# The relation between DPC participation of hospitals and their efficiency:
# A panel data analysis on Japanese Local Public Hospitals *

Kota Yoshimura

*Graduate School of Economics, University of Tokyo*

## Abstract

To clarify productive differences in hospitals, considerable amounts of researches have been done by measuring efficiency. As for Japanese studies, however, well maintained efficiency analysis with quality variables was quite challenging until the recent introduction of Diagnosis Procedure Combination (DPC). Still, since the introduction of DPC has been limited to some hospitals, previous papers could only estimate their efficiency. In this paper, applying the framework of missing data analysis, I attempt to impute quality variables for non-DPC hospitals, which enable to estimate efficiency of both DPC and non-DPC hospitals. The imputation model is carefully constructed while considering sample selection bias. I also construct discrete choice model of DPC introduction each year. Combining these estimation results, I find a tendency of DPC introduction that new participants of system show relatively low efficiency year by year. This finding may support how to construct an incentive scheme for participation of the system in part.

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