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主論文題名： Essays on Some Impacts of Deregulation in Japan: Methods and Applications using Frontier Functions (日本における規制緩和の効果について：フロンティア関数を用いた実証分析)				
(内容の要旨)				
<p>The introductions of competitions by deregulations have been often applied to reduce or eliminate the inefficiencies of the managers who supply public or quasi-public goods in less competitive situations. In Japan, deregulations have been implemented to improve the inefficiencies since 1990s. This thesis analyzes the impact of deregulation of the public sector and the regulated private sector. The particular deregulation that is analyzed was intended to reduce inefficiencies by introducing competition and promoting new entry. The main purpose of this thesis is to provide a useful methodological framework to measure the impacts of new entry on the efficiency of the public sector in Japan using frontier functions and to provide some empirical illustrations of this framework. Introduction part (Chapter 1) explains how deregulations can improve the inefficiencies in management, how frontier analysis has developed as a common empirical method to measure the inefficiencies in management, and how to measure the inefficiencies. In this part, the advantages of frontier analysis and the disadvantages are also discussed.</p> <p>Part I (Chapters 2 and 3) discusses the impacts of a particular type of privatization of public facilities, the Designated Manager System (DMS), which was intended to introduce market mechanisms into the public sector. In this Part, the impacts on the introduction around 2006 of the DMS for public halls are investigated. Chapter 2 measures how the productive efficiency of Japanese public halls has changed following the introduction of the DMS, using Stochastic Frontier Analysis (SFA) and Data Envelop Analysis (DEA). In particular, Chapter 2 hypothesize that the DMS has forced the managers of public halls to be more cost conscious, leading to an improvement of the soft budget problem. That is, the production possibility frontier for public halls is expected to shift upwards, and production inefficiencies would be smaller as a result of the introduction of the DMS. An unbalanced panel data set from 2004 to 2009 on 200, roughly 10 % of the total number of public halls, randomly chosen public halls was used to estimate a stochastic production frontier. The estimation results show that the introduction of the DMS did lead to an upward shift of the</p>				

production frontier, but it did not lead to any large change in the efficiency of production.

Chapter 3 attempts to examine whether public cultural policies to expand the demand for art and culture has succeeded in increasing the demand for private music concerts in Japan, using SFA. In particular, this chapter focuses on how the introduction of the DMS for public halls in 2006 increased the demand for private music concerts. A feature of this chapter is to capture some of the impacts of each local government's cultural policy to expand the demand for art and culture. This chapter theoretically represents how to measure the different impacts of cultural policy by each local governments, using the frontier function. The hypothesis that both local governments' cultural investments and the DMS have increased the sales of tickets for private music concerts is examined. Data from the Private Music Live Entertainment 2000-2008 is used to investigate the factors which influence on the sales of tickets for private music concerts. The estimation results support the non-crowding-in hypothesis and show that the DMS has increased sales of tickets for private concerts. That is, the results suggest the DMS has improved the local governments' cultural policies to increase ticket sales for music concerts.

In Part II (Chapter 4), the impacts of deregulation in a monopoly market, the electricity market, are discussed. In particular, the changes in cost efficiencies associated with the liberalization of the electricity markets are examined. Chapter 4 measures the improvement in cost efficiencies caused by higher degrees of the electricity liberalization, using SFA. In addition, this chapter also aims to examine whether or not economies of scale exist in the electricity generation sector and the transmission sector, and whether or not economies of scope exist between electricity generation and transmission. Since 1995, liberalization of the electricity market in Japan has been phased in and regulations on entry have been relaxed three times. One motivation for these regularity changes has been to improve the efficiency of electricity production by introducing competition. Using a panel data set on the nine main power companies over the period 1970 - 2010, estimates of fixed-effects and stochastic frontier models of the cost function are obtained and compared. Estimates of the cost function show that liberalization has improved cost efficiency when both frontier models and non-frontier models are estimated. Estimates of the fixed-effects model are used to calculate economies of scale and economies scope because the data support the fixed-effects model. Economies of scope are found to exist for all nine power companies, while overall economies of scope declined in the 1970s and have improved little by little since the 1980s.

Finally, Chapter 5 contains some concluding remarks that are derived from the

preceding chapters, focusing on the relevant methodologies and policy implications. Some of the potential areas for further research are also discussed.





