THE IMPACT OF SECURING ALTERNATIVE ENERGY SOURCES ON RUSSIAN-EUROPEAN NATURAL GAS PRICING

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Overview

This paper examines the pricing of natural gas in Europe, and especially how alternative sources of gas supply affect the price of Russian gas. The increasing presence of LNG import capability in European ports has made this issue more important, especially for European policy makers. Theoretical results from an asymmetric Nash Bargaining model suggest that Russian prices should decrease as dependency on Russian gas decreases. The empirical results, obtained by estimating a correlated random effects model, corroborate this prediction by finding a negative relationship between Russian prices and average dependency on Russian supplied gas. We then show how the parameter estimates are consistent with Gazprom's recent reduction in prices in Lithuania following its construction of an LNG import terminal that secured access to non-Russian suppliers of gas.

Methods

An asymmetric Nash Bargaining model and a correlated Random Effects Estimation.

Results

First, an asymmetric Nash Bargaining model is developed to provide theoretical insight into the relationship between dependence on Russian supplied gas and its pricing.

Second, using a panel data set where many of the main variables are time invariant, I estimate a correlated random effects model after arguing that it is the most appropriate technique in our context.

Third, I find statistically significant estimates that suggest a statistically and economically significant negative relationship between pricing and average dependence on Russian supply.

Fourth, I show that results from the model can explain the recent experience of Lithuania. I then use the model to examine what might happen if Latvia followed the Lithuanian strategy by importing 20% of its gas from Norway. My estimates imply that it should expect a price decrease of around 11% from Gazprom.

Conclusions

The theoretical and empirical results suggest that investment in LNG import capacity underwritten by contracts with alternative suppliers should decrease the natural gas price charged by Gazprom. The impending increase in LNG availability, especially from the U.S., may thus provide an opportunity for European nations to reduce their dependence on Russian gas and especially to obtain lower prices from Gazprom.