

The Impact of Liberalization on the Production of Electricity in Japan*

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ABSTRACT

This study aims to measure the impact of liberalization on the efficiency of electricity production in Japan, and to examine 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 regulatory changes has been to improve the efficiency of electricity production by introducing competition. Using a panel data set on the nine main power companies in Japan over the period 1970-2010, fixed-effects and stochastic frontier estimates of the cost function are obtained and compared. Estimates of the cost function show that liberalization has improved cost efficiency. Economies of scope are found to exist for all firms.

Keywords: cost function, liberalization, fixed-effects model, stochastic frontier analysis, vertical integration

JEL Classification Codes: H32, D22, L11

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