. A sustainable growth and development enables better health conditions, increasing the share of population of healthy individuals. On the other hand, healthy individuals are fit both physically and mentally, they are expected to contribute to production more than a sick person and increase productivity and have a positive impact on economic growth. When a person is healthy, life expectancy increases and this promotes individual savings and private investments in education.

The health expenditure play an important role to enhance the economic growth, Baldacci (2004) constructed a panel data set for one hundred and twenty developing countries from 1975-2000 and found that spending on health within a period of time affects growth within that same period while lagged health expenditures appear to have no effect on growth. He inferred from this result that the direct effect of health expenditure on growth is a flow and not a stock effect.

The health sector in Pakistan suggests that the number of Doctors has increased to more than 160289, Dentists 12544, 82119 Nurses and 13678 Lady Health Visitors (LHV). The current ratio of population density versus health facilities is at 1127 person against one doctor, 14406 per dentist and availability of one hospital bed for 1786 person compares well with some regional countries like Bangladesh and India. Pakistan has also a large market for private health care delivery. The private sector provides varying levels of care and constitutes a diverse group of doctors, nurses etc. Most of the facilities have been established in urban areas. Despite a substantial growth in the number of health institutions, facilities and services, the desired health outcomes could not be achieved due to rapid growth of population.

The motivation of this article is to find out that government of Pakistan every year spend a lot of money to increase the medical staff or health care persons and provide a large fund but the health level is still questionable. The objective of this study is to find out that government expenditure influence the economic growth as well as the health care persons/paramedical staff play very important role to maintain the level of health. Which indirectly improve the health of the people/labor and in this way labor medical leave become short. Better health improves the efficiency and the productivity of the labor; ultimately contributes to the economic growth and leads to human welfare.

2. Literature Review

In Pakistan, health expenditure is as current and development expenditure. For the current ongoing year 2012-13, the current expenditure is as Rs. 62.12 billion and development Rs.17.34 billion. They together estimates as 79.46 billion which in term of percentage is 0.35 percent of GDP and has increase by 44.16 percent over last year of 2011-12.

Peykerjou (2011) studied the relationship between health and economic growth in 15 member countries of Organization of Islamic Cooperation (OIC) for 2001-2009. The objective of this study was to examine the effects of different health indexes on the economic growth. The results showed that increase in economic growth in OIC countries was also due to increase in life expectancy. It was also observed in this study that there was a negative relationship between fertility and economic growth in these OIC member countries.

Akram *et al.* (2008) showed that human capital played an important role in continuous economic growth in Pakistan by using secondary data and co-integration techniques. They used age dependency, trade

openness, life expediency, health expenditures, infant mortality rate, investment percentage of GDP, per capita GDP and secondary school enrollment. This study showed the per capita GDP was the dependent variable and all others were independent variables. Their findings showed that trade openness, health expenditure, secondary school enrollment, investment, life expectancy and mortality rate were positively related to economic growth. They suggest that in Pakistan, people have lower per capita income that is why they spend less on health facilities; therefore, the government must increase the wages of labor to facilitate their life.

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 persistent underdevelopment.

Jamison (2003) finds that better health accounted for about 11% of growth. Study concludes that investment in physical capital, education and health plays critical role in boosting the economic growth.

From the microeconomic view point, 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.

Fogel (1994), approximately one third of GDP of Britain between 1790 and 1980 is the outcome of improvements in health especially improvement in nutrition, public health, and medical care facilities and these improved health facilities should be considered as labor enhancing technical change.

According to the Preston (1975), from the microeconomic view point when individual's income is low (poor), demand for medical care tend to be low. As a result, the marginal rate of return to invest in health via medical care is high. Thus, a small increase of income will strongly improve health state. While, once individual reaches a very healthy and wealthy state, an additional income will not make this individual healthier, but stagnant. Thus, the effect of economic growth on health is concave and depending on the level of development.

Wang explored the causality between an increase in health care expenditure long and economic growth for OECD countries during 1986-2007. The empirical procedure is divided into two parts. The first is the panel regression analysis and the second is the quantile regression analysis. The estimation of the panel regression reveals that, expenditure growth will stimulate economic growth; however, economic growth will reduce expenditure growth. With regard to the estimation of quantile regression, when economic growth is quantile, in countries with low level of growth, the influence of expenditure growth on economic growth is different. In countries with medium and high levels of economic growth, the influence of expenditure growth on economic growth is positive; when health care expenditure growth is quantile, the influence of economic growth on expenditure growth is more different.

3. Data and Methodology:

3.0 Data:

The data is collected from the handbook of statistics which is published by the State bank of Pakistan from 1961 to 2014, which is a reliable source.

3.1 Unit root results:

First of all unit root is applied to the check the stationary either variable's data is stationary or not. It is necessary to make the data stationary before estimation. Result of unit root test is given below in the table 01.

Table No.1

Variables	ADF statistics	Critical Value	Integration Order
GDP	-5.518617	1% level -3.560019 5% level -2.917650 10% level -2.596689	I(0)
HEXP	2.390713	1% level -3.562669 5% level -2.918778 10% level -2.597285	I(0)
RD	6.603022	1% level -3.560019 5% level -2.917650 10% level -2.596689	I(0)
RN	8.367195	1% level -3.560019 5% level -2.917650 10% level -2.596689	I(0)
LHVs	4.602292	1% level -3.560019 5% level -2.917650 10% level -2.596689	I(0)

It is clear from the results that all variables are integrated meaning that these variables are stationary at level. As a result, the study strongly suggests to apply the Johansen test of co-integration because it full fill the condition which is required by the johansen i.e variable must be non-stationary at level.

3.2 Co-integration test results:

(a) Trace

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.646596	144.3318	95.75366	0.0000
At most 1 *	0.496061	90.24445	69.81889	0.0005

(b) Maximum Eigenvalue

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.646596	54.08739	40.07757	0.0007
At most 1 *	0.496061	35.63563	33.87687	0.0305

Coefficients (normalized by $b^*S11*b=I$):

GDP	HEXP	RD	RN	LHVS
-0.028364	0.000126	0.000201	-0.000141	-0.002111
-0.592085	0.000195	0.000446	-0.000366	-0.003127

The trace value and the maxi-eign value show that there exists a co-integration equation. The result indicates that there is long run relationship between the variables.

3.3 Vector Error Correction Estimations:

Error Correction:	D(GDP)	D(HEXP)	D(RD)	D(RN)	D(LHVS)
CointEq1	-0.034147 (0.01889) [-1.80721]	-19.99322 (12.0172) [-1.66371]	-49.60316 (14.3594) [-3.45441]	-40.80420 (6.06113) [-6.73212]	-5.467790 (2.49543) [-2.19112]

Vector error correction model shows the adjustment speed of coefficients towards equilibrium and short run relationship among the variables.

4. Conclusions

This study tries to find out, whether medical facility (medical centers) and the paramedical staff play any role to enhance the productivity or the government expenditure in the medical line affect the economic growth in a country for this purpose the study employing time series data from period of 1961 to 2014. The study explains that there is a significant impact of paramedical staff like register doctors, register nurses, lady health visitor and the midwives on the economic growth of Pakistan. Moreover, the expenditure which is made from the government side to facilitate the public in the medical line, like to build new hospitals, new health facility centers and spend to give as an incentive improve the numbers of medical persons which indirectly improve the health of the public/ labor, reduces the numbers of holiday to a great extent. Additionally, the study elaborates that there is long run as well as short run relationship among the government expenditure in the health sector, paramedical focal and economic growth of Pakistan.

Suggestions

1. The government should facilitates the health centers with the latest technology.
2. The government should maintain the check and balance system.
3. The government should gave incentives which discourage the doctors to open private centers and hospitals.
4. The V.I.P. protocols which is given by the paramedical persons to their relatives and referenced people should be condemned.
5. The free medical test facility which is only for deserving persons, the M.S gave this facility to the people

which came to him in cars, should be only for deserving ones.

6. The management of the health center or hospital should be non-medical staff.
7. When a doctor became the expert of his field the government should provide his expertise to the public, not to make the head of the facility to expire his expertise.
8. When an expert doctor became the head of the health center, totally he is busy to maintain the center and unable to check the patients.

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