



Natural gas market integration in the Visegrad 4 region: An example to follow or to avoid?



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ABSTRACT

In this article, we focus on the ongoing project of natural gas market integration in the Visegrad 4 region. Employing discourse-network analysis – a novel methodological framework that combines stakeholder analysis with frame analysis, we map and evaluate the individual stakeholders' positions towards the project. The results show a substantial lack of shared understanding of what does such integration actually mean, how to implement it, how to recognize that it has been achieved, and how to relate it to integration that takes place at the European level. We conclude by identifying structural problems that prevent the regional integration from emerging and putting them in perspective of the common European gas market project.

1. Introduction

Over the last two decades, the EU has aimed to build up an integrated gas market, outlining a vision of a common trade area providing households and businesses with cheap, reliable and de-politicized supplies of natural gas. To accelerate this process, the EU encouraged regional co-operation, resulting in two processes: the division of EU Member States into three major regions of enhanced co-operation and support to various smaller bilateral and multilateral projects of gas market integration (ACER, 2016).

One of these is a project that the Visegrad Four countries (V4, the Czech Republic, Hungary, Poland and Slovakia) introduced in 2013, in a document entitled “The Road Map towards the Regional Gas Market.” The document called for the development of new, as well as further extension of existing, interconnections between the V4 countries and for preparation of market design for the V4 region (The Visegrad Group, 2013, p. 3). To date, the project yielded mixed results. While physical infrastructure development has prospered and V4 countries enjoy a growing grid of connection points, regulatory aspects of the integration project have stagnated. Not only has the goal of a multiply coupled market zone failed to come to pass, but even preparatory work has not yet been conducted (ACER, 2016).

The contrast between the generally successful cooperation in the field of energy, which ranks among the platform's top priorities and is appraised as the area in which it performs best (Kořan, 2011; Kořan et al., 2016; Törő et al., 2014), and the limited results of the gas market

integration project is the focal point of this article. Unlike the prevailing stream of literature which deals with technical, economic and/or regulatory aspects of the integration (Ascari, 2013; Dąbrowski, 2014a, 2014b; De Jong and Egenhofer, 2014; Osička et al., 2016; Slobodian et al., 2016) we focus on the ideational dimension of the issue, taking a closer look on the project's stakeholders and the ways they perceive the project and the roles that they themselves as well as the other stakeholders play in it. We derive our analysis from interviews we conducted with the top representatives of all major stakeholder institutions of the process in all V4 countries: ministries responsible for energy, national regulatory authorities, transmission system operators and ministries of foreign affairs; and we employ the discourse-network analysis (DNA) methodological framework (Janning et al., 2009) in order to unearth the shared as well as mutually incompatible conceptions that the stakeholders hold about the matter. The DNA-based approach provides, in our opinion, a useful perspective on the operational level of an integration process.

The presented insights into the V4 market integration project not only bring new information about the case itself, but also provide us with new perspectives on the general issue of market integration in the EU. Given the importance of the regional arrangements in the EU's integration plans we approach the V4 market integration as model that can help us identify the less apparent obstacles in the integration process. As such, the results are valid also from the standpoint of building of the common European gas market project.

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2. Theory and literature

The general issue of gas market integration is covered by a substantial body of literature. It includes issues such as dynamics between market integration and infrastructure development (Dieckhöner et al., 2013), impact on energy systems and energy security (Aalto and Korkmaz Temel, 2014; Costantini et al., 2007; Hirschhausen, 2006; Jirušek et al., 2015; Khan, 2017; Kyriakopoulos and Arabatzis, 2016; Le Coq and Paltseva, 2009), or the regional specifics of the integration process (Deitz, 2009; Fischlein et al., 2010; Jirušek et al., 2017; Renner, 2009). However, the most attention is arguably devoted to two strands of research: first, the question of how does an integrated market emerge into existence (Eberlein, 2008; Glachant et al., 2013; Padgett, 1992), and second, the way the market integration process affect the prices of the commodity (Asche et al., 2002; Hulshof et al., 2016; Neumann et al., 2006; Siliverstovs et al., 2005; Xunpeng et al., 2017).

Within the first strand of literature, significant attention is paid to the EU common gas market – a major integration project that is closely interlinked with the one that is taking place at the V4 level. The EU model is characterized by the gradual speed of transformation (Ruszel, 2015; Sencar et al., 2014; Yafimava, 2013) and the uneven level of willingness to shift competences from EU member states towards supranational institutions due to the fact that many European countries (like Poland or Hungary) view the energy industry as strategically important with emphasis on concepts such as energy as a public service and control over security of supply (Austvik, 2016; de Jong, 2004; Mišík, 2016). Moreover, the EU is still facing the various degrees of development of national markets due to the diversity in the way individual governments grasped and subsequently implemented market liberalization (Westphal, 2014). Given this situation, creating a Europe-wide market makes less sense and the gradual regional approach seems to be more realistic (Ascari, 2011). Concretely, the EU model is based on the assumption that a conjunction of neighboring (national) gas markets helps to create small (regional) integrated gas markets. Those markets represent the first step to the internal gas market in the EU (Glachant, 2011).

This assumption also represents one of the imaginary foundation stones on which the EU liberalization framework was built (Parmigiani, 2013). Starting with three Liberalization Packages, it was finally confirmed with a Gas Target Model (GTM) in 2011 and its re-formulation in 2015. The selected version of the GTM in fact replicates the general MECO-S model brought into the public discussion by the Florence School of Regulation under the leadership of Jean-Michel Glachant. Markets based on the GTM are planned to be structured as entry-exit zones with each having its own hub or virtual trading point (ACER, 2015). Furthermore, Sergio Ascari concluded that integrating smaller markets would be beneficial providing the final market fulfills three basic criteria of liquidity which are (1) size of at least 20 bcm/y, (2) three different sources of gas, and (3) low wholesale market concentration - HHI 2000 or less (Ascari, 2013). The regional cooperation is thus necessary, especially in the case of CEE and SEE, where liquidity, access to alternative supplies and traded volumes are limited.

In our research, we approach the V4 integration project as a case of such regional cooperation initiative (Gerring, 2007). Since we are interested in the project's stakeholders and their perceptions and expectations, we apply the DNA methodological tool on the case in question. The DNA approach is meta-theoretically grounded in constructivist tradition which assumes that reality is created, maintained and transformed chiefly through social construction (Berger and Luckmann, 1991). Social construction is a complex set of interactions between actors and social structures, which is mediated by both formal and informal rules. Through rules, actors are affected by social structures in which they are embedded (rules may affect actors' choices for example by rewarding or penalizing certain behavior) and vice versa – through obeying or confronting rules, actors re-shape social structures (Onuf, 2013).

Despite the method's key components – discourse analysis and stakeholder (network) analysis are being utilized in energy research regularly (see for example Sovacool, 2010; Fischlein et al., 2010; Kratochvíl and Tichý, 2013; Ocelík et al., 2017), it is the merger of both in the form of discourse-network analysis that potentially offers researchers much more granular picture of the attitudes and motivations held, and policies pursued, by stakeholders of complex processes such as gas market integration. Hence, the method has been used extensively in energy research since its introduction. Rinscheid (2015) examines Fukushima's differential impact on nuclear power policymaking in Japan and Germany, focusing on interaction patterns of policy elites. Khanna (2015) structurally analyses the configuration of debate on privatization versus nationalization of India's struggling coal industry between 1997 and 2013. Wagner and Payne (2017) uncover which actors are given a voice, which policy measures they favor and with whom they share policy positions in the Irish media discourse on climate change. Rennkamp and Bhuyan (2017) analyze discourse coalitions that emerge in support and opposition to the nuclear program in South Africa, arguing, in accordance with Hajer (1995, p. 66), that [discursive] story-lines potentially change the previous understanding of what the actors' interests are. Similarly, Brugger (2016) analyzes the relation between discourses, local policy network structures and the success of four German counties in implementing renewable energies.

In our research, we see the emerging V4 natural gas market integration as a social structure in the making. Notably, the actors' visions of the integrated market as well as their perceptions of the roles they and the others will play in it are crucial for determining the shape of the integration process. In our research, we reconstruct these visions and perceptions through the DNA approach, which allows us shed more light on the less-discussed ideational dimension of the integration process.

3. Method

Discourse Network Analysis generally allows for the analysis of discursive interactions of stakeholders over time while taking into account the complexity of discursive events (Haunss et al., 2013). A discourse network is a network formed by stakeholders who share beliefs and subscribe to particular concepts (Janning et al., 2009; Leifeld and Haunss, 2012). These interactions between agents and concepts can be characterized as undirected affiliation networks (Borgatti and Halgin, 2011; Wasserman and Faust, 1994). An affiliation network is a network between two distinct classes, with connections occurring between classes, but not within (Borgatti et al., 2013). In our case, the network is comprised of class of stakeholders and class of concepts that actors use to describe the phenomenon of interest. Stakeholders are only connected by their affiliation to a particular concept, and vice versa, concepts are connected only through particular actor who subscribes to several concepts.

In theory, the network may be represented as a graph $G(M, N, E)$, where M is a set of first class (stakeholders), N is a set of second class (concepts), and E is a relationship that connects nodes across classes (maps the set of concepts N to the set of stakeholders M) (Borgatti and Halgin, 2011; Wasserman and Faust, 1994). Visualization of a sample network is depicted in Fig. 1.

4. Data collection and processing

Four distinct groups of stakeholders based on their crucial impact on the gas market integration process were identified for the analysis: national regulatory authorities, NRAs (Czech ERU, Polish URE, SlovakURSO and Hungarian MEKH); transmission system operators, TSOs (Czech Net4Gas, Polish GazSystem, Slovak Eustream and Hungarian FGSZ); ministries responsible for energy, MoEs (Czech MPO, Polish ME, Slovak MH and Hungarian NFM); and ministries of foreign affairs, MFAs (Czech MZV, Polish MSZ, Slovak MVEZ and Hungarian MK).

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