BUDGET INVESTMENTS IN HEALTHCARE SECTOR OF ALBANIA

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ABSTRACT

This paper observes the impact of public health spending on the adult mortality rate, the measurement of effective increase of public health spending on the decrease of adult maturity rate in Albania. Although the effects of public health transfer on improvement on health sector are quite clear, the implication on the mortality rate is less evident. This study explores the effect of public health spending in adult mortality rate in Albania by using simple regression analysis with public health spending as independent variable and mortality rate as dependent one. All the data are taken by INSTAT and Ministry of Finance of Albania for the period of 2004 to 2011. International cross-country studies of the relationship between public health spending and health outcomes, shows there is a slight effect of public health spending on health outcomes. Similar research done for middle-level and upper middle-level countries also shows that there is not a strong relationship between public spending on health care and mortality rate. Some studies conclude that poverty and income rather than public health spending are the crucial determinants of health status. Also the findings of this study conclude with the same result that there is a weak relationship between public health spending and adult mortality rate in Albania.

Keywords: Public expenditure, Health sector, Albania, Mortality rate.

INTRODUCTION

The health public spending issue is discussed and advocated by political concerns and economic considerations and it has really caused so much discussion in economics, finance and other fields of study. It is important to estimate the extent to which health of population is affected by public spending. As Albania has been under centralized system prior 1990 meaning that everything was controlled by the state it was the Ministry of Health who was the main actor that regulated all health service expenses and decided on the proportion of relevant investment in facilities, equipment, human capacity and so on. Nowadays the Ministry of Health in collaboration with the Ministry of Finance determine the amount of public expenditure that will be used in the development of quality of equipment & facilities, medicals, trainings and qualification of the doctors .It is important to emphasize the fact that all investment in this mentioned industry will come from the tax income that Albanian people do pay. This paper will give an introduction of health situation in Albania continuing with the budget performance in the mentioned sector. Then, it will be continued with the measured impact of investment on the level of adult mortality rate of Albanian people and finally concluding all the results derived from the explanation of regression analysis used above.

LITERATURE REVIEW

International cross-country studies of the relationship between public health spending and health outcomes, usually find a slight effect of public health spending on health outcomes.

(Kim K, 1992). Similar research done for middle-level and upper middle-level countries also shows that there is not a strong relationship between public spending on health care and mortality rate (Or, 2000). In the study of (Filmer D, 1999) it is found that public health spending explained only one-seventh of the observed differences across countries. There are other factors which do have a stronger effect on health status and these factors can be country's income per capita, extent of female education. So, some studies done by (Politi, 1995) and (Walton, 1998) conclude that poverty and income rather than public health spending are the crucial determinants of health status.

OVERVIEW OF HEALTH SYSTEM OF ALBANIA

The main objective of the health sector is maximization of the population's health so respective reforms should be taken in order to respond to health care needs and identify appropriate actions toward these goals. Modern health centers should be built in different geographic areas of Albania so people can get the highest level of treatment. An essential parameter that affects the health care reform is the participation of state. Investments in the health sector as a whole were needed in improving the conditions of hospitals, training and employing staff with relevant skills, decreasing mortality rate of different ages, investing more on the medicine base in the hospitals, constructing existing hospitals and purchase of machineries and equipments. As Albanian health system has changed from a centralized system to a decentralized one this has caused the reduction of state involvement in the health issues. Anyway state remains the main key player for improving the way of resource allocation decision. Even though of changes in the political system, health indicators are in favorable position when compared with other countries that have similar per capita income level. A report issued by the World Bank discussed the role of government in health mentioning three key issues such as:

1) investment in health of poor people can reduce the poverty and its consequences
2) improving government spending in health sector
3) promotion of diversity in health services and health insurance.

MINISTRY OF HEALTH, HEALTH CARE FINANCING AND SPENDING

The Ministry of Health in collaboration with the Ministry of Finance play an important role on controlling health budget as they are the major funder of health care services. Ministry of Health has to work hard in improving the efficiency of financial resource allocation and it has to find the needs of population in the health sector. As it is seen in reality, the conditions of hospitals and health centers in Albania are in desirable conditions especially in rural areas.

When Albania was governed under communism regime there is little information of the financial amount of money invested in the health industry. While nowadays it is founded that Albanian health care services remain at a low level with 3.1% of the budgetary spending in health services, medical technology, vocational training of doctors and nurses.

Three sources of health service funding are:

1. General Revenues (public state budget)
2. Health Insurance Fund
3. Out of Pocket Payments

Main source of funding comes from the state budget. One of the problematic issues is the tax base given the low income of population. The reform strategy taken by the state was to establish the Health Insurance Institute. Except Health Insurance Institute, local authorities contributed on health care financing. A special budget is taken by them from the Ministry of Finance for paying staff costs, operational costs and maintenance costs. In the current situation, the financing scheme is the following:

- Funding of Hospitals depends directly on the decision of Ministry of Health where this Ministry allocates funds directly for staff salaries and other spending.
- The Institute of Public Health is directly funded from the State Budget
- Essential Drug List

The entities that finance the health system are: Ministry of Health and Health Insurance Institute. Ministry of Health is the major source of financing of healthcare with 2/3 of the total healthcare budget. Local Authorities are a crucial part of health care financing. Ministry of Health for 2010 accounts for contributing 2.25% of GDP in this sector.

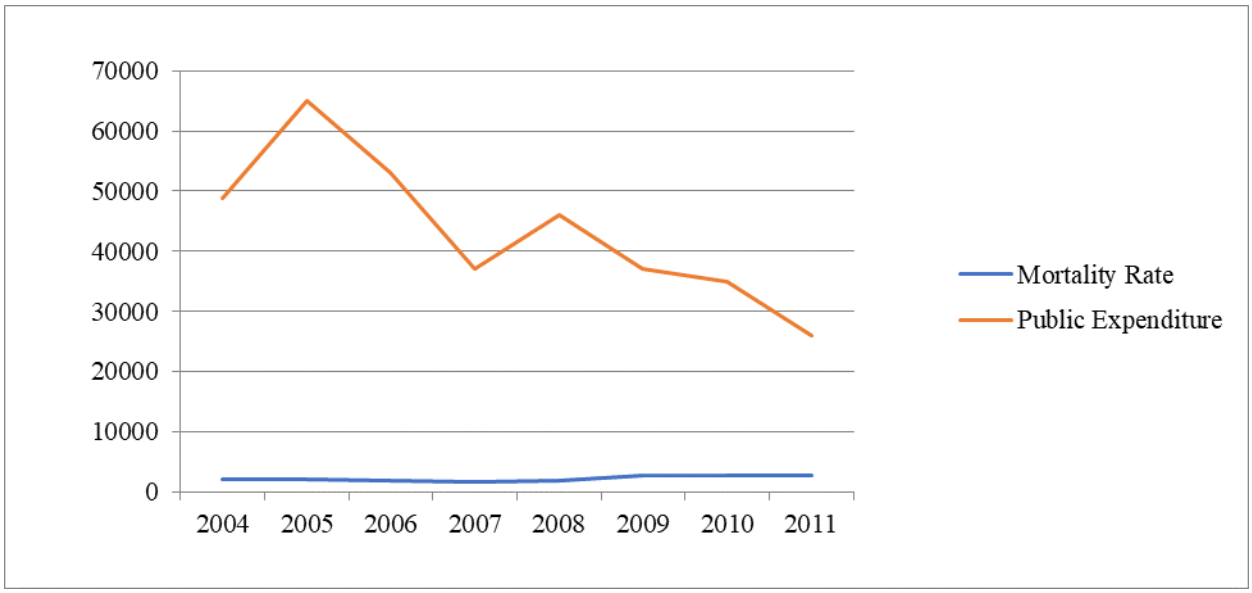
MORTALITY RATE SITUATION IN ALBANIA

Mortality Rate Reduction is an important indicator of the progress in the health sector in every country. Generally speaking annual mortality rate depends on the total number of population and from the risk of mortality. Odds of mortality in 2000-2010 are calculated for the entire country by gender and five-year age groups. Longevity at birth is 72.1 years for males and 78.6 for women. In every age, mortality is higher for men compared to women. Mortality decreases when age increases up to 10-14 but then increases constantly. Much of mortality risk under age 40 years old are less than 1, at the age of 60-84 years old this risk is even 100 times higher, about 1 to 10. In Albania infant mortality rate compared to East European Countries is 5 times higher than that of Western Countries. Because of cooperation and partnership with Soviet Union Countries mortality rate declined sharply after Second World War. However, in that time Albania with the lowest standard living in EU has a quite different health status from the other regional countries. In 1990 the average life expectancy was 67 years old. Albania has created a socialistic health care system throughout the nation, accessible and free of charge for everyone. Meanwhile, due to complete isolation from the outside world over the last 15 years, Albania has had insufficient health resources. The standards of quality of medical services became doubtful with obsolete equipment and old fashioned. There is no doubt that isolated agricultural lifestyle will have affected health status. The question is to what extent has the recent breakdown of the health care system caused deterioration in the situation regarding infant and maternal mortality rate. In 1989 there was a political instability, followed by a transition to a democratic system in 1991, which brought the economy downturn. The health care system, seen as a symbol of the old regime, was largely destroyed, causing deterioration in the provision of health services. The hospitals with old fashioned equipment, were working under bad circumstances too. Unfortunately infant mortality, already the highest in Europe, appeared to increase after 1990.

METHODOLOGY

Public health spending has statistical insignificant effect on health status (Ravallian, 1997).It is found that some countries are not affected by public health spending. In this study the exploration of the effect of public health spending in Albania on individual mortality rate using data from INSTAT is done. The regression model is run over a period of 8 years from 2004 to 2011 because of the data being more reliable in these years. According to the model an increase in public health spending will slightly decrease the mortality rate among Albanians. Albania is a country where state government plays a role in funding health service provision. State Government is dominantly responsible for health provision both in terms of health care and public health measures. The main objective of this study is to evaluate the relationship between public spending on health at state level and the probability of death at the individual level. So the specific research question is: Does public spending affects the probability of individual mortality? The answer of this question will be given by using the regression model and giving detailed explanation of regression analysis.

Figure 1: Public Expenditure and Mortality Rate



Source: (INSTAT, 2004-2011) (Ministry of Finance of Albania, 2004-2011)

Data

As mentioned above the data used for regression analysis are taken from INSTAT and Ministry of Finance where the data about adult mortality rate ranging from age 40 till 70 is taken by INSTAT and the data of public health expenditure is taken from the statistics published at the website of Ministry of Finance of Albania.

Regression Analysis

Following the graph, the relation between public health spending and adult mortality rate is weak for Albanian case through the years 2004 to 2011. The regression between capital investment in health generated by tax revenue and mortality rate of individuals will be analyzed. Public Health spending is the independent variable while adult mortality rate is taken as dependent one. The regression equation is: $Y= \alpha + \beta1*X + u$ where

X – is the independent variable, in this case the public health spending

Y – is the dependent variable, which is being predicted, in this case adult mortality rate.

α - is the expected intercept parameter, which equals the value of Y when the value of X=0

$\beta1$– is the expected slope, which tells who much Y changes for a given unit change of X

u – error term or disturbance term, the error in predicting the value of Y, given the value of X.

The equation of the regression model between the public health spending being the independent variable and mortality rate is the dependent variable is as follows:

Y = 3135.523 – 0.022194*X

RESULTS

The intercept would represent the value of adult mortality rate if the revenues taken by tax rate would be 0. Slope in this case is – 0.022 which shows the level of correlation between 2 variables and explains that a unit increase in X changes the expected value of Y by the amount of $\beta1$. As Ordinary Least Square estimate is unbiased because 4 assumptions of Simple Regression Analysis are fulfilled, a 1% increase in public health expenditure will decrease the mortality rate by 2.2 %. This result may be explained by changes in public investment in years. Generally the correlation between these variables is weak, giving support

to the studies related with this issue done by various international researchers. As for the statistical significance, the two sided alternative with significance level α= 5% and degrees of freedom 120 is chosen. The critical value is 1.96. As t statistics is – 1.680196 and falls out of the rejection region, there is enough evidence to accept the null hypothesis. Consequently the β1 coefficient is statistically insignificant which means that the value of β1 is not exactly 0 but near to 0.

Finally, explanatory meanings of the statistics found will be tested. In this part, how much of a variable inside the equation, the mortality rate can be explained by the variation in the other variable public expenditure. As R2 is equal to 0.319964 this means that only 32% of the change in mortality rate can be explained by a change in public health expenditure. So the R2 shows that the public health expenditure explains about 32% of the variation in mortality rate for this sample of 8 years. That means that 68% of the mortality rate variations is left unexplained. This lack of explanatory power may not be too surprising because there are many other elements that influence adult mortality rate; these factors are necessarily included in the error of the simple regression equation. Although R2 is considerably not a high value we can say that it is still possible that Ordinary Least Square regression equation is a good estimate of the ceteris paribus relationship between X and Y. This concept can be easily understood in this way: for every point increase in public expenditure, the adult mortality rate would decrease by a multiplier of 0.3199. If there is a change in public spending then according to estimations done during this period, a change smaller in death rate would be expected.

CONCLUSIONS

According to the studies done with the data, it is found that public health spending has a weak correlation with adult mortality rate, which means that 1% increase in public spending will cause less than 1 % decrease in mortality rate. This shows that there are other factors which more strongly affect the mortality rate and life expectancy mentioning here the level of income, diet used and working environment conditions. Investment in health is a controversial debate and more and more enforcement is needed for the right use of funds in the predefined areas of improvement. Ministry of Finance in collaboration with Ministry of Health play an important role on controlling health budget as they are the major funder of health care services. The intervention of state is necessarily needed even in the case of health industry because it helps to improve government spending in health, to promote diversity in health services and health insurance and enhance investment on behalf of health of poor people to reduce the poverty and its consequences. Mortality Rate situation in Albania is that this level decreases for age 10-14 and after 14 years old it increases constantly. According to statistics it is revealed that much of the risks of mortality are considered to be at age 60-84 years old. So concluding with the model, level of public spending does not strongly affect the level of mortality. However, the government should try to improve the economic performance and economic growth in order to have desired decreased level of mortality rate and higher life expectancy.

Even though the effect of the health spending in mortality rate is considerably low, Ministry of Health should continue to improve the efficiency of financial allocation resources because there are many other areas where improvement is really needed mentioning here: building new hospitals, construction of the existing one, purchase of machineries, equipments and other facilities, investment in the medicines, reduction of infant mortality rate and so on.

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