

Title: Estimating a Cost Function of the Japanese Public Hospitals: An Evaluation of Health Care Provision in Japan

Abstract: Japanese public hospitals are widely spreading out in the nation and they have played an important role for health care provision as a public good. However, what patients expect from hospitals has changed because of improvements in medical techniques and the higher health care demand. There is a tendency that the public hospitals try to attain many departments for higher quality of health care. Interrelationships between hospitals and general practitioners are important for prevention of diseases and implementation of efficient health care provision with shorter wait time. This is the functional differentiation policy among hospitals and general practitioners.

This paper aims at evaluating provision of health care in Japan and hospital consolidations with using a cost function. A short-run total variable cost function of the hospitals observed in 2001 is estimated with the translog function for testing existence of economies of scale and scope between inpatient and outpatient services. Examinations about utilization in fixed input factors are taken. Moreover, an impact of nurses' wages against variable costs is considered. Regarding recent hospital financing issues in Japan, the effects of subsidies to the public hospitals are investigated.

The data are collected from the Yearbook of Public Firms published in 2003. The variable cost function and the cost share equations are simultaneously estimated with the SUR. The estimation results are as follows: 1) Economies of scale evaluated at the mean-scale hospital exist. 2) Economies of scope are not observed. 3) The fixed input factors are over-equipped. 4) Nurses' wages have a strong impact against the short-run variable costs. 1) and 2) lead to a perspective that the public hospitals should promote consolidations for economically efficient health care provision and the functional differentiation policy is acceptable. 3) and 4) imply that the public hospitals should control input resources efficiently.

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