

A Study of Scale Economies and Price Differential in the Natural Gas Distribution Industry

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The purpose of this chapter is to prove price differential of the city gas industry in Japan by estimating scale economies.

There are three organizational forms in the natural gas distribution industry in Japan. In particular, the organizational forms between utilities which purchase natural gas from wholesalers and utilities which provide natural gas transformed into LNG by using its own facility are quite different. They are respectively trying to pursue their efficiency in a competitive manner. However, the results turned out to be quite different. This chapter estimates scale economies in two types of suppliers and factor analysis on the price of their suppliers, and then examines the influence which the differential of two organizational forms gave to gas price.

In conclusion, the affects of scale economy of utilities which purchase natural gas from wholesalers is larger than that of utilities which supply natural gas transformed into LNG by using its own equipment. In addition, this paper found that the prices of larger scale utilities were constant or at least not rising. This means that the city gas price has been decided under the influence of scale economies.

This paper has also found that price differential will become increasingly larger in the future. If the natural gas distribution industry is considered a universal service, the government needs to reduce this price differential. However, if this industry is considered a local service in a particular district, several utilities would lose in the competition, then stop supplying, and finally leave the market. Hence, the government needs to make a new policy as a next step after the reform of liberalization since 1995 by considering whether this industry is universal or not.

URL: <http://www.geocities.jp/hashimokei/Draft2012.pdf>