

MARKET COUPLING BETWEEN ELECTRICITY MARKETS: THEORY AND EMPIRICAL EVIDENCE FOR THE ITALIAN-SLOVENIAN INTERCONNECTION.

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Overview

The integration of EU energy markets and networks is currently considered to be the best instrument to achieve the objectives stated in the common energy policy. The recent progresses towards integration appear to be obtained by groups of neighboring countries who share the same concerns about the implementation of optimal energy areas. National regulators, TSOs and power markets are the leading actors of this regional grouping which has been sustained by the EU policy as a way to increase integration by means of a bottom-up dynamic. In particular Market Coupling initiatives have flourished in the last decade and they are seen as platforms for the development of common cross-border cooperation mechanisms and for testing the effectiveness and implementation of EU market rules. For these reasons it is extremely important to analyze one of these experiences to evaluate the effect that a greater interconnection has on the major stakeholders such as consumers and energy producers.

The coupling of the Italian and Slovenian electricity markets, after more than three years of activity, is deemed to be a success. The main reasons alleged are: i) the convergence of prices in the two day-ahead wholesale markets (IPEX and BSP); ii) the improved efficiency in the use of the interconnection infrastructure; iii) a higher liquidity with respect to the one registered under the allocation regime of explicit auctions and iv) higher liquidity for the Slovenian market.

The strong growth in the use of market coupling is quantified by an increase in average volumes allocated to 415 MW, 95% of the total (values more than tripled compared to 2011), compared to a share become absolutely marginal and equal to 5% allocated through explicit auctions (71% in 2011). The increase in volumes traded on the Slovenian stock exchange (BSP), amounts from about 0.2 TWh in 2010 to 4.4 TWh in 2012.

Methods

In this paper we consider clearing prices of the day-ahead market run by BSP and clearing prices determined in the North Zone of the day-ahead market run by GME. Using recently introduced econometric techniques, we look for some form of convergence of the two series emerging after the activation of the market coupling mechanism. We aim at testing whether price convergence can be considered significant and hence whether or not the area is converging towards a single optimal zone of energy exchange.

Results

We analysed the clearing prices formed in the Italian and Slovenian electricity exchanges before and after the mechanism of market coupling was implemented and we observed that, although some form of price equilibrium has been reached, the two markets are still far away from being two strongly integrated markets.

Conclusion

Although It and Sl wholesale market do not appear to be strongly integrated, we are able to conclude that the market coupling experience has significantly improved the usage and efficiency of the interconnection between the two countries.