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The effect of Financial Decentralization on Efficiency of Health Services Delivery in the Provinces of Iran during 2006-2016: Using Spatial Econometrics

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11

EXTENDED ABSTRACT

INTRODUCTION

One of the most important parts of any country is the health sector and the health system, which has a great impact on the country's development. Developed countries consider their most successful services in optimizing and providing appropriate health and treatment services, because In a society, the provision of health care services and the health system in an optimal way will lead to the satisfaction of the society. In recent years, in response to the inability of central governments to provide public goods and services, many countries around the world have used decentralization. This method is considered a way to make the government more efficient, responsive and responsible.

METHODOLOGY

This research is applied in terms of purpose and in terms of causal-analytical method, during which it examines the effect of financial decentralization on the efficiency of providing public services using the combined data of Iran's provinces during the period of 1385-1395 using the spatial econometric method. In the current research, a two-step approach has been adopted: the first step is to estimate the efficiency coefficient, in which the efficiency of public services is estimated using the SFA random frontier method. Unlike non-parametric models that do not consider the effect of physical factors due to the limitation of the number of variables, the SFA model includes the model with multiple inputs. In the second stage, the effect of centralization on the efficiency of health services is investigated

12 **The effects of Natural Resources Rents and Good Governance on Happiness in Selected Countries: A Generalized Method of Moments approach**

Shahid Chamran University of Ahvaz
Quarterly Journal of Quantitative Economics
(former Economic Studies)

FINDINGS

The obtained results show that the effect of income and expenditure decentralization index on the efficiency of health services is positive and significant, and the square of the financial decentralization index on the efficiency of health services is negative and significant. The obtained results show that there is a non-linear relationship between decentralization and efficiency, and therefore an optimal value for decentralization can be obtained that the provinces that are below the optimal value can improve the efficiency of their health services by increasing decentralization; In other words, excessive financial decentralization will have a negative effect on the efficiency of health services. In fact, the initial levels of financial decentralization have a positive effect on efficiency, but after passing the maximum point, increasing financial decentralization leads to a decrease in the efficiency of providing public health services.

CONCLUSION

The results of the research show that the effect of financial decentralization of revenue and expenditure on the efficiency of health services is non-linear. The level of financial decentralization index has a positive coefficient with the efficiency of health services and a negative coefficient with the square of the decentralization index. This means that increasing the level of decentralization in the provinces does not always lead to an increase in the efficiency of health services, but it has an optimal limit for each province, and after reaching the maximum point, the increase in decentralization causes the efficiency to decrease. In fact, the loss of economies of scale and the increase of costs over benefits, the weakness of human resources, the low technological level of provinces compared to national institutions, the lack of a strong monitoring system that leads to corruption, are among the factors that prevent the positive impact of decentralization on The efficiency of providing healthcare services. The optimal level of expenditure decentralization in this research is 7.75, which most of the provinces of the country are at the optimal level in terms of external decentralization, so the increase in expenditure decentralization will not lead to the improvement of the efficiency of health services. In contrast, the optimal level of income decentralization is 44.36, which is Tehran and Isfahan provinces. are above this limit and other provinces are below the optimal value of income decentralization, so the implementation of income decentralization policy can lead to more efficient provision of healthcare services.

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14 The effects of Natural Resources Rents and Good Governance on Happiness in Selected Countries: A Generalized Method of Moments approach

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18 The effects of Natural Resources Rents and Good Governance on Happiness in Selected Countries: A Generalized Method of Moments approach

Shahid Chamran University of Ahvaz
Quarterly Journal of Quantitative Economics
(former Economic Studies)

Appendix

Results from estimating the efficiency of Health Services

Source: research findings

p-value	Statistical standard deviation	Estimated coefficient	Variable
0/001	0/25	-0/8512	Number of hospitals
0/000	0/2565	1/33	Number of active beds
0/000	0/2101	0/7937	Health and medical centers
0/043	0/146	0/43	Number of laboratories
0/000	0/088	-0/187	Number of employees
0/089	0/03260	-0/00046	Expenditures
0/032	0/2879	0/61	Variance of the inefficiency component and the random component (σ^2)
0/000	0/3687	1/66	Variance ratio of the inefficiency component to the total variance (γ)