

Diversity of the means of natural gas purchase

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Overview

In recent years, natural gas average prices in Europe, the United States, and Japan are quite different. In the United States, natural gas prices are comparatively cheap because of shale gas provision, whereas gas prices in Europe and Japan are expensive. Japanese import gas price is the most expensive of the three. The United States and Europe have some maturing gas spot markets in their countries, while Japan does not. In Europe, natural gas import companies purchase gas via pipelines and by LNG in order to obtain bargaining power against sellers. On the other hand, Japanese import companies continue to purchase LNG with the convention that maintains the correlation between natural gas prices and crude oil prices. This study considers the affects that diversity of the means of natural gas purchase gives to gas price, using empirical analysis.

Methods

This study estimates the relationship between gas import prices and spot or futures prices with OLS models. This study uses the import prices in Germany and Japan as dependent variables. Independent variables are Henry hub spot prices, UK natural gas futures, and crude oil futures prices in New York. Because the last term (t-1) spot and futures prices influence the current term (t) gas prices, this estimation adopts lag models. This study uses monthly data from 1997 until 2013, and the number of observations is 204.

Results

Although the crude oil futures prices significantly influenced import gas prices in Germany and Japan until 2007, the price in Germany has strongly been affected by UK futures prices and Henry hub spot prices since 2008. Japanese gas price has significantly been affected by the crude oil futures prices since 2008.

Conclusions

The estimation results indicate that natural gas prices that are purchased by the contract that is linked to only crude oil prices tend to be at high prices such as Japan. This means that it is important to purchase natural gas from many regions by the contract that is not linked to crude oil prices. And also, in order to obtain the bargaining power against sellers, import companies need to purchase both natural gas and LNG. European countries have diversity of the means of natural gas purchase, compared with Japan. Therefore, in European countries, the fluctuation of gas import prices is small, and domestic natural gas prices are

stable.

References

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