Decomposition of cost efficiency in the regional long-term care system in Japan
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Introduction: Japan has a universal comprehensive long-term care insurance (LTCI) system operated by the central and local government. The increase in the aging population, the decline in birth rate, and the prolonged economic slump in Japan have forced policymakers to consider the efficiency of providing long-term care. In this paper, we examined the efficiency of Japan’s regional long-term care system.

Methods: We performed Data Envelopment Analysis (DEA) of 47 regions by prefectures, which are subnational jurisdictions. We applied the methods suggested by Thanassoulis et al. (2012) and Tone and Tsutsui (2007), and decomposed cost efficiency into technical, allocative, and price efficiencies under differing average unit costs among regions in order to shed light on the structure of cost inefficiency.

Results: We obtained the following preliminary results: (1) technical inefficiency caused the highest loss; (2) most of the technical inefficiency loss was from labor cost, particularly for professional caregivers providing institutional service; (3) most of the allocative inefficiency loss was from the labor cost for professional caregivers providing institutional service; (4) and the allocative inefficiency loss from labor cost for professional caregivers providing in-home services was a negative value.

Discussion: This study reveals substantial variations in efficiency across prefectures, and obtains the national level efficiency potential as 20%. The policy implication drawn from this study is that reformation of the institutional service and promotion of shift to the in-home service can help decrease expenses incurred by Japan’s long-term care system.

References:

Keywords: long-term care, cost efficiency, data envelopment analysis, Japan