Visegrad 4 States and Russian Gas Dilemma: Between Politics and Commercial Interests of Energy Companies

By
Ivan Smirnov

Submitted to
Central European University
Department of Political Science

In partial fulfillment of the requirements for the degree of Masters of Arts in Political Science

Supervisor: Professor Inna Melnykovska

Vienna, Austria
(2021)

Abstract: The presented thesis is aimed at considering drivers that influence energy policy outcome of decreasing or sustaining the energy dependence of Visegrad 4 states on Russian natural gas supply. The theoretical part provides the overview of the factors that influence the sustaining or decreasing the energy dependence of states that import Russian gas. The empirical part of this thesis provides the analysis of the structural and organizational power of energy companies in Hungary, Slovakia, Czech Republic, and Poland, along with the role that governments of the foregoing countries play in gas trade with Russia. The evidence provided indicates that the Czech and Slovakian gas companies were able to significantly influence the states' energy policies and, driven by commercial interests, to diversify the gas supply and reduce the energy dependence on Russia, although in the Slovakian case the power of companies decreased to almost zero after the main energy company was re-nationalized in 2014. The analysis of Poland and Hungary reveals the opposite trend, with governments were the key decision-makers on the energy dependence diversification and preservation, respectively, which indicates about the absence of structural power of energy companies in those two afore-mentioned states.

Table of Contents

Abbreviations

BACI	Bidirectional Austrian-Czech Interconnector gas pipeline project
BCM	Billion Cubic Meters
BCM/Y	Billion Cubic Meters/Year
BRUA	Common Bulgarian, Romanian, Hungarian, and Austrian pipeline project
CNG	Compressed Natural Gas
EPH	Czech Energy Company
E.ON	German energy company
FGSZ	Hungarian energy transmission operator company
FIDESZ	Hungarian right-wing populist party
GDF SUEZ	French energy company
LNG	Liquified Natural Gas
LTC	Long-Term Contract on gas supply
MCM	Million Cubic Meters
MCM/Y	Million Cubic Meters/Year
MET-Hungary	Hungarian private-owned energy company
MOL	Hungarian private-owned energy company
MVM	Hungarian state-owned energy company (since 2014)
NSI	North-South gas Interconnector
PGNiG	Polish state-owned energy company
PiS	Polish right-wing populist party
PM	Prime Minister
PO	Civic Platform – Polish centre-right party
RWE CZ	Largest Czech energy company

SGS	Southern Gas Corridor pipelines framework
SPP	Largest Slovakian energy company
TAP	Trans-Adriatic Pipeline
TANAP	Trans-Anatolian Pipeline
TSO	Transmission System Operator
VEMEX	Gazprom-owned gas transmission operator in Hungary
VNG	German Energy Company
V4	Visegrad 4

Introduction

The issue of Russian natural gas import has been of a special importance for the Visegrad 4[1] states, which is stipulated by their high levels of total energy consumption and energy dependence in comparison to the EU averages, alongside with the states' place in the transit chain of Russian gas supplies to the European Union (Szilárd 2015; Oravkova and Misik 2018; Osicka et al. 2021; The European Commission, 2021). The recent data, provided by the European Commission (2021) demonstrates that in 2019 the import dependency of Visegrad 4 member states on natural gas exceeded 80%, accounted for 109.7% for Czech Republic (with 16.1% share of natural gas in national energy mix), 115.2% for Hungary (with 33% share of natural gas in national energy mix), 136.6% for Slovakia (with 24.2% share of natural gas in national energy mix), and 83.1% for Poland (with 10.4% share of natural gas in national energy mix). Simultaneously, the Eurostat (2020) data indicates that "Russia was the largest supplier of natural gas to the EU, both in 2019 and 2020". Furthermore, the energy analysts outline Slovakia, Czech Republic, Poland, and Hungary among states that "receive between 75 and 100 percent of their natural gas imports from Russia" (Bartuska et al. 2019, 3-4). The observed dependence of V4 states on natural gas import, according to the research by Torocsik et al. (2021, 41), will preserve, since "natural gas is expected to remain a significant fuel source in electricity generation, and in the industry sector", with the "phasing out and closure of many coal units in the region".

Two gas crises of 2006 and 2009, resulted in the geopolitical disputes between Russia and Ukraine, heavily affected Hungary and Slovakia, decreased the share of the transited natural gas in afore-mentioned years and brought the issue of the security of energy supply on the table for all Visegrad 4 states in both the EU and V4 formats (Szilárd 2015, 362-363), which

[1] The Visegrad 4, also known as the Visegrad Group, is the political, economic, and cultural union, which exists since 1991 and consists of four states: Poland, Hungary, Czech Republic, and Slovakia.

"culminated between 2010 and 2013 when the original Buzek-Delors proposal of the Energy Union and the two flagship gas projects were introduced" (Osicka et al. 2021, 80; The Visegrad Group 2013). Russia's decision to build first Nord Stream and then Nord Stream 2 pipelines also strengthened the need for V4 cooperation, since the new Russian pipeline projects were expected to "significantly change the structure of natural gas supplies and strengthen the monopolistic position Russia in the EU Single Energy Market" (Jirusek 2020, 2). In 2016, the countries of the V4 firmly demonstrated consensus on the foregoing issue, not only addressing their concerns in an official letter to the European Commission, but also forming and implementing the common agenda on energy policy with the security of energy supply set as a key priority (Reuters 2016; Usiak 2018; Jirusek 2020). Along with the establishment of the coordination plans, the NSI East Gas framework (the North–South gas interconnections in Central Eastern and South-Eastern Europe) was developed to reduce the energy dependence of the foregoing V4 states (Oravcová and Mišík 2018, 15, 20-22). Most of the framework's projects were financially supported by the European Commission predominantly via the "European Energy Program for Recovery" (Oravcová and Mišík 2018, 16).

Nevertheless, despite the officially proclaimed common incentive to reduce the energy dependency and diversify the energy portfolios, the increased energy cooperation of V4 states, underlined by scholars (Minarik, 2014; Dyduch and Skorek, 2020), has been recently defined as "overrated" (Osicka et al. 2021, 59), uncoordinated and "of a strongly reactive nature" only (Osicka et al. 2021, 81), with "its' effectiveness not regarded as satisfactory" (Slufinska and Nitszke 2017, 25). The individual actions of V4 member-states also correspond to the assumption about the lack of the unified approach to energy relations with Russia, and to the import of Russian natural gas in particular. While Hungary officially supported the construction of Russian South Stream pipeline (Euobserver 2014), Slovakia supported the diversification of the gas supply and proposed an alternative Eastring project (The Moscow Times 2014).

Furthermore, the V4 states' approach to the gas import Long-Term Contracts (LTCs) also varies, with Slovakia extended its' LTCs with Russian Gazprom Export until 2032 (Gazprom Export – Slovakia 2021) and signed an agreement to transit Russian gas until 2050 (The Slovak Spectator 2017), Hungary extended its' LTC that was to expire in 2021 (Enerdata 2021), and Czech Republic's contract with Russia has been in force until 2035 (Gazprom Export – Czech Republic 2021), while only Poland has decreased the dependency on Russian gas the most, rejecting to prolong its' gas contract with Russian natural gas giant, completely re-orienting the supply towards the LNG (Liquified Natural Gas) from Norway, Qatar, and the US, and demonstrating the firm critical stance on the Nord Stream 2 since the very beginning (Reuters 2020). Thus, the above-mentioned discrepancy between the common V4 concern of energy security and difference in dealing with energy dependence on Russian natural gas supply constitutes the **research puzzle** of this work.

The previous research on the energy relations of Central and Eastern European states with Russia, including Visegrad 4 countries, has been mainly focused on the issue of energy security, with member-states energy policies were "marked by a very dominant focus on securing supplies of two primary energy sources, oil and gas" (Chester 2010, 889). The main argument in the analysis of V4, and more generally EU member-states energy dependence on the import of Russian natural gas presumes that Russia applied the "mercantilist strategy", based on the positioning of gas as a strategic resource, which serve as a tool for achievement of Russian foreign policy goals (Andersen and Sitter 2019, 61-63), so that it can hardly be defined as a "reliable gas supplier" (Andersen and Sitter 2019, 62). Nonetheless, one of the main shortcomings of the above-mentioned literature is its' predominant focus on geopolitical aspect of energy trade (Casier 2011; Judge et al. 2016; Sharples 2016; Khruscheva and Maltby 2016; Siddi 2020), with the other potential drivers of energy policies are usually absent in the analysis.

The importance of the domestic political factors in the analysis of states' energy dependence was emphasized recently by Balmaceda (2008; 2013), O'Donoghue (2011), Nosko (2013), along with Nosko and Misik (2017). However, although underlining state capture and rent-seeking activity of political elites as one of the most important drivers of Central and Eastern European states', including V4 countries, policies on energy dependency, the above-mentioned studies present mostly state-centred view on the issue of Russian natural gas import. Furthermore, the role of national and multinational gas companies in the states' responses to dependence on Russian hydrocarbons received only moderate attention within the academia (Stoddard 2012; Abdelal 2013; 2015; Abdelal 2018), especially within the V4 context (Misik 2016; Posaner 2020).

Besides, the existing analysis of the V4 states' incentives to reduce the degree of energy dependence on the import of Russian natural gas is mainly presented by the single case studies (Deak and Weiner 2019; Gawlikowska-Fyk 2019; Binhack and Tichy 2012), or rather focused on several interconnected infrastructural projects, such as Nabucco and Trans-Adriatic Pipelines (Szilard 2015, 363-365), or Nord Stream 2 and Turkish Stream (Jirusek 2020). Therefore, the comprehensive review of factors, which stipulates the V4 states approach towards energy dependency on Russia has not been provided by the existing literature on the topic.

Hence, the **goal of this research** is to fill this lacune, to analyze the energy dependence of the Visegrad 4 states, and to review, among other factors, the role that energy companies play in the foregoing states' policies aimed at protracting gas trade with Russia or diversifying the natural gas supply. In turn, the scientific novelty of this research is presented by the juxtaposition of economic interests of energy companies to political interests of the national political elites in Visegrad Group states, which has not been made in terms of the previous research on states' energy dependence, as was discussed above. The **research question** of this

paper is formulated as follows: ‘Why some of the V4 states preferred to significantly reduce the energy dependence on Russian natural gas import, while others do not despite the common concern with the security of energy supply?’.

The method applied in this research is presented by the comparative case study with the most similar systems design (MSSD). The selection of cases is based on the similarity of characteristics of the Visegrad 4 states, which are the following: Poland, Hungary, Slovakia, and Czech Republic are the members of the European Union and the EU Energy Chapter, the foregoing 4 states share the common concern with the energy security, while the natural gas import is of high importance for their national economies.

The data used in this work was collected from various sources and includes official press-releases of energy companies, operating in the Visegrad 4 states, along with the press-releases of Russian energy giant - Gazprom. Furthermore, the reports of energy regulatory authorities, state coordination plans on energy policy, and journalist investigations on lobbying activity of gas companies in V4 states were also analysed, summarized, and applied in this work.

The thesis is structured as follows. The first chapter is devoted to the analysis of conceptual approaches to states’ energy relations with Russia and to the review of the existing theoretical literature of factors that influence energy dependence sustaining or decreasing and their application to the Visegrad 4 states outlined in the previous research. The second – research design chapter - introduces hypotheses, formulated in accordance with the theoretical streams reviewed, outlines dependent and independent variables of this research, provides information on case selection and methodology applied, along with the description of the data used for the analysis. Chapter 3 presents the comparative analysis of drivers of sustaining energy dependence and diversification of energy suppliers and supply routes in Visegrad 4 states during 2009-2020 period. The final chapter concludes.

1. Reviewing theoretical approaches to study states' energy dependence

This chapter is focused on an in-depth analysis of existing theoretical literature on the topic of Visegrad 4 member-states energy policies. In the first section the conceptualization of the notions of 'energy dependence', 'energy interdependence', and 'energy security' is reviewed to reveal how they were applied to the analysis of states' energy relations in terms of the previous research, what are the defining features of those neighboring concepts, and whether those existing concepts are relevant and applicable to the study of V4 states' approaches to gas trade with Russia. The second part of the chapter is aimed at providing theoretical framework for study of V4 energy policies and factors that affect the energy dependence in the analyzed states towards the extension of the gas import from Russia or diversification of the supply and supplier(s).

1.1 Conceptualizing approaches to study Russia-V4 energy relations

The issue of gas trade of European states with Russia has been studied by scholars within both the International Political Economy, Political Science and International Relations for years, starting from the "East–West gas trade between the Soviet Union and Europe that began with piped deliveries in 1968 to Austria" (Abdelal 2015, 561) to the ongoing debate over the construction of various Russian infrastructural gas projects and Nord Stream 2, the construction of which has begun in 2015, in particular (Goldthau 2016; Adomeit 2016; Heinrich 2018). Nevertheless, the problem has remained of how to properly define those energy relations, what are their specific features and what stipulates those relations. In turn, when it comes to the analysis of the gas trade between Russia and European Union member states, including the 4 states of the Visegrad Group, three concepts are usually applied by scholars within the academia, namely: *energy interdependence*, *energy dependence*, and *energy security*. Those

three neighbouring concepts are interrelated and have clear similarities, although emphasise different aspects of the states' energy relations with Russia. The detailed overview of those concepts is presented in the **Appendix 1**.

1.2 Theoretical framework

1.2.1 Political factors of dealing with energy dependence

1.2.1.1 Rent-seeking activity of domestic political elites

One of the first scholars who stressed the importance of domestic politics as influencing the outcomes of state's energy policy was Balmaceda (2007; 2013). Analyzing the energy dependence of 'energy-poor' states, the author developed the concept of "rents of energy dependency", which is based on the idea that the reduction of the energy dependence is constrained by the rent-seeking actors, represented by domestic politicians and various interest groups (Balmaceda 2013, 11). Examining the energy policies of Ukraine, Belarus, and Lithuania, Balmaceda found out that in those three states the reduction of energy dependence on Russian gas supply was hindered by the domestic political elites, who along with interest groups constitute rent-seekers and strategically use the existing dependence to gain the personal benefits (Balmaceda 2013, 263-265).

More generally, the rent-seeking activity of state and the corruption practices as one of its' forms received the close attention of scholars (Coolidge and Rose-Ackerman 1999; Mohtadi and Roe 2003; Aidt 2016). Analysing economic sectors that are characterized with the existence of monopolies, Lambsdorff (2002, 101) argues that since "monopolies give rise to rents, these invite disputes regarding their distribution", so that "state may engage in attempts to obtain some part of the producer's rent". Cooperating with each other in non-transparent way, states

and private firms influence state' policies and legislation, with the state receiving benefits from the dominant position of the monopolistic firm, often through the corruption schemes (Lambsdorf 2002, 101-102). Since national energy markets are usually characterized by scholars as monopolistic (Abdelal 2013; 2015; Ruszel 2020), political elites could be interested in seeking rents from preserving this dominance by reducing the competition on the national energy markets through regulation that favour "national energy champions" (Deak and Weiner 2019, 8) and preserving the dependence on a single energy supplier.

The recent analysis of corruption rent-seeking and state capture in Central and Eastern European states was made by Nosko and Misik (2017). In turn, their evidence indicates about the significance of the two foregoing practices when it comes to the energy policy choices and preferences in the CEE states. In this context, state capture took two different forms, which, however, are successfully co-exist, as the results of the research by Innes (2014) demonstrate. According to the author, "the CEE region is peculiarly vulnerable to two modes of state capture: party state capture and corporate state capture", while those forms presume "re-politicization of the state in pursuit of political monopoly by party(ies)" and the "exercising of public power primarily for private gain" (Innes 2014, 88). Hence, the interests of political elites whether they are clearly political or based on the receiving of personal economic benefits constitute the distinct feature of political regimes in Central and Eastern Europe, including the V4 states in-question.

Analysing the rent-seeking activity of political elites in V4 states, scholars also emphasize the high level of corruption in the region, arguing that this is "a relatively frequent practice in the Czech Republic, and the situation in other post-communist EU countries is rather similar in this regard" (Němec et al. 2021, 2). The evidence on the rent-seeking corruption models in the Visegrad 4 states and the state capture, which have been developing after the countries' accession to the EU was also provided by Soukupová (2013) and Szanyi (2019), who notes that

"political and social control over transparency in political decision-making declined with the demise of classic program parties' role in politics and the raise of populist 'business firm' political parties" (Szanyi 2019, 1; See also: Szanyi 2016).

Hence, by adopting the legislature on energy regulations, which benefit national energy companies, politicians are aimed to benefit from such cooperation, which involves the participation of the third party – Russian energy company Gazprom. One of the best examples to support this statement is presented by the "energy law amendments in Hungary, to both enable construction of the South Stream in defiance of EU acquis, and to allow Gazprom to store and trade gas stored in Hungarian UGGS" (Nosko and Misik 2017, 207).

1.2.1.2 Preserving the status quo in domestic politics

In her work, Balmaceda (2013) applied the public demand theory, which shows "how electoral preferences and the voice of various political and social groups come – or not – to affect energy policies and to how differences in energy policy preferences may be used instrumentally by various domestic political groups" (Balmaceda 2013, 11).

Preservation of the political power through the "discretionary control over the state economy" was outlined by Levitsky and Way (2010, 66) as one of the tools at the disposal of incumbent governments. The authors emphasize that by exerting the control over the economy, political elites "may enhance incumbents' capacity to pre-empt or thwart opposition challenges" (Levitsky and Way 2010, 66). Following Levitsky's and Way's logic, the strength of the incumbent towards the opposition in case of the threat of not being re-elected rests on having the direct control over the important economic sectors, which can be achieved through the nationalization of enterprises or "in the form of rents controlled by the state, as in many mineral-based rentier states" (Levitsky and Way 2010, 66). The evidence for application of this strategy

by incumbent governments, although mostly authoritarian, in different contexts was also analysed by Green (2007) and Gel'man (2011; 2015). Developing the concept of "bad governance", Gel'man (2017, 6) further argued that the bad governance is motivated by the incubment's incentive to preserve the political power and note that "it is also a consequence of elite rent-seeking combined with weak and limited domestic and international resistance".

The cheap price of the hydrocarbons, especially natural gas, represents an important issue for the electorate of the energy dependent countries, so that the governments often try to receive the electoral support of the population by providing the cheap gas prices (Posaner 2020; Tsafos 2007; Deak and Weiner 2019). Since Gazprom's approach to gas trade with the European Union member-states varies from country to country and the gas export is based on bilateral contractual relations that allows renegotiation of the 'take-or-pay' principle of pricing and the provision of the discounts for gas supply, while the prices for Liquified Natural Gas remained higher in comparison with those for Gazprom's natural gas (Amon and Deak 2015, 82), the control over energy policy and the preservation of the supply of cheap Russian gas becomes the instrument which the incumbent government can use to gain electoral support of the population (Deak and Weiner 2019, 5).

Applying the foregoing arguments to the V4 context, the scholars are arguing about the existence of several authoritarian tendencies in V4 states, which is accompanied by the public criticism towards the political elites "for their authoritarianism, for ignoring the rule of law and the constitution, for their efforts to restrict judicial power, and for their criticism of free media and civil society" (Frič 2016, 95; See also: Rupnik 2007; Nový 2014; Pakulski et al. 2016; Enyedi 2020) and pro-Russian stances (Szomolányi and Gal 2016, 72).

The political elites' motivation to preserve the political power thus is closely connected with the energy policy conducted by the government, especially in states which are highly dependent

on energy import and thus are vulnerable from the prices of hydrocarbons, such as those in the Visegrad Group. In turn, Posaner (2020, 249) notes that "left-wing governments are motivated to maintain downward pressure on retail prices for consumers, making lower wholesale costs a strategic priority". Nevertheless, as the author's evidence shows, this motivation could be observed in case of right-wing governments as well, especially in the Visegrad 4 context (Posaner 2020, 195).

The above-mentioned argument was further developed by Nosko (2013), along with Nosko and Misik (2017). The scholars point out that "many politicians across the CEE region have discovered energy's wide-ranging potential for influencing economic competitiveness, and welfare provisions, and thus influencing the outcome of elections … that can be illustrated particularly well by the cases of Bulgaria, the Czech Republic, Hungary, and also Slovakia" (Nosko and Misik 2017, 208).

1.2.2 Structural and Organizational power of gas companies

The last, but not least factor, which has been omitted in the previous research is, as Abdelal (2015, 553) argues, the role of multinational firms in the energy industry. Examining the activity of European gas firms on the market of hydrocarbons, Abdelal (2013, 446) points out that unlike the European governing political elites "that interpret dependence on Russian gas as a threat have worried most about the possibility that Russia will coerce policy changes among European nations", European gas firms are "correct to discount this threat", following the logic opposite to governmental when it comes to the natural gas trade with Russia. Having the ability to influence the energy policy, the decisions on importing Russian gas were, according to Abdelal (2015, 563), "taken by the firms, while governments were only advised and consulted

and [had to] essentially delegate responsibility for energy policy and elements of grand strategy to the firms, which were tasked by their shareholders with maximizing profits".

Abdelal's assumption partly rests on the theoretical notions of structural and organizational power of business firms, developed by the scholars of International Political Economy (Lindblom 1977; Culpepper and Reinke 2014; Culpepper 2015; Kesarchuk 2016; Marsch et al. 2015). In turn, referring to Lindblom (1977), Marsh et al. (2015, 578) argues that "every political system needs a mechanism for taking decisions about jobs, prices, production and grants", with business controlling those decisions "in capitalist societies, as opposed to ministers or public servants". The power of business to affect the policy outcomes is based on the fact, that the government in market economies lacks the ability to coerce the business firms to invest into domestic economy, providing the latter with the "subsidized services, grants, tax breaks or government contracts" instead (Marsh et al. 2015, 579). Simultaneously, in contrast to the government, the business "has the ability to "threaten" the government that it will not invest or invest in another country", which stipulates its' "structural position and veto over government policy decisions in areas of economic, industrial and industrial relations policy" (Marsh et al. 2015, 579). Two important aspects of structural power should be mentioned in relation to Linblom's argument: firstly, the scholar assumes that the business does not completely dominate the decision-making process of government, since both actors are involved in the bargaining process, which is not "asymmetrical" (Marsh et al. 2015, 579-580; Lindblom 1977). Secondly, for Lindblom (1977), in capitalist system the interests of business are "legitimized as synonymous with the national interest of government" (Marsh et al. 2015, 579; Lindblom 1977). Besides, Culpepper (2015, 403-404), following Lindblom's (1977) logic points out that the bargaining between the business and government takes the form of the continuing "political struggle", defined with the particular "rules of the game": "when the rules of the game are up for negotiation, regulators and firms battle to exercise control, with

regulators are almost always more concerned about being able to exercise state power than firm managers and owners".

While Lindblom (1977) notes that the business can influence those decisions through the structural power, Culpepper and Reinke (2014, 429; Miliband 1969; Culpepper 2011) emphasize that the business rely not only structural, but also instrumental power, which represents the form of influencing decision making with "the various means, unrelated to the core functions of the firm, through which business influences politics: donations for campaigns, privileged access to policymakers, and lobbyists and organizations that defend business interests." Analysing the power of banks and their influence on bailout policies in the US and the UK, Culpepper and Reinke (2014, 432) also state that not only the two foregoing types of business power should be distinguished, but also two different dimensions of each type of power, namely: strategic and automatic. Whereas the former refers to the "organizational lobbying campaign contributions" for organizational power and "outside option" for structural power, the automatic forms of the afore-mentioned types of power is reflected in "application of public-private revolving door practice" in case of organizational and "disinvestment" in case of structural power of business (Culpepper and Reinke, 2014, 432).

The application of the argument about structural and organizational power of energy companies in the EU and V4 contexts is provided in the **Appendix 2.**

1.2.3 Europeanization of energy policy

The last factor, which is presented by the impact of the Europeanization of energy policy on the nation-states gas trade with Russia is described in the **Appendix 3**.

2. Research Design

2.1 Outlining hypotheses and introducing dependent and independent variables

In accordance with the foregoing theoretical argument of structural and organizational power, developed by Lindblom (1977), Smith (1999), Culpepper and Reinke (2014), Culpepper (2015), Marsh et al. (2015), and Abdelal (2013; 2015; 2018), in terms of this thesis it is hypothesized that the decisions on the reduction or sustaining of energy dependence of V4 states are stipulated by the structural and organizational power of energy companies. In accordance with that, the hypotheses of this research are formulated as follows:

H1: If the energy company has a strong structural and organizational power, then it plays decisive role in decision making on sustaining the supply of Russian natural gas or diversifying the suppliers and supply routes.

H1a: If the energy company has a strong structural and organizational power and its' commercial interest is to diversify the gas supply and suppliers, then the diversification and the decrease of energy dependence on Russian gas would be observed.

H1b: If the energy company has a strong structural and organizational power and its' commercial interest is to preserve the supply of Russian gas through LTCs' extension, then the sustaining of energy dependence on Russian gas would be observed.

Following also the theoretical arguments by Innes (2014) and Szanyi (2019) on rent-seeking politicians, along with Nosko (2013), Nosko and Misik (2017), and Posaner (2020) on the role of the political elites in the states' energy policies, it is also expected that the political elites would try to sustain the energy dependence on Russian natural gas import due to their rent-seeking motivation (Balmaceda 2007; 2013) or the desire to obtain the control over the state economy (and energy sector in particular) to preserve the political power, with the latter

expectation partly based on the argument made by Gel'man (2017) on the bad governance in post-communist states and the political elites as actors whose main interest is to preserve their political power, along with Levitsky's and Way's (2010, 66) on controlling economy as an important instrument for the sustaining of incubment's political power.

H2: If the energy company lacks a strong structural and organizational power, then the country's domestic political elites drive the decision making on sustaining the supply of Russian natural gas or diversifying the suppliers and supply routes.

H2a: If the domestic political elites are interested in rent-seeking, then the sustaining of energy dependence on Russian gas would be observed.

H2b: If the domestic political elites are interested in preserving the status quo in domestic politics, then the sustaining of energy dependence on Russian gas would be observed.[2]

According to Escribano (2007, 41), "one policy response to energy dependence is diversification, which tackles physical vulnerability of state". Moreover, the "physical vulnerability", as Escribano notes, "is usually estimated based on the geographic concentration of supply and the flexibility of a well-developed liquefied natural gas (LNG) infrastructure" (Escribano 2007, 41).

Thus, the *dependent variable* (DV) would be the variation of the degree of energy dependence, which is measured with, following the logic of Escribano (2007), O'Donoghue (2011), and Nosko (2013), whether the policy outcome was to support Russian infrastructural gas projects

[2] Potentially, one more alternative hypothesis - *H2c* "If political elites are interested in the increase of national welfare, then the diversification and the decrease of energy dependence on Russian gas would be observed" can be formulated. However, the hypotheses on political elites motivations, postulated in this thesis stem from the theoretical arguments of the research by Levitsky and Way (2010) and Gel'man (2017) on the 'bad governance', along with the findings of previous research on state rent-seeking and the incentive of political elites to preserve the political power in Visegrad 4 states (Innes 2014; Nosko and Misik 2017), which stipulates the assumption of this thesis that political elites' interests are limited by only two of the foregoing motivations.

and/or prolong LTCs with Russian Gazprom and its' affiliates or to decrease the dependence on Russian natural gas through the diversification of 2 aspects, namely:

1. Diversification of energy suppliers, which presumes the increase of number of natural gas suppliers other than Russia (predominantly – the suppliers of Liquified Natural Gas or 'LNG').
2. Diversification of energy supply routes, by which the development of the interconnectors and pipelines, alternative to Russian Nord Stream and Nord Stream 2, Turkish Stream and Yamal-Europe pipelines is presumed.

Correspondingly, the *structural and organizational power* of Polish, Hungarian, Slovak, and Czech energy companies, along with international energy companies that owned/own the shares in the national companies of 4 foregoing states constitute the first *independent variable* (IV) that is applied in terms of this research. Borrowing from Culpepper and Reinke (2014, 432), the structural power is operationalized with the application of "outside option" and "disinvestment", whereas the organizational or instrumental power in terms of this study refers to the "application of revolving door practice" and "organization of lobbying campaigns" by the energy companies of 4 states in-question. As Culpepper (2015, 395) argues, the problem arises when the scholars try to measure the structural power and to provide the causation in terms of the empirical analysis. Although there is still no consensus within the academia on what is the best way to empirically prove the application of structural power by business, in terms of this research one of the solutions, provided by Culpepper (2015, 396), who claimed that "accounts of structural power do best when they show the ways in which the structural power of business leads to outcomes that run in visible contrast to public opinion or governmental preference" is applied.

The second *independent variable* (IV) is represented by the *interests of the domestic political elites*. Following the theoretical assumptions, made by Balmaceda (2013), Nosko (2013), Nosko and Misik (2017), Levitsky and Way (2010); and Posaner (2020), the distinguishing between the rent-seeking of the state and the incentive of the political elites to preserve the status quo in the domestic politics, which is accompanied by the strategic use of the energy dependence on Russian gas import to gain electoral support and strengthen their political positions on the domestic arena is made. Rent-seeking activity of the political elites is operationalized with the adoption of the amendments that favour private or state-owned energy companies that have connections with those political elites (Lambsdorff, 2002). The motivation to preserve the status quo in domestic politics is measured with the exploitation of cheap prices on gas that follows from contracts with Russian Gazprom in the electoral campaigns of governments in analysed Visegrad Group states, targeting private energy companies in public speeches to accuse them in neglecting states' national interests, and politicians' negotiating with gas suppliers for gas price restructuring (Tsafos, 2007; Posaner, 2020).

2.2 Method and Case-selection

In terms of this thesis, comparative case study with the most similar systems design (MSSD) is applied in order to test the postulated hypotheses. The 4 cases of states that are selected for the analysis correspond to the 4 states of the Visegrad Group, although scholars express the opposite views on the features of those 4 cases when it comes to the analysis of their energy policies. The detailed description of case selection is presented in the **Appendix 4.**

2.3 Data

The data was collected from the number of various sources and includes V4 states' documents on energy policy, working papers, along with statements, published on Russian and V4 states gas companies and transmission system operator companies' websites, such as Russian 'Gazprom', Polish 'PGNiG' and 'Inwestycje Gaz – System S.A'; Hungarian 'MOL Group', 'MET International – Hungary', 'MVM Group'; Czech 'RWE Supply & Trading CZ', 'Net4Gas', 'VEMEX'; and Slovak 'SPP'. In addition, in terms of this thesis, the journalist investigations on lobbying activity of energy (gas) companies in the considered states, along with the previous studies that provide the comments from the states' authorities and energy companies' representatives are used to reflect the evidence of the application of the structural and organizational power of energy (gas) companies in the analysed states, since the official documents and working papers alone cannot provide a comprehensive account on that issue.

3. Comparative case study of V4 states' energy dependence on Russian natural gas supply

3.1 Hungary

3.1.1. Diversification of energy suppliers and supply routes

Since the gas crisis of 2009 affected the gas supply to Hungary in the way that the country was losing 30 million cubic meters (mcm) of Russian natural gas daily, while the daily consumption level accounted for approximately 60 bcm (Kaderjak 2009, 44), several steps towards the diversification of energy supply were made to decrease the total dependence on Russian natural gas import. In turn, since 2009 gas supply disruptions, the trend on the decline of the imports and the level of consumption has been observed (Amon and Deak 2015, 84). As analysts noted in 2015, "direct Russian gas imports have practically halved, mainly due to decreased demand, but also due to more imports from Western hubs" (Amon and Deak 2015, 89). In addition, Hungary built several gas interconnectors with the neighbouring countries to diversify the supply routes and avoid the possible supply disruptions from the Russian side. Firstly, the Szeged–Arad gas pipeline was introduced, which allowed Hungary to receive gas from Romania (Mol Group 2010). Then, the interconnector with Croatia was released and implemented in 2009 (Europaeishe Investitionsbank 2009), with the volume of gas transmission from Croatia to Hungary increased due to the recent improvements made by Croatia (Plinacro 2020). Hungary also interconnected its' gas grid with Slovakia in 2015 (EurActiv 2015).

Hungarian energy company MOL was supporting the construction of the Nabucco pipeline that was aimed at the diversification of natural gas supply, transmitting gas from Azerbaijan and Turkmenistan, and decrease of dependence on Russian gas import, with such step was also supported by the Hungarian political authorities in 2008, who even tried to expedite the

construction process and initiate several meetings with the international shareholders of the project, including the private-owned MOL itself (Budapest Business Journal 2008).

Hungary also joined the Southern Gas Corridor – the EU-backed diversification project which consists of several segments of gas pipelines, including Trans-Adriatic (TAP) and Trans-Anatolian pipelines (TANAP). According to the Hungarian Minister of Foreign Affairs and Trade Peter Szijjarto, "Hungary would have a physical link to the Southern Gas Corridor through an interconnector between the networks of Greece and Bulgaria as well as a pipeline between Hungary and Serbia, to be completed before the end of 2021", which would allow Hungary to import gas additionally from Azerbaijan and Turkmenistan (Ace Group Consultants 2021). In 2013, as a part of Southern Gas Corridor, the BRUA pipeline project was initiated by Hungary (along with Bulgaria, Romania, and Austria) with the financial support from the European Union, which was "intended to cut Eastern and Central Europe's dependence on Russian gas, an important part of the European Commission's third energy package and the CESEC group's objectives" (EurActiv 2017).

However, the dependence on Russian natural gas import has preserved, while "for many policy makers and political actors, Russia remains the dominant supplier, and Moscow has a strong mandate for negotiations on most energy-related questions" (Amon and Deak 2015, 88). After the Nabucco project was cancelled, Hungary re-oriented its' support towards the alternative project of South Stream, initiated by Russia, so that the deal was signed between the Gazprom and "state-owned Hungarian Development Bank to build part of the South Stream pipeline" (EurActiv 2009). Furthermore, in 2014, despite the active EU resistance to the new Russian pipeline, "Hungary's parliament approved amended legislation aimed at circumventing EU law, opening the way for the construction of the Russian-backed South Stream natural gas pipeline on Hungarian territory" (EurActiv 2014), although the project was finally cancelled and Turkish Stream was introduced by Russian Federation instead. The latter also received the support from

Hungary, which was linked to the Turkish Stream pipeline in 2019 in accordance with the agreement signed with Gazprom (EurActiv 2017). Hungary's participation in BRUA pipeline has also been problematic, with Hungarian energy companies that took part in the project implementation left in 2020 (CEE Energy News 2020).

Most importantly, Hungary imports the major share of Russian natural gas via the Long-Term gas contracts, that were first signed in 1996 between Russian Gazprom and Hungary with the "Russian-Hungarian joint-stock operator company Panrusgaz" (GazpromExport – Hungary 2021). The LTC, which expired in 2015, was further extended until 2021 (GazpromExport – Hungary 2021), while the recent negotiations in January 2021 between Hungarian political authorities and Gazprom indicated that the contract was again prolonged (Enerdata 2021). Finally, one step towards the supply of LNG was made by Hungary, which reached an agreement with British-Dutch company Shell "to supply 0.25 Bcm/year of LNG via Croatia terminal" (S&P Global 2020). Nevertheless, the afore-mentioned volume is negligible in comparison with the 8.7 bcm of gas supplied by Gazprom in 2020 (Enerdata 2021). Hence, Gazprom has remained the country's main exporter of natural gas, even despite several diversification projects were released, with only few of them were finally accomplished.

3.1.2. Role of energy companies v. role of domestic political elites

Hungarian gas companies have been represented by 'MOL Group' (with its' operator company 'FGSZ Natural Gas Transmission Limited Company'), 'MET – Hungary' (part of Swiss 'MET Group/MET Holding A.G.') – both private-owned energy companies, state-owned 'MVM Group', and joint Hungarian-Russian 'Panrusgaz'. Gazprom tried to establish relations with Hungarian companies several times and tried to increase its' presence in Hungarian energy sector, with the most active period was in the 2000's, while recently, as scholars argue, this

presence has been decreased (Weiner 2017, 205, 211). Simultaneously, one attempt to "purchase of 21.2% of MOL from Austrian OMV in 2009" was made by Russian Surgutneftegas (Deak et al. 2019, 69). Nevertheless, in 2011 Hungarian government purchased the Surgut's share in MOL back, so that the government received the significant share of 21.2% in Hungarian energy company (Reuters 2011).

The role of the afore-mentioned companies in the decision-making on the issue of gas trade with Russia, contrary to the structural and organizational power of energy companies' assumption of this research, has been very limited. Despite the fact, that private-owned MOL Group was one of the beneficiaries of the EU-backed Nabucco diversification project, the company left the project in 2012, while "voiced doubts over Nabucco several times since 2010 due to the project's uncertain costs and gas supply sources and concerns over its structure and management" (Reuters 2012). The position of company on Nabucco coincided with the position of two Hungarian governments both times when the project was released and when the company expressed its' intentions to withdraw (Budapest Business Journal 2008; EurActiv 2012).

The situation with the FGSZ transmission operator has been more controversial. The company was able to "abandon plans to develop its interconnector with Austria, throwing the future of BRUA into doubt" (Intellinews 2017) due to financial costs, which contradicted to the interests of this private-owned company and can be determined as the sign of application of organizational power, since the project was important to Hungarian authorities. However, the lack of structural power in case of FGZS can be demonstrated firstly with the permission for Hungarian segment of Russian-backed South Stream construction before the project was cancelled – "FGZS, the only private-owned operator company was not even included in the tender, while the state-owned 'South Stream Hungary' received the approval for the construction works" (Deak and Weiner 2019, 6); and, secondly, with reverse flows of natural gas during the 2014 Russian-Ukrainian conflict, when FGZS "temporarily stopped reverse

flows citing technical reasons, and increased import demand for Hungarian storage" (Amon and Deak 2015, 93), although the company was "financially interested and strongly advocated reverse flows" (Amon and Deak 2015, 93). In this situation, the company was dependent on the governmental decisions, which were made in favour of Gazprom interests, rather than to support the FGSZ that could gain financial benefits from the continuation of the reverse flow. Furthermore, the meeting between Gazprom CEO Miller and Hungarian Prime Minister Viktor Orbán "just three days prior to the Gazprom statement on Ukrainian transit played an important role in the gas export suspension" (Amon and Deak 2015, 93).

The situation in Hungarian energy sector has also changed significantly after the MVM company was re-nationalized under Orban's government. The overview of the changes in energy companies – government relations is presented in the **Appendix 5**.

Nevertheless, the question arises whether the foregoing companies have a strong structural power to influence the Hungarian decision making on the gas trade with Russia and diversification of the Russian supply. As the recent analysis demonstrates, the "questions related to natural gas imports and the long-term supply contract (LTSC), its renegotiation and the Russian pipeline projects were delegated to the political level" (Deak et al. 2019, 70). The evidence, which corresponds to this view, shows that during 2012-2020, the private-owned companies and transmission operators, such as MOL and FGSZ were absent during negotiations on gas trade with Russian Gazprom. Rather, the meetings were held with the active participation of Hungarian political authorities, including Orban himself or Hungarian Minister of Foreign affairs and trade Szijjarto: the latter represented Hungary during negotiations on the Turkish Stream in 2017 (Reuters 2017), signed a new contract with Gazprom in 2018 (Russian Business Today, 2018), 2019 (NeftegazRU 2019), and 2021 (Enerdata 2021), and conducted working-meeting with Gazprom CEO Miller in 2021 (Gazprom 2021).

The extension of the gas import dependence on Russia was stipulated by several reasons: firstly, cheap gas prices became the crucial component in Orban's electoral win in 2014: the support of Russian-backed South Stream was based on the Orban's strategic calculation, since "Gazprom's price concessions formed a key platform for a utility rate cut pledge, which aided Orbán's electoral campaign in 2013 and cemented his re-election in 2014" (Deak and Weiner 2019, 2). The cheap Russian gas as the part of the populist strategy of Fidesz to preserve the status-quo in domestic politics has remained crucial for Orban "social affordability" policy (Amon and Deak 2015, 90), while the Hungarian energy sector has remained "unprofitable, where price increases are not tolerated politically, and the state is forced to subsidise the sector in a manner that is hidden from the European Commission" (Amon and Deak 2015, 91). In this context, the policy choice towards alternative suppliers and supply routes was also predetermined by gas price aspect and its' importance for the incumbent government. The recent Hungarian agreement with LNG supplier Shell corresponds to the foregoing assumption: as Foreign Affairs and Trade Minister Szijjarto noted, "partly because of the coronavirus pandemic, and partly because of the overproduction crisis that preceded it, the price of LNG has fallen below that of piped natural gas. For this reason, we have decided to increase the role of LNG in the country's gas supply" (S&P Global 2020).

Thus, the case of Hungarian energy policy preferences demonstrates the absence of strong structural power of energy companies, although several of those companies obtained privileged position on the Hungarian gas market due to their organizational power applied. Instead, the decision-making on dealing with the dependence on Russian gas and diversification has been completely at the disposal of ruling right-wing populist party Fidesz and Hungarian Prime Minister Orban, who are strategically using gas contracts and low gas prices for preservation of their political regime in the country.

3.2 Slovakia

3.2.1 Diversification of energy suppliers and supply routes

One year prior to 2009 gas crisis, Slovakia signed "the Framework Agreement" with Russian Gazprom for delivering Russian piped gas to the country (GazpromExport – Slovakia 2021). However, the following Russian-Ukrainian disputes and gas disruptions led to the situation, in which the country "announced a state of emergency, started to draw gas from its own reserves, while several companies were forced to limit or completely stop production" (The Slovak Spectator 2009).

In accordance with that, several diversification measures were implemented to reduce the dependence on the Russian natural gas supply. In turn, the contracts with French GDF Suez "for 500 million cubic metres of gas per year supply", German E.ON Ruhrgas for a "supplemental 350 million cubic metres of gas" and a "short-term contract with Verbundnetz Gas (VNG)" were signed in 2009 (New Europe 2009; contracts expired in 2014), along with "contingency contract" with E.ON in 2014 (Posaner 2020, 194; contract expired in 2016). Further, Slovakia gas operator company 'Eustream' proposed the construction of the Eastring pipeline, which was aimed to "remove the need for the planned South Stream pipeline across the Black Sea, which is backed by Moscow and opposed by Brussels and Washington" (The Moscow Times 2014), although the project has not been finished yet. Nevertheless, the recent analysis indicates the lack of the EU interest in the project due to the fact, that "it has only limited impact on increased diversification within the CEE in particular and the EU in general, as it focuses mostly on Slovak transit issues" (Misik and Nosko 2017, 847). In 2021 the construction of LNG terminal in Bratislava Port was released, although the project is aimed predominantly "at reducing greenhouse gas emissions and pollutants in inland waterway transport on the river Danube" (EurActiv 2021). Finally, several gas interconnectors were

released with Poland (Central Europe Energy Partners 2019; Eustream 2019), implemented in Hungary (EurActiv 2014; Reuters 2020) and constructed, as in case with the Austrian TAG pipeline system (Coordinated Network Development Plan 2020).

Despite the gas supply disruptions, Slovakian energy company SPP still holds the LTC with Gazprom, which was renegotiated in 2010 and 2014 (Posaner 2020, 195; GazpromExport-Slovakia 2021). The SPP annual reports for 2015-2017, and 2018 (the latest report available) indicate that Russian Gazprom has remained the key supplier of natural gas (SPP Annual Report 2015; 2016; 2017; 2018). Moreover, among the results of the 2019 negotiations "between Russian PM Medvedev and Slovakian PM Pellegrini on joining Nord Stream 2 and Turkish Stream", it was stated by the Slovakian officials that the country "is ready to provide its storages for gas that will be delivered via the pipeline" (Reuters 2019).

3.2.2 Role of energy companies v. role of domestic political elites

The key energy player in Slovakian energy sector has been represented by the 'SPP' (Slovenský plynárenský priemysel). According to company annual report for 2003, the state (the Ministry of Economy of Slovakia) holds 51% of shares in the company, while "in addition to the State, … 49 % interest is owned jointly and equally by the German gas company E.ON Ruhrgas and the French gas company Gaz de France" (SPP Annual Report 2003, 4). The foregoing two companies, namely E.ON and GDF Suez were involved in the long-lasting conflict with the Slovakian government and personally Slovakian PM Robert Fico, who was in office from 2008 to 2010 for the first term, and has been the PM for the second time since his re-election in 2012 until 2018. The crucial aspect of this conflict was that the decision-making in terms of the SPP was in the hands of the foreign E.ON and GDF Suez, although they hold only minority stake of 49%, as was mentioned previously. After the gas crisis of 2009 heavily affected domestic

Slovakian gas consumption, SPP signed two contracts with de-facto its' key investors E.ON and GDF Suez, diversifying the supply of gas in Slovakia and decreasing the dependence on Russian gas import (Posaner 2020, 194). Both before and after crisis, Slovakian PM Fico accused companies with making financial benefits on Slovakian households, stating the necessity to re-nationalize the SPP (Reuters 2008; News Now 2017).

According to Kaderjak (2009, 44), Fico's government "blamed the gas importer and supply company managed by EON and GDF for accentuating the crisis by exporting 15-20% of the country's gas reserves from its storage sites while industrial consumers were curtailed". After Fico's re-election in 2012, the Prime Minister criticizes the previous government and both companies for the same activity: "In 2008, the German and French owners of [gas utility] SPP proposed a drastic gas charge hike. We countered with a proposal that this decision would no longer be the purview of the board of directors but rather of the general assembly of shareholders. But then, in 2010-12 under the government of Iveta Radicova, you returned that to the board of directors, in which the state is in a minority" (News Now 2017).

The evidence for strong structural power of SPP in Slovakian energy decision-making was also noted by Misik (2016), who analysing the interviews with Slovakian Ministry of Economy representatives emphasized that "the energy business does not include the government in its strategic decisions; foreign firms with shares in Slovak energy companies usually make decisions "back home", excluding their Slovak subsidiaries (some of them with government-owned shares) from this process" (Misik 2016, 76). Besides, government representatives acknowledged that "we [Ministry of Economy] are generally independent in the sense that nothing depends on us" (Misik 2016, 76). The SPP under the management of E.ON and GDF Suez until 2014 were able not only to influence national energy legislation of Slovakia (Misik, 2016, 76), but also conduct negotiations on the long-term gas contracts bypassing the governmental authorities (Misik, 2016, 76).

The situation changed significantly after E.ON and GDF Suez sold their shares in the SPP to Czech energy giant 'EPH' (E.ON 2013). The SPP was further re-nationalized under Fico's government as EPH sold its' shares and the right of managerial control to the state, with the Ministry of Economy now holding 100% of shares in the company (Centre for Eastern Studies 2013; Eustream 2021). Two aspects of the afore-mentioned deal are important for the analysis. Firstly, E.ON and GDF rejected to sell their shares in SPP directly to the government, while preferring Czech EPH. Secondly, the EPH, which agreed to sell the shares to Slovak government in 2014, further used its' organizational power to lobby for the Eastring pipeline construction with the help of the former Czech Prime Minister - Mirek Topolánek (Gotev 2015), although the analysts previously stated that the Eastring construction was promoted exclusively by the Slovakian government (Misik and Nosko 2017, 846-847).

Since the company turned to the total control of the Slovakian government, Gazprom has remained the key exporter of Russian natural gas to the country (SPP Annual Report 2018). One of the reasons that stipulates this governmental decision is the price of gas, so that similar trend can be observed in both Hungary and Slovakia. As Fico noted in 2013: "households need not worry about rising gas bills next year, as these will remain unchanged" (The Slovak Spectator 2013). While E.ON and GDF were following their commercial interests, increasing the share of gas suppliers in Slovakian energy portfolio until 2014, Fico's choice for importing Russian gas rests on the importance of cheap gas for his electoral campaigns, his political power as the Prime Minister of Slovakia, and as an additional reason for criticism towards the opposition government of Iveta Radicova, who hold the office in 2010-2012 and was cooperating with foreign E.ON and GDF Suez (Posaner 2020, 197).

Hence, the analysis of the Slovakian case reveals that decreasing the dependence through the diversification of gas suppliers in 2009-2010 was made due to the structural power of energy companies E.ON and GDF Suez, which hold 49% share in Slovakian energy company SPP.

However, after the SPP returned under the state control, the dependence on Gazprom's gas was sustained due to the strategic calculations of the domestic political elites to strengthen their political power, including Slovakian PM Fico.

3.3 Czech Republic

3.3.1 Diversification of energy suppliers and supply routes

Long before gas crises of 2006 and 2009 occurred, the Czech Republic made several steps towards the diversification of gas supply and decreasing country's dependence on Russian natural gas. In turn, "in the late 1990s the Czech Republic began importing from Norway, with total imports from Norway reached a quarter of gas consumption in the early 2000s, but have since declined, to 1.3% in 2015" (IEA 2016: 123). The LTC with Norwegian Statoil expired in 2017. As a diversification 'emergency' measure, Czech Republic has been able to receive "gas volumes from Norway as well as those from other European Union (EU) countries via German transmission networks to Hora Svaté Kateřiny" (IEA 2016, 123). Therefore, the country can exploit west-east reverse flow in case of gas disruptions, as it was with 2009 temporal termination of gas supply to Czech Republic, and further to Western Europe due to Russian-Ukrainian conflict over gas prices.

Furthermore, several gas interconnectors were released and supported by the European Commission under the PCI (Projects of Common Interest) framework, including "Poland-Czech Republic interconnector (currently known as "Stork II") between Libhošť and Hať in the Czech Republic and Kędzierzyn in Poland and "Bidirectional Austrian-Czech interconnection (between Baumgarten and Reinthal in Austria and Brečlav in the Czech Republic" (IEA 2016, 126). Besides, Czech Republic joined the South Gas Corridor initiative (Lyapina 2017, 11),

with the construction of afore-mentioned BACI and NSI interconnectors reflected in the Preventive Action Plan of Czech Ministry of Industry and Trade (2019).

Simultaneously, Czech Republic holds the LTC with Russian Gazprom, which was signed in 1998 and would expire in 2035. After the contract with the Norwegian gas suppliers was not extended after expiration in 2017, Gazprom de facto remained the dominant supplier of natural gas to Czech Republic. The detailed analysis of Gazprom – Czech Republic energy relations is provided in the **Appendix 6**.

3.3.2 Role of energy companies v. role of domestic political elites

The analysis of Czech energy companies involved in gas trade with Russia is focused on 3 privately-owned companies, namely: RWE, VEMEX, and Net4Gas. The former represents Czech "dominant wholesale gas supplier, which holds two long-term contracts, one with Gazprom Export and another with suppliers in Norway" (IEA 2016, 123). The latter represents the TSO that is owned by RWE, while 51% of VEMEX shares are owned by Gazprom through its "Gazprom Germania" (Zapletnyuk 2012).

The role of Czech government in energy policy is limited, which has been indicated by several analysts in different time periods (Posaner 2020, 164; Misik 2016, 77). Misik (2016, 77) argues that "Czech representatives perceive the position of their state vis-a-vis the energy business as unequal and weaker". Moreover, the interviews with the representatives of Czech Energy Regulatory Office indicate that the government had to make concessions for energy companies even though this contradicted to state position on foreign gas trade and its' regulation (Misik 2016, 77). The companies' role was decisive not only in the issues of the natural gas import, but in terms of the country negotiations with the EU, so that "the government was doing its best to hide that its position [was] that of [the main gas company]" (Misik 2016, 77).

Difference in the positions on gas trade with Gazprom on business-state level can be best demonstrated with the gas disputes between Czech RWE and Russian Gazprom over the take-or-pay obligations of Czech side (Reuters 2012). While government was not indicating any positions on the gas conflict with Russia, Czech gas companies pursued their commercial interests, which led to the Arbitration process between German-owned RWE Supply and Trading CZ and Gazprom (Posaner 2020, 169). One of the preconditions for the process was the numerous statements of RWE on the company's losses due to gas disruption in 2009: it "reported losses of $300 million for the full year 2010" (Posaner 2020, 155). As a result of 2012-2014 processes, Czech gas monopolist "won a lawsuit with Gazprom the obligation take-or-pay in the International Arbitration Tribunal of the International Chamber of Commerce (ICC) in Vienna" and achieved a revision of its' contractual obligations on payment to Gazprom (Lyapina 2017, 6). Interestingly, one of the consequences of the RWE Supply and Trading CZ's win against Gazprom was "retaining by company its' dominant position in the country throughout the duration of its contract, which results in restriction of competition on Czech gas market" (Offshore Energy 2013).

The reduction of joint projects and, most importantly gas supply (and thus physical dependence on Gazprom's natural gas supply) followed the RWE Supply and Trading CZ and Gazprom's disputes in 2012-2014 (Posaner 2020, 158). In addition, it was at that time RWE-owned Net4Gas TSO that initiated the diversification of supply routes and signing an agreement with Poland for the construction of the interconnection pipeline – right at the time the main company RWE was in the arbitration process with Russian Gazprom (Bloomberg 2012). The role of state in the gas disputes between RWE and Gazprom, initially limited due to the lack of the ability to put pressure on private-owned company only decreased during that period, which was stipulated by the "controversy in domestic politics in 2013-2014" (Posaner 2020, 157), although the attempt was made to improve relations with Gazprom from the side of Czech Republic's

government during the negotiations between Gazprom CEO Miller and "Vladimir Remek - Ambassador Extraordinary and Plenipotentiary of the Czech Republic to the Russian Federation" (Gazprom Press Release 2014). In addition, both sides emphasized "more than 45 years of efficient dialogue between the countries provided for secure Russian natural gas supply to consumers in the Czech Republic" (Gazprom Press Release 2014).

Despite the fact, that RWE Transport and Supply CZ still supplies Russian natural gas due to the importance of transit fees which the Czech Republic gains due to the transmission of Russian gas to the West (Lyapina 2017), the volume of gas imported decreased, with the interconnector projects and pipelines improved the energy security of Czech Republic and reduced country's dependence on Russian gas (Posaner 2020, 162-164). Nevertheless, gas supply has continued in terms of the agreement between Gazprom and its' partner company VEMEX, operating in Czech Republic on 500Mm³/year gas volume" (Independent Commodities Intelligence Services, 2012), which, nevertheless, constitutes only a small amount in comparison to the RWE Transport and Supply CZ's contractual volume of 6.9 bcm/year (Gazprom Group Export Report 2014).

Hence, Czech private companyRWE Supply and Trading CZ's commercial interests, which position became monopolistic after 2012, became one of the main drivers in the diversification process and the strengthening of Czech energy security, decreasing the country's dependence on Russian gas in 1990-s with the inclusion of Norway in the list of Czech energy suppliers, and in 2012-2014 during gas disputes and arbitrage with Gazprom for re-negotiation of prices and reduction of the volume of gas imported to Czech Republic.

3.4 Poland

3.4.1. Diversification of energy suppliers and supply routes

The gas disruptions of 2006 and 2009 affected Poland in the way that "the supplies to industrial consumers did not return to normal until 7 February 2009, according to PGNiG, with daily nomination volumes from Naftogaz Ukrainy only then confirmed as being at a normal level" (Posaner 2020, 113; PGNiG Press Release 2009). The reduction of dependence on Russian natural gas supply was officially announced by government with the plans for implementation of several important steps, including: "provision of service of virtual reversible transmission on the Yamal gas pipeline (5.5 billion m3/year, Poland - Germany); construction of the LNG terminal in Świnoujście (5 billion m3/year); expansion of transmission capacities in Lasów point of entry (a total of 1.5 billion m3/year, Poland - Germany); and construction of the interconnector in Cieszyn (0.5 billion m3/year, Poland – Czech Republic)" (Mlynarski 2015, 311).

The construction and further expansion of Świnoujście LNG terminal became one of the two top priorities for both Polish government and Polish gas company PGNiG SA, along with Gas-System SA TSO, since the project was aimed at the significant diversification of both suppliers and supply routes. Besides, the construction of Świnoujście LNG, which was finished in 2016, allowed country to make its' contribution to the North-South Gas Corridor construction – one more interconnector project, supported by the European Commission as a step towards diversification of gas supply and increasing energy security of the EU member-states (Gas-System SA 2016; The European Commission 2019).

The Baltic Pipe project represents the second main priority for Polish government and is aimed at the "transportation of gas from Norway to the Danish and Polish markets, as well as to end-users in neighbouring countries" (Baltic Pipe 2021). The construction of the project, however,

has not been finished yet, with Denmark recently revoked a permit for the construction of Baltic Pipe on Danish territory (RIA News 2021).

In addition, several contracts on the LNG supply from Norway, Qatar, and the US were signed by Polish PGNiG to decrease the dependence on Russian gas import. The detailed overview of those contracts is provided in the **Appendix 7**.

The Poland's relations with Gazprom after 2009 crises can be defined as contentious. Polish PGNiG holds the LTC with Russian Gazprom since 1996 (the so-called "Yamal Contract"), with the contract expires in 2022 (GazpromExport – Poland 2021; Posaner 2020, 115). Russian gas is supplied to Poland via Yamal-Europe gas pipeline (GazpromExport – Poland 2021). Although the Polish PGNiG and Gazprom signed a memorandum on gas cooperation in 2010 (Gazprom Press Release 2010); in the following years several re-negotiations on gas prices and volumes were initiated by PGNiG in 2012 (S&P Global 2012); 2014 (PGNiG Press Release 2014; Reuters 2016); 2017 (PGNiG Press Release 2017). In addition, those re-negotiations were accompanied by several arbitration processes against Russian Gazprom in 2011, which were "settled out of court" (Posaner 2020, 118), and 2014, with the latter ended up by PGNiG victory in 2020 (PGNiG Press Release 2020). Furthermore, in accordance with the results of Polish antitrust investigation, Gazprom "was fined with $7.6 billion (6.5 billion euros) for building the Nord Stream 2 gas pipeline to Germany, saying the project hurts Polish consumers and increases Europe's dependence on Russian imports" (AP News 2020). Despite the Polish Regulatory Office reports state that "the import from the East, carried out as part of a long-term contract concluded between PGNiG S.A. and Gazprom, continued to be important" (National Report of the President of the Energy Regulatory Office 2019, 83), the trend has changed after the foregoing PGNiG arbitration ended up, so that the company announced in 2020 that no renewal of LTC with Gazprom is considered by PGNiG after it would expire in 2022 (Reuters 2020).

3.4.2. Role of energy companies v. role of domestic political elites

In case of Poland, the structural power of gas companies has been limited, as evidence shows, due to one simple reason – both 'PGNiG' and Polish TSO 'Gaz-System SA' represent state-owned companies. The former – PGNiG – has been in the ownership by Polish state since the company's establishment in the beginning of 1980s. According to the recent PGNiG official shareholders data (PGNiG 2020), the State Treasury of Poland holds 71.88% of shares in the company, which presumes that the Polish state controls decision-making process of PGNiG, along with Gaz-System SA, where the Polish state has been the only shareholder (Gaz-System SA 2021). Hence, negotiations on LTC with Gazprom almost in each case were agreed with the governmental authorities, including those conducted in 2012, 2014, and 2017.

The only episode when PGNiG was acting independently in terms of the negotiations with Gazprom was the signing in 2013 of a "Memorandum of Understanding on the development of the long- postponed second phase of the Yamal pipeline project with a capacity of what was agreed to be no less than 15 bcm/y, which could transit Poland to serve the Slovak and Hungarian markets" between Gazprom and EuRoPol Gaz – the company that was owned by both Gazprom and PGNiG that were holding equal shares of 48% (Posaner 2020, 119; PGNiG Press Release 2013). The reaction of the Polish PO government, headed by then-Prime Minister Donald Tusk followed almost immediately – "Tusk dismissed Treasury Minister Mikołaj Budzanowski on 19 April, with PGNiG's chief executive Grażyna Piotrowska-Oliwa relieved of her post 10 days later" (Posaner 2020, 119). Interestingly, 5 years after PGNiG CEO was fired by Tusk's government, she won the process against the PGNiG (Money PL 2018).

It was Tusk's government which initiated gas suppliers' diversification and signed contracts with Vitol, Statoil, and VNG. Further, the diversification intensified, which was driven by ruling right-wing PiS government, together with President Andjey Duda, who is also affiliated

with PiS (Polityka Insight 2019). In turn, it was "government Plenipotentiary for Strategic Energy Infrastructure Piotr Naimski", who "announced that Poland would not extend the Yamal contract for gas supplies from Gazprom which expires in 2022", and made a decision on re-orientation of gas supply towards LNG from Qatar and the US, which was planned to be accomplished through "the expansion of the LNG terminal capacity in Świnoujście (from 5 to 7.5 billion m3)" and the construction of Baltic Pipeline (Polityka Insight 2019). The number of interconnectors "with Lithuania, the Czech Republic, Slovakia and Ukraine, which were supposed to increase Poland's export capacity by about 20 billion m3 (up from the current level of about 3 billion m3)", proposed by PGNiG, were also supported by Polish government (Polityka Insight 2019). In this context, one can argue that there was a sign of organizational power application by PGNiG: in 2016, the PiS government passed a law, which created favorable conditions for state-owned PGNiG, so that its' "share in the retail market went up in 2016-2017 from 73.7 to 82 per cent" (Polityka Insight 2019).

During 2016-2020, the Polish Government and PGNiG were acting synchronously with the goal of decreasing energy dependence on Russia. Firstly, the Polish Government expressed its' support to PGNiG in the case of OPAL pipeline (PGNiG Press Release 2016). Secondly, while PGNiG in its' official press release stated that it aims to "protect Poland's interests by participating in an appeal to Nord Stream 2 AG" (Montel 2020), the Polish government supported the initiative, with "three ruling Law and Justice (PiS) party MEPs prepared a draft resolution on the Russian-German Nord Stream 2 pipeline" (Poland In 2021).

Several reasons can be underlined when it comes to the causes of Polish government's agenda on gas trade with Gazprom: firstly, by diversifying the suppliers and supply routes, PiS government was able to respond on the Nord Stream 2 construction, which would increase the volumes of gas imported to the European Union, bypassing Poland. The political discourse of Poland reveals that this project, along with Russian energy policy in Europe is perceived in

Poland as a security threat to European energy (Heinrich, 2018). Secondly, PiS, which holds almost total control over the domestic and foreign political dimensions in Poland has stable and firm position in relations with Russia, which deteriorated even further after the 2010 tragic incident with then-Polish President Lech Kaczynski, Russian annexation of Crimea and gas crises of 2009 and 2014, with the latter caused by the ongoing political conflict between Russia and Ukraine (Siddi 2020).

Therefore, during the analysed period of 2014 – 2020, it can be concluded that the decision-making in energy sector and gas trade in particular was at the disposal of Polish government, which has controlled Poland's energy giant PGNiG and national gas TSO Gaz-System SA. The actions towards diversification of gas supply were implemented by the afore-mentioned companies, which can be determined as a part of Polish state political agenda in bilateral relations with Russia, aimed at the promotion of energy independence of the EU from Russian natural gas supply, while also indicate about the absence of structural power of gas companies in Poland.

3.5 Comparing V4 states policy outcomes of sustaining/decreasing energy dependence on Russian gas

Comparing first the drivers of gas trade with Russian Gazprom and the diversification of energy supply, along with adding new suppliers of gas to V4 states' energy portfolios, it is necessary first to recap the hypotheses, postulated in terms of this thesis. According to the first hypothesis (*H1*), "if the energy company has a strong structural and organizational power, then it plays the major role in the decision making on sustaining the supply of Russian natural gas or diversifying the suppliers and supply routes", with the *H1a* presumes that the diversification take place when in it correspond to the commercial interests of the energy company with strong organizational and structural power and *H1b* postulating that the sustaining of the dependency on Russian gas

supply import would happen in case it goes along the economic interests of the energy company with strong organizational and structural power. The second hypothesis (*H2*) presumes that "If the energy company lack a strong structural and organizational power, then the country's domestic political elites drive the decision making on sustaining the supply of Russian natural gas or diversifying the suppliers and supply routes". Hypotheses *H2a* and *H2b* postulate that the sustaining of energy dependency is stipulated by the rent-seeking activity of state and preserving the political power of the incumbent, correspondingly. The results are summarized in the **Table 1**, while the detailed analysis of the results in the examined V4 states provided in the **Appendix 8**.

N	Hypotheses	Hungary	Slovakia	Poland	Czech Republic
H1	If the energy company has a strong structural and organizational power, then it plays the major role in the decision making on sustaining the supply of Russian natural gas or diversifying the suppliers and supply routes.	Not confirmed	Partly confirmed (2009-2014)	Not confirmed	Confirmed
H1*a*	If the energy company has a strong structural and organizational power and its' commercial interest is to diversify the gas supply and suppliers, then the diversification and the decrease of energy dependence on Russian gas would be observed.	Not confirmed	Confirmed	Not confirmed	Confirmed
H1*b*	If the energy company has a strong structural and organizational power and its' commercial interest is to preserve the supply of Russian gas through LTCs' extension and support of infrastructural projects, then the sustaining of energy dependence on Russian gas would be observed.	Not confirmed	Not confirmed	Not confirmed	Not confirmed
H2	If the energy company lack a strong structural and organizational power, then the country's domestic political elites drive the decision making on sustaining the supply of Russian natural gas or diversifying the suppliers and supply routes.	Confirmed	Partly confirmed (2014-2020)	Confirmed	Not confirmed
H2*a*	If the domestic political elites are interested in rent-seeking, then the sustaining of energy dependence on Russian gas would be observed.	Confirmed	Not confirmed	Not confirmed	Not confirmed
H2*b*	If the domestic political elites are interested in preserving the status quo in domestic politics, then the sustaining of energy dependence on Russian gas would	Confirmed	Confirmed	Not confirmed	Not confirmed

be observed.

Table 1: Results.

4. Discussion and conclusion

This thesis analyses what drivers stipulated the decisions of V4 states whether to sustain energy dependence on Russian natural gas supply or decrease this dependence through the diversification of suppliers and supply routes. The main assumption of this research, which stems from the theoretical literature on the issue in-question is that the strong structural and organizational power of gas companies stipulated the Visegrad 4 countries' choices towards the sustaining of energy dependence on Russian gas or diversifying the supply routes via constructing interconnectors and pipelines, alternative to Russia, and suppliers, signing the contracts on piped and Liquified Natural Gas supply with exporters, such as Norway, the US, and Qatar.

The comparative empirical analysis of Visegrad 4 states' energy policy choices in the domain of gas trade reveals that energy companies with strong structural and organizational power, such as Czech RWE Supply and Trading CZ and Slovakian SPP during the period of company control was by foreign energy giants E.ON and GDF Suez until 2014, when the company was de-facto re-nationalized under the Fico's government, played the decisive role in the decisions towards the diversification of natural gas supply and suppliers that was dictated by their incentive to obtain financial gains from the decrease of energy dependence on Russian natural gas supply. In sum, the empirical results of this work go in line with the arguments of the previous research (Balmaceda 2013; Nosko 2013; Nosko and Misik 2017), which presume that the state-capture, rent-seeking activity of state, and the motivation of political elites to obtain control over energy sector to strengthen their position and preserve the status quo in domestic politics constitute an important drivers of sustaining energy dependence on Russian gas supply, as could be observed in the analysis of Slovakian and Hungarian cases, provided in terms of this paper. Furthermore, the presented evidence also supports the argument of scholars on energy populism (Tsafos 2007; Mazzuca 2013), according to which the prices of the

commodities, such as hydrocarbons, including oil and gas stipulate targeting energy companies with the incentive to obtain the direct control over their activity that can be best observed in criticism of Slovakian SPP by prime minister Fico before the company was re-nationalized.

Our theoretical expectations on the structural and organizational power of companies as the main driver of energy dependence sustaining or diversification in V4 states, however, found little or no evidence in cases of Poland and Hungary, along with Slovakia since 2014, where the decision-making on gas trade was driven by the political authorities, who tried to strengthen their political position in domestic political arena with the preservation of cheap prices on Russian gas – as in case of Slovakia and Hungary, increase the energy security of their state, mitigate the economic losses from the construction of Russian-backed infrastructural gas projects – as in case with Poland, or to seek rents, as the Hungarian case indicates. Those results can be partially explained by the fact that the Soviet legacy of the CEE states affected the establishment and development of institutions, by which the business-state relations are determined: "as long as post-Soviet business seeks rents rather than profits and until redistributive logic predominates over the growth-generating one, it cannot have structural power" (Kesarchuk 2016, 13). Furthermore, not only structural power can be absent due to the above-mentioned reason, but also the organizational power in post-Soviet states is often applied "behind-the-scenes, [with] personalized influence sometimes enjoyed by individual business people", in contrast to Western European states, where the opposite situation is observed (Kesarchuk 2016, 21; Handley 2008, 11).

The lack of evidence in support of our hypotheses on the two possible motivations of political elites on sustaining energy dependence on Russian supply in case of Poland, nevertheless, corresponds to the findings of the previous research (Nosko 2013; Weiner 2018) that argues about the difference of Poland approach to energy policy and the importance of energy security in comparison with other V4 states. The potential alternative explanation can stem on the

theoretical assumptions on deteriorating Polish-Russian bilateral relations (Jirusek, 2020; Siddi, 2020). In contrast to Poland, the difference of V4 states' bilateral relations with Russia and cooperation of Hungarian, Slovak, and partially Czech governments with Russian political authorities was outlined by Dangerfield (2012), Lenc (2015), and Marusiak (2015, 38), who stated that "the most notable cleavage within the V4 states is their evolving relations with the Russian Federation", although the scholars were focused predominantly on the states' positions on the conflict in Ukraine and their attempts to play the role of intermediary between Ukraine and Russia and the pro-Russian separatists in Donbas" (Marusiak 2015, 45).

Another assumption, explaining the collected results regarding the Polish case is presented by the construction of negative "Russian Other" as the fundamental element of the Polish right-wing ruling PiS party's foreign policy agenda. Siddi (2020, 546) notes that the construction of national identity constitutes an important factor for the energy policy choice of the states and predetermines whether the state in terms of its energy policy would follow conflicting or cooperating strategy regarding hydrocarbons trade with external suppliers. Following Siddi's (2020, 546) argument, the negative "Russian Other" may stipulate the state's choice of decreasing energy dependence on Russia and intensive energy diversification, since Russia is viewed as a serious security threat. The discourse analysis of policy documents by Heinrich (2018, 76-78) shows that in Poland, when it comes to the Nord Stream 2 construction, the energy relations with Russia are viewed through the prism of 'security threat' and the necessity for increasing county's security of supply, with the diversification of routes and suppliers of gas serving as a most common solution.

Simultaneously, as the cases of energy companies RWE Supply and Trade CZ and Slovakian SPP under foreign control show, strong structural and organizational power can be decisive for the energy policy outcomes, especially in terms of preservation of the energy dependence on Russia or diversifying the gas supply. This evidence supports the argument of the International

Political Economy scholars, such as Abdelal (2013; 2015; 2018) and Culpepper (2015) about the importance of new dimension in countries' energy policies analysis, namely: energy companies' structural and organizational power, while contributing to the study of the national energy policies formation and their influence on the Visegrad Group states' attitudes towards the EU energy initiatives, such as the Energy Union development (Nosko and Misik 2017), explaining the variation between states' actions to reduce energy dependence on Russian natural gas supply – the goal that enshrined in the EU energy strategies (Wach et al. 2021).

Nevertheless, the further research is required, with more thorough analysis of Visegrad 4 states' choices towards each EU and Russia-backed infrastructural gas projects, consideration of the new more extensive data on lobbying activity of energy companies and decision-making process in all 4 states, which can be collected from the interviews with the government authorities of V4 countries and energy companies, operating in Visegrad Group.

Appendix 1. Conceptualizing approaches to study Russia-V4 energy relations

The first concept of *energy interdependence* defines the gas trade as a clearly economic and commercial issue. The concept of interdependence was first developed by Nye and Keohane (1973) in their prominent work 'Power and Interdependence' and in that time did not concern the energy trade specifically, rather focussing on the economic cooperation between states as a mean to avoid military conflict. *Energy interdependence* presumes the economic engagement of both sides, involved in trading process, which is based on the idea that "mutual need in trade may motivate each state to strengthen bonds in other areas, thereby strengthening the web of interstate linkages that tie states together and decreasing conflict between them" (Krickovic, 2015, 4).

However, when it comes to the gas trade between Russia and European Union member-states, scholars provide different assessments of those relations. Krickovic (2015) argues that those relations can be defined as *symmetric interdependence*, since the EU depends on the supply of Russian natural gas in the same way that Russia depends on the EU as a main exporter of Russian fossil fuels, so that "both sides would face daunting costs if the energy relationship is severed or disrupted" (Krickovic 2015, 9). This view corresponds to the arguments by other scholars, who labels energy relations as a "two-way phenomenon" (Paillard 2010, 72), in terms of which the energy consumer can also impose influence on the supplier, whose channels of energy supply are not diversified (Quester 2007, 445). As Quester (2007, 445) notes, "the complexities of an increasingly interdependent world may thus present surprises on all sides, with the location of political power being more difficult to sort and predict, and with the joint gains of exploiting economic exchanges, perhaps coming out ahead of considerations of relative power". Nevertheless, the argument by Casier (2011), in contrast to the foregoing studies, indicates that this conceptual view of energy trade as interdependence is applicable only to the

limited period of Russia-EU energy relations. Furthermore, the author argues that during 1990s, those relations were rather *asymmetrical,* which was stipulated by the economic instability of Russia after the collapse of the Soviet Union: "energy relations were not framed in competitive terms, but the emphasis was rather on helping to make Russian energy sectors competitive, suggesting if not Russia's . . . dependence on the EU, then at least an asymmetrical interdependence to its disadvantage" (Casier 2011, 538). This view was enshrined in the "EU Common Strategy on Russia of 1999", which was developed around the "assumption of Russia's weakness and instability" (Casier 2011, 538).

With the political and economic development of Russia under the Vladimir Putin presidency the shift towards the analysis of the gas trade with Russia in the geopolitical or strategic terms occurred (Casier 2011; Nitoiu 2016), so that the notion of *energy dependence* was applied.

In general terms, the use of the notion of energy dependence in the field of states' energy relations varies depending on the context. For instance, Balmaceda (2007; 2013, 15) applies the notion of energy dependence to the analysis of post-Soviet states, such as Ukraine, Belarus, and Lithuania, gas trade with Russia by emphasising the dependence as a precondition for the rent-seeking activity of interest groups, stating that in accordance with that view the reduction of the energy dependence is constrained by the rent-seeking actors, represented by domestic politicians and various interest groups. However, when applied to the EU, the notion of energy dependence has been used by scholars not as a self-sufficient framework for the analysis of the energy relations, but rather as the definition for the condition of the dependence on the Russian natural gas import that represents a security concern for the EU member-states, with the gas pipelines considered as a geopolitical tool at the disposal of Russian foreign policy strategy, so that two components often highlighted within the academia in relation to energy dependence: 'geopolitics' and 'foreign policy strategy' (Casier 2011). In turn, after the 2006 and 2009 gas crises occurred, experts and scholars started to write about Russian energy as a geopolitical

instrument or "energy weapon" at the disposal of Russian 'hard power', which took a central place in assertive Russian geopolitical strategy of firstly "regaining political and economic influence in its near abroad" (Hogselius 2012, 1), and then against the European Union (Andersen and Sitter, 2019). According to Erixon (2008, 1), Russia started to actively exploit the long-term dependence and use its' gas import to Eastern and Western European states in the way that "allows to play games with Europe as a whole by engaging individual member countries on a preferential basis, clearly to their advantage", de-facto returning to the strategy applied in Soviet times. Since then, the Visegrad 4 member-states became the most vocal advocates for the prioritization of '*energy security'*, bringing the issue of the security of energy supply on the table for those countries in both the EU and V4 formats (Szilárd 2015, 362-363).

One of the not numerous attempts to develop the concept of energy dependence was made by Casier (2011). Based on the works of Nye and Keohane (1973), along with the study by Barnett and Duval (2005), Casier (2011, 541) provides four defining features for the *energy dependence as a security concern* in the EU-Russia energy relations, namely: 'the existence of real dependence vulnerability'; "high degree of asymmetrical interdependence", reflected in "the absence of demand dependence on the Russian side"; existence of "a political will to make use of the energy weapon"; and, finally, the occupation of "a dominant place in the hierarchy of issues in the given context by energy dependence".

Considering the issue of dependence vulnerability, which "refers to the costs after a certain period of time and is determined by the availability of alternatives", Casier argues that the EU dependence cannot be viewed as completely vulnerable, since the EU is developing policies for energy diversification, while it is costly for Russia to develop new pipelines, so that "the stability of demand creates worries for Russia" (Casier 2011, 541, 543). Furthermore, as the 2008 financial crisis and the sharp decline of the oil prices demonstrated, Russian economy is vulnerable, which indicates about the lack of high asymmetric interdependence in favour of

Russia (Casier 2011, 544). Finally, Casier (2011, 545) points out that "with the EU Russia's policy has been predominantly pragmatic, trying to avoid tensions escalating and fundamentally jeopardising relations". Hence, the energy dependence of the EU on the import of Russian gas, although stipulated by the Russian geopolitical calculations, is not one-sided and indicates rather about symmetric interdependence, which correspond to the arguments of the previously reviewed strand of literature on *energy interdependence*.

Assessing Casier's approach to the study of energy trade, one may argue that it is mostly outdated due to the set of reasons. Firstly, there has been an ongoing increase of energy consumption in case of the EU observed, which indicates that the energy dependence of European states on Russian natural gas import has preserved (Hogselius 2012, 1). Secondly, concerning the vulnerability of Russian demand, the recent studies indicate that Russia has been also diversifying the net of its' gas importers, expanding its' infrastructural gas projects to the East, strengthening the energy relations with China (Abdelal 2018, 161). Most importantly, such conceptual view of energy trade between Russian and European Union does not reveal the degree of the diversification within the EU among various EU member-states and the possible variation in that aspect, along with how this affects the character of gas relations with Russia for individual member-states.

Furthermore, one obvious weakness of both *energy dependence* and *interdependence* conceptual frameworks is that when applied to the analysis of the EU, the emphasis in the previous research is made on the EU as a monolithic actor, with the difference in the extent of energy dependence or interdependence among the different EU-member states, and Visegrad 4 states in particular, being usually not examined. Besides, those conceptual approaches concentrate exclusively on inter-state relations that are driven either by the economic or geopolitical/strategic rationales of the governing elites in terms of the energy trade, omitting

the complexity of the energy trade and the possibility of other non-state actors and forces to affect the energy policy outcomes, regarding the natural gas import from Russia.

Analysing the third strand of literature, which is devoted to the application of *energy security* concept to the issue of energy trade, it is important to distinguish, as Nosko (2013, 18) argues, "two waves of energy security literature". While the first relates to the 1970-s and portray the energy as an issue of "hard security", the latter is characterized with going beyond the "hard security" towards the analysis of the new dimensions (Nosko 2013, 19).

Considering the first wave of energy security research, Deese and Nye (1981), along with Nosko (2013, 19) argue that the security was predominantly viewed as a constituent part of foreign policy that was aimed to address the problems with the prices for energy and hydrocarbons supply. In accordance with that, one of the important components of energy security concept can be highlighted, emphasized by the scholars of the first wave (Deese and Nye 1981; Nosko 2013, 18-19), which has been overlapping with the notion of energy dependence – geopolitics.

To the contrary, the second wave of energy security research, as Nosko (2013, 20) justly claims, characterized with the exploring and inclusion of new dimensions. In turn, the recent definitions of energy security emphasise the importance of such aspects as energy price, sufficiency, and stability of supply (Yergin 2006), forms and the quantity of supply (Månsson et al. 2014), thus highlighting the importance of economic dimension of the energy trade (Sovacool 2013). Different view on the energy security was stated by Pach-Gurgul and Ulbrych (2019, 177), who argues that it "could be defined with regards to an individual, a local and regional community, a state and the international community". Based on the broad strand of recent research on sustainability, renewable energy and diversification, the authors complement the above-mentioned views of energy security concept with the additional dimensions, focusing on

'ecological', 'economic', and 'infrastructural' aspects (Pach-Gurgul and Ulbrych 2019, 175-177). While the former generally correspond to the notions, pointed out by Yergin (2006) and Månsson et al. (2014) and is devoted to the conditions, stipulating consumer's ability to purchase energy, the latter two outline the shift towards renewables and "reduction of the emission of CO2, or the use of new environment-friendly technologies, e.g. CCS (carbon capture and storage)" on the one hand, and the state's ability to plan, develop, and finance the infrastructural energy projects (Pach-Gurgul and Ulbrych 2019, 178). Along with that, Von Hippel et al. (2011, 6724) state that "environment, technology, demand-side management, social and cultural factors, and post-Cold War international relations – are central additions to the traditional supply-side point of view" towards the issue of energy security.

The emergence of new dimensions of energy security prompted scholars to emphasize the complexity of the concept, which combines both economic and geopolitical dimensions. As Jaaskelinen (2018, 3; Aalto and Temel 2014) claims, "energy security remains a slippery or polysemic concept that varies contextually, culturally, politically, temporally, spatially and in terms of energy source". Other scholars characterize energy security as an "equivocal, multifaceted dynamic term" (Pach-Gurgul and Ulbrych 2019, 177; Chester 2010; Dyer & Trombetta 2013).

Cherp and Jewell (2014: 107), as they argue, developed new approach to understanding of the features of the energy security, outlining three key dimensions. The scholars note that the fisrt dimension is focused on the study of energy security concept through the prism of geopolitical relations between energy exporters and consumers, the latter two "assesses energy security through quantifiable factors, such as demand, scarcity or infrastructural capacity" (Jaskelinen 2018, 3; Cherp and Jewell, 2011, 37) and emphasizing "nuanced anticipation of known and unknown risks", concerning energy security (Jaskelinen 2018, 3; Cherp and Jewel, 2014, 112). Furthermore, considering geopolitical or 'sovereignty' dimension of energy security,

Jaaskelinen (2018, 3), along with Mayer and Schouten (2012, 24), also characterises energy security as a "specific assemblage that consists not only of perceptions of (in)security, including political and market trends, but also material flows and physical infrastructures".

Another two approaches – market-centred and state-centred – were outlined by Jirusek (2020, 2), who points out that the advocates of the former portray energy as a strategic resource, which is of a high importance for state, which is acting on the international arena. The latter approach, on the contrary, "is based on liberal theories, stressing the role of multilateral cooperation, interdependence and, most importantly, market exchange. In this sense, energy is an ordinary commodity and state interventions are undesirable" (Jirusek 2020, 2; Chester 2010, 889). Nevertheless, as scholars argues, "market-based assessment alone is not sufficient and energy security is often considered as an element of (national) security in general" (Jaaskelinen 2018, 3).

Comparing the concepts of energy security by Cherp and Jewell (2011; 2014) and Jirusek (2020), it is clear that, despite the new names and labels for the aspects and dimensions of energy security, those dimensions, in fact, correspond to the old geopolitics and the view of energy as "hard security" (Nosko 2013, 19), highlighted by the IR scholars in late 1970-s, and the economic aspect, outlined by the second wave of the energy security research, which also could be observed in the notion of *energy interdependence.*

What unites the foregoing notions and the variation of the concept of the energy security, while simultaneously representing its' main weakness, is that they do not provide the comprehensive framework, which can help for understanding of the possible difference in states' energy policies in terms of the energy trade. Moreover, they portray the energy security as an ultimate goal of the energy trade, while the energy security constitutes only "one of the policy priorities of gas trade" (Nosko 2013, 26). In turn, as Balmaceda argues, the domain of domestic politics

is often excluded from the analysis of energy dependent state's policy choices, "as conceptions of energy security continue to focus mainly on security of production, prices, and physical availability of energy". (Balmaceda 2013, 7). Thus, "the authors in the search for understanding the variation of importance given to the energy security among various countries in their energy policies rather refitted the definitions to fit the empirical observations" (Nosko 2013, 24). Besides, as Nosko (2013, 24) argues, "instead of finding reasons for this discrepancy and variation, the authors pursued the road of changing and widening the definition of energy security to fit the empirical observations".

Applying energy security to the study of V4 energy policies, one need to note one of the first comprehensive attempts to account for the energy security in CEE states and their variation in energy policy preferences, which is presented by the work of O'Donoghue (2011). Defining the energy diversification as one of the tools for increasing the energy security, O'Donoghue (2011, 15) outlines the following three dimensions: "diversification of energy resources which means a variety in a countries energy mix between oil, gas, coal and renewable energy sources"; "the geographical diversification of energy supplies, which takes into account that gas via pipeline often travels a far distance from source country"; and, finally, the "diversification of transport routes, which is linked to alternative pipeline routes".

Similar approach could be seen from Nosko (2013). The author applies the "narrow definition of energy security as sensitivity to energy import dependence", outlining "five constituent aspects: the level, type and structure of a) transit diversification, b) supplier diversification, c) import market concentration, d) energy mix and finally e) energy prices" (Nosko 2013, 26).

Although arguing that "energy policy is not only about security, but about other policy aims such as welfare, competitiveness, efficiency, environment and general industrial policy as well", Nosko (2013, 27) claims that analyzing energy security among other drivers of energy policy is still helpful in understanding why some energy consumer states decrease the energy dependency

rate of their country in accordance with the 5 indicators, developed by the author, while others do not.

The review of the existing conceptual frameworks to the study of gas trade with Russia showed that 'energy dependence', 'energy interdependence', and 'energy security' are closely interrelated. While the research on energy interdependence outlines the economic engagement of the trading sides as the key component of energy trade, in case of the EU-Russia gas trade the relations represent the asymmetry and indicate about the energy dependence of the European member-states, including four V4 countries in-question, namely: Poland, Czech Republic, Slovakia, and Hungary. The afore-mentioned dependence, in turn, represents the security dilemma for the EU, which is stipulated by geopolitical and geostrategic, rather than economic aspects of the energy relations. In this context, the concept of energy security combines the elements of both energy dependence and interdependence, mixing geopolitical and economic dimensions of the Russian gas supply to Europe. The weakness of the application of those three concepts in the previous research, however, is that they did not account for the context-specific features of the V4-Russia energy relations, portraying either economic cooperation or energy security as the ultimate goals for interdependence and energy security, respectively. Furthermore, even despite the conceptual novelty in terms of the latter, made by O'Donoghue (2011) and Nosko (2013), their energy security concept is state-centric and does not examine the possibility of non-state actors' interference in the policy process of V4 countries gas-trade with Russia.

Appendix 2. Structural and organizational power of energy companies in the European Union and Visegrad 4 states

Turning to the issue of the EU-Russia energy trade, Abdelal (2015, 553) notes that by imposing their power, energy firms "unavoidably exert influence over politics … and affect geopolitical results with consequences for political economy even when there is no identifiable policy choice made by a government". Their ability to "reshape institutional context" and influence energy policy outcomes is stipulated by the variety of relationships the energy firms have with different actors, including domestic and foreign governments, along with foreign energy firms (Abdelal 2015, 557). Outlining the various forms of those relationships that energy firms have with governments, Abdelal (2015, 554; Vernon 1971, 115) emphasizes that "the state is not the agent of the multinational firm; nor is the multinational firm an agent of the state", which also corresponds to the assumption initially stated by Lindblom (1977). The bargaining power of energy firms that can be referred to both structural and organizational forms, stipulates their success or failure in terms of the energy trade with both domestic and foreign governments. Simultaneously, as Abdelal (2015, 560) argues, in hydrocarbon market, the relations between energy firms "are far from a collection of discrete, arm's length transactions", and they are defined by their "history": "those are histories of trust, which can be built, broken, and restored" that can be enshrined in interpersonal relations between firms' managers and executives or institutionalized when the firms deal with governments' representatives.

Applying the argument on structural and organizational power towards the European gas firms, Abdelal (2013, 32) also states that the energy policy of the EU in relation to the import of Russian piped natural gas are driven by the bilateral relationships of trust between Russian Gazprom and European "E.ON, BASF, WINGAS, and Eni", which are based predominantly on the "influence" aspect that "derive from the subtle, yet powerful reshaping of domestic politics that resulted from such bilateral economic relationships" (Abdelal 2013, 32; Hirschman

1980, 14-16). As Finon and Locatelli (2007, 21) also argued, despite the pressure from the side of the EU, which was reviewed in-detail in the previous section, "member-states continued to rely on their leading national firms to secure long-term energy supplies, which they have been able to do thanks to their contracting power and their significant investment capacity". Hence, pursuing economic motives, European energy firms sustain the energy dependence on Russian natural gas import, despite the claims about the insecurity of Russian gas supply and the calls for supply diversification from the side of the politicians in Brussels (Abdelal 2015, 566).

The relationships of Visegrad Group states' gas firms with Russian Gazprom, however, go beyond the scope of Abdelal's (2013; 2015; 2018) research, which is focused instead on the Italian, German, and French gas companies and has been understudied within the academia. The attempt to fill this lacune was made by Nosko (2013), who, analysing business-government relations as one of the rationales for prioritizing energy security on the national level, pointed out that "in countries where energy consumption is concentrated in one or very few sectors, and the share of these sectors on exports is high, the sensitivity of government to the needs of these industrial sectors is higher" (Nosko 2013, 84). In both Hungary and Slovakia, as scholar argued, the "high concentration of energy industry in small number of companies influenced both the position of these sectors vis-à-vis energy suppliers, but also their interest in energy policy" (Nosko 2013, 83). Although Nosko does not apply the concepts of structural or organizational power of energy companies and rather analyzes the role of those firms that are vulnerable from the energy import in the energy security prioritization, the empirical evidence shows that "a number of individual companies were seeking and received preferential arrangements for energy supplies" (Nosko 2013, 83). However, unlike the most scholars of International Political Economy, including Abdelal (2013, 2015; 2018), Nosko (2013) portrays the relations of industries that depend on energy import and government in the way that the former is dependent on the decisions of the latter, so that the asymmetry in favor of Hungarian and Slovak

governments can be traced: “depending on the choices of the government, it [energy intensive industry] can either choose to shield the sector in the long run, preventing the pressure to increase energy efficiency, or support the sector in short term but assure that the energy efficiency is increased” (Nosko 2013, 84), while the relationships between national gas companies and Gazprom remain unexamined.

The opposite view was presented by Misik (2016). Providing the model of ‘energy challenges’, the scholar outlines, among others, business challenge for states energy policies, which rests on the assumption that “these firms occupy a very special place within national economies, and governments deal with them with extreme caution, even in cases when the state is a direct owner of the firms' shares” (Misik 2016, 71).

Appendix 3. Europeanization of energy policy

Analysing the factors that affect energy policies of EU member-states, several scholars emphasize the important role of the EU in the 'Europeanization' of energy policy that influence energy policies of member-states (Dyduch 2015; Tews 2015; Janowska and Ancygier 2017; Solorio and Jörgens 2020; Wach et al. 2021;). The recent study by Wach et. al shows that "the importance of sectoral policies in the European Union's economic policy has been growing, especially over the last decade" and of energy policy in particular (Wach et al. 2021, 5). Defining the Europeanization of the policy as the process that presumes "on the one hand, the creation of favourable conditions for the development of industries (including the energy industry) and businesses (including energy companies) in the territory of the European Union, and on the other hand, the convergence of the macroeconomic systems of individual EU member states, and the convergence of the industries and sectoral policies (including the energy policy)" (Wach et al. 2021, 5), the scholars argue that the regulatory activity of the EU in the domain of energy policy has been increasing, which is connected with its' desire to achieve the established goals of its' decarbonization '2050 strategy' (The European Commission, 2011) and which would inevitably influence the national energy policies of member-states, although "the EU shares the competencies with the latter" (Wach et al. 2021, 5).

One of the first innovations in energy regulation, concerning the issue of gas trade, was presented by the adoption of three Energy Packages in 1998, 2003, and 2009, correspondingly, with the main aim of "liberalization of energy market" (Goldthau 2016, 10; Andersen and Sitter 2019). Along with the "gradual market opening", those packages increased the competitiveness and transparency in the energy market, while also having "deep effects on national energy governance" (Goldthau 2016, 10). Furthermore, the 2014 proposal of 'Energy Union' by "then-president of the European Council Donald Tusk, complemented the EU strategy of energy trade" (Goldthau 2016, 24), represented an attempt to form a common comprehensive EU

regulatory framework, and presumed an "integration of various existing policies on the EU level, aimed at transforming them into a more coherent framework for full market integration, in addition to fostering energy efficiency, climate action and low carbon technologies" (Goldthau 2016, 24). One of the constituent parts of the Energy Union project was represented by the "Projects of Common Interest' (PCI) in gas and electricity infrastructure" (Goldthau 2016, 9). The idea behind the foregoing initiative presumed the financing of the infrastructural projects' planning and designing (Goldthau 2016, 10). Moreover, one can also argue that the PCI and the Energy Union in general are the logical continuation of the EU "Trans-European Network policy" that was developed with the focus on the financial support of interconnectors and Liquified Natural Gas terminals' construction for diversification of the energy suppliers and supply routes (Finon and Locatelli 2008, 28). Hence, the EU has played the important role in promoting market integration and drive changes in both EU energy market and energy policies of member-states, adopting legislation for energy market regulation and energy trade, including the import of Russian natural gas (Figure 1). Nevertheless, when applying the Europeanization of energy policy as a factor that potentially explains the gas trade of V4 states with Russia, one problem arises, which is connected to the afore-mentioned "division of competencies" (Wach et al. 2021, 5) and loopholes in the EU legislation in the energy domain. Although the EU regulations in energy sector and in the domain of gas trade set certain requirements for member-states in their energy governance, the adopted strategies, packages, and directives "leaves ample room for a more strategic political reading of relevant EU regulation by member-states" (Goldthau 2016, 25). In turn,

Figure 1: The overview of the EU energy regulations adopted. Source: Wach et. al. (2021, 6).

Year	Document	Postulates or Effects
1952	Treaty of Paris	Establishing the European Coal and Steel Community (ECSC)
1958	Euratom Treaty of Rome	Establishing the European Atomic Energy Community (Euratom)
1988	Internal Energy Market	The very first document presenting the objectives for the liberalisation of the energy market.
1992	The Maastricht Treaty	Introducing the postulate of Trans-European Networks (TEN) in energy infrastructure.
1991	European Energy Charter	Legal framework for the long term cooperation (EU, Europe, non-European countries).
1994	Energy Charter Treaty	
1994	Green Paper on an EU energy policy	Working out a consensus in reaching a coherent EU energy policy.
1995	White Paper on an EU energy policy	Details for the forthcoming energy sector reform in the EU.
1996	Electricity Directive	Principles of the internal market in energy production. The gradual opening of national markets.
1998	Gas Directive	
2000	Lisbon Strategy	The EU growth and competitiveness strategy for 2000–2010. Underscoring the role of energy and the single energy market.
2005	Emission Trading Scheme	Introducing the Emission Trading Scheme (ETS) in order to reduce the emissions on the whole.
2006	Green Paper on sustainable energy	Strengthening the EU energy policy. Postulating low-carbon energy production and decreasing energy consumption.
2007	The Lisbon Treaty	Complementing the EU primary law with a separate part on the common energy policy. Obligating the EU to introduce Trans-European Networks (TEN) in energy infrastructures.
2009	Climate and Energy Package (Third Energy Package)	Establishing the Agency for the Cooperation of Energy Regulators (ACER). Introducing the third-party access (TPA) and undoubling principles. Introducing two transmission regulations. The EU's 20-20-20 goals. Introducing energy poverty monitoring.
2010	The Commissioner for Energy	Introducing the Directorate-General for Energy and the Commissioner for Energy
2010	Europe 2020 Strategy	The EU smart, sustainable, inclusive growth strategy for 2010–2020. A curb in greenhouse gas emissions, and an increase in renewable energy production and consumption.
2015	Energy Union Strategy	A key EU policy priority aims at building an energy union based on security, sustainability and energy competitiveness.
2019	Clean Energy for All Europeans Package and European Green Deal	A comprehensive EU energy policy framework to achieve carbon neutrality by 2050 facilitates the transition away from fossil fuels and replacing them with cleaner energy.

according to Dreyer et al. (2010, 18-19), the adopted "Gas Directive explicitly allows for an extensive host of derogations, that is, discretionary and temporary national and case-by-case exemptions from the unbundling rules". The evidence for "the lack of political coordination" for the cooperation between member-states on the energy trade initiatives of the EU, including the four countries in-question, was also provided by Focken (2015, 180), alongside with Nosko and Misik (2017).

The latter argue that the member-states have been divided not only on the "European Commission proposal on joint purchase of gas", but also on the issue of Energy Union, which is accompanied by the "lack of the EU member states' shared desire and need for negotiating contradictory and, sometimes, incompatible policy priorities and ignoring important energy policy trade-offs" (Nosko and Misik 2017, 204-205). Moreover, the scholars point out that the

foregoing division can be seen in the Eastern and Central European member-states, with Hungary and Slovakia constituting "Russia friendly" group of states, Poland and Baltic states relate to "Russia skeptic", and "a transient group including the Czech Republic, Bulgaria and occasionally Latvia that moves between Russia enthusiasm and Russia skepticism depending on the government, and the individual political elites in power" (Nosko and Misik 2017, 205). In this context, Russian infrastructural projects also became the cornerstone for the Western and Eastern European states. Examining the issue of Nord Stream 2 pipeline construction, Goldthau (2016, 25) emphasises that "it is material interests of EU member states instead and the broader international security environment as perceived by key EU decision makers that will arguably be decisive in case of the Nord Stream 2". The implementation of the EU target on the gradual diversification of energy sources and increase of the renewables in the national energy mixes, as the evidence by Wach et al. (2021, 12) indicates, also varies for the Visegrad countries, with only Czech Republic "exceeded its commitment of 13% for 2020 already from 2013".

Therefore, despite the fact, that the EU has been developing its' energy policy framework which requires the compliance from member-states on the set goals and priorities, the fact that national states have the space for maneuver in terms of how to deal with the dependence on Russian natural gas supply due to the imperfections of the existing EU energy legislation and lack of unanimity of member states on the EU energy projects allows us to argue that the Europeanization of energy policy cannot account for the V4 states' approaches to natural gas trade with Russia.

Appendix 4. Case Selection

While several studies outline the serious differences of the analysed V4 states, such as the "differences in the size of territory and population" (Misik 2015, 204), variation in the "structure of their energy mix" (Misik 2015, 204-205), difference in their bilateral relations with Russia as the gas supplier (Misik 2015, 205), others to the contrary note that those 4 states have visible similarities, which are represented by the significance of the energy policy and energy security for those states, with "energy policy is mentioned as one of the priority areas of the group" (Jirusek 2020, 3), along with the similarities "in terms of their fundamentals and external conditions" (Nosko 2013, 50). Although acknowledging the existence of the afore-mentioned differences, in terms of this thesis what Gerring and Cojocaru (2016, 399) defined as the "most-similar (explaratory) strategy" of case selection or MSSD is used, which is stipulated by the set of reasons, or, following the argument by Gerring and Cojocaru (2016, 399), by "similar background conditions" with the clear divergence of the policy outcome (reducing the degree of energy dependence through diversification). Those background conditions are the following:

- *Significance of natural gas import*: as was mentioned in the introductory chapter of this research, the dependence of all 4 analysed states on natural gas import remained high, with the "share of gas originating from Russia relative to consumption is more than 90 per cent in the Czech Republic, Slovakia and Hungary, and 69 per cent in Poland" (Torocsik et al. 2021, 29-30). Furthermore, the recent data show that "approximately 65 per cent of the natural gas consumed in the Czech Republic is imported from Russia", while in "Hungary's case, approximately 65–70 per cent of imports come directly from Russia through an LTC" (Torocsik et al. 2021, 30). Hence, "natural gas plays an important role in national economies" of the selected 4 countries (Misik 2016, 71).

- *Concern with the energy security*: the previous research indicates that the V4 states share the common concern with the security of gas supply, which has become more vocal after the 2006 and 2009 gas crises (Szilard 2015). The joint letter to the European Commission with the common concern towards the construction of Russian Nord Stream 2 gas pipeline, signed, among others, by the prime ministers of Poland, Hungary, Czech Republic, and Slovakia also corresponds to the foregoing view (Reuters, 2016; Jirusek, 2020). Moreover, the states' concern has been numerously stated in the official documents and statements of the Visegrad 4 platform (Visegrad Group 2010; 2013; 2016; Osicka et al. 2021).

In addition, the 4 analysed states also similar in terms of their membership in the EU Energy Chapter, which follows from their membership in the European Union.

Finally, despite the fact, that Poland is often excluded from the comparative analysis of Visegrad 4 energy policies, which is usually explained by scholars with the fact that Poland has "much larger energy market compared to the rest of the Visegrad four countries" (Nosko 2013: 49), while others focus on the historical past and bad bilateral relations between Poland and Russia (Siddi 2020; Jirusek 2020), our choice of this country for the analysis stems from the argument about the important role of gas investments by Polish gas operator company Inwestycje Gaz – System S.A. in "gas supply diversification projects in Central and Eastern Europe" (Mlynarski 2016, 307, 311), which stipulates the relevance of the Polish case for our analysis.

Appendix 5. Changes in energy companies-state relations in Hungary

Before re-nationalization, the Hungarian MVM company was owned by multinational companies, including German E.ON, and the LTC with Gazprom transferred to the state-owned MVM (Deak and Weiner 2019, 9). After the renationalization took place in 2013 (Financial Times 2013), MVM and MET got advantageous positions on the Hungarian gas market, since the multinational companies, such as E.ON, RWE, GDF Suez, and ENI were forced to leave the Hungarian market, selling their shares to the state-owned or state-affiliated companies MVM and MET (Deak et al. 2019, 70; Felsmann 2018). According to the analysts, MET and MVM "became stakeholders in the Romanian Black-sea gas issue by allocating pipeline capacities along the route and also a shipper in the „South Stream lite" Bulgarian section" (Deak et al. 2019, 72). In addition, the anti-corruption investigation, conducted by the "Corruption Research Center of Budapest (CRCB)" revealed that MVM and MET were involved into corruption schemes with the Hungarian government: "the state MVMP used much of the capacity with which it was entrusted to purchase natural gas at the Austrian border from a Hungarian-Russian-owned, Swiss-based company called MET which it immediately returned to it on the other side of the border" (The Budapest Beacon 2016). Those episodes indicate that after the energy sector became formally controlled by the government, the state-owned and state-affiliated companies applied their organizational power for making financial benefits on the gas trade.

Appendix 6. The gas trade of Czech Republic and Gazprom

The Russian natural gas has been transported to Czech Republic through OPAL and Nord Stream. In accordance with the International Energy Agency 2016 country report on energy sector of Czech Republic, "98% of contractual gas imports were sourced from the Russian Federation" (IEA 2016, 121), which accounted for "approximately 70% of RWE Supply and Trading's long-term purchase portfolio" (IEA 2016, 121). Along with German-owned RWE, Russian gas is supplied to Czech Republic via company VEMEX, and TSO (Transmission system operator) 'NET4GAS' (Posaner 2020, 138-139).

Russian Gazprom is also investing "in the underground gas storage systems (UGS) and compressed natural gas (CNG)" (Lyapina 2017, 9). In turn, Russian gas giant participated in the construction of "15 out of 120 CNG stations in Czech Republic" and was involved in the establishment of "Czech - Russian consortium CNG CZ in 2013" (Lyapina 2017, 9). The contract between Czech UGS operator MND Group and Gazprom was also signed in the same year (Gazprom Press Release 2013; MND Press Release 2016). Besides, "it is expected that this UGS will take about 12% of the gas storage capacities of the whole Czech market" (Lyapina 2017, 10).

In addition, the support towards the Russian-backed Nord Stream 2 gas pipeline was first expressed in 2017 by Czech President Milos Zeman during negotiations in Moscow (NeftegazRu 2017), and further during the Czech governmental meetings with the gas regulatory authorities in Czech Republic (Czech Radio 2018).

Appendix 7. Polish gas contracts on LNG supply from the US, Qatar, and Norway

In turn, the contracts on LNG supply were signed by Polish national gas giant PGNiG and Qatari 'Qatargas' in 2009 and extended in 2014 and 2017 (PGNiG Press Release 2009; PGNiG Press Release 2014), "under which Qatargas will increase the volume of LNG supplied to PGNiG to approximately 2.7 billion cubic meters, after regasification annually, until June 2034" (Warsaw Institute 2017). Besides, Norwegian Statoil and US company 'Port Arthur LNG' also signed the agreements on LNG supply to Poland in 2006 (Independent Commodity Intelligence Services 2006), 2017 (PGNiG Press Release 2017) and 2019 (AA Energy 2019), respectively. The contract with the American supplier would allow Poland to receive "9.3 billion cubic metres of regasified fuel annually" (PGNiG Press Release 2020).

Short-term gas contract was also signed with the Swiss gas trading company Vitol SA in 2011 (PGNiG Press Release 2011). Due to new contracts, the dependence on Russian gas decreased, so that "the share of natural gas purchased from Gazprom in the overall gas import volume fell from 87 percent to 60 percent" (data for 2015 and 2019)" (PGNiG Press Release 2015; 2019), while LNG import accounted for 23 percent in Polish national gas portfolio in 2019 (PGNiG Press Release 2019).

Appendix 8. Analysis of the collected results

As could be observed from the analysis of V4 state energy policy choices, made during the period after 2009 gas crisis to 2020, *H1* and *H1a* were confirmed in case of Czech Republic, while received only partial confirmation in case of Slovakia (only during the analysed period of 2009-2014). The structural power of Czech energy company RWE Supply and Trade CZ was sufficient for making the decision towards the reduction of the volumes of natural gas, supplied from Russia, with the diversification of supply through the construction of interconnectors with Poland and Slovakia was made by RWE-owned TSO Net4Gas, which was stipulated by the commercial interests of the afore-mentioned companies and the disputes with Gazprom over contractual gas prices that ended up with the RWE's win in the arbitration process. In Slovakian case, however, the diversification of supply was initiated by the Slovak gas company SPP, which was at the time of contract signing in 2010 controlled by foreign investors E.ON and GDF Suez that owned 49% of shares in company. In both Slovakian and Czech cases, the decisions on the diversification were made according to commercial interests of companies, as can be observed from the evidence provided. However, the situation in Slovakia changed after 2014, when the SPP ownership completely turned to Slovakian government, headed by PM Fico. After re-nationalization happened, the SPP sustained the relations with Gazprom as the country dominant supplier, thus preserving the energy dependence on Russian natural gas import, which was caused by Fico's populist strategy to strengthen political positions before and after re-election and confirm the *H2* and *H2b* of this research. No evidence was found in support of *H2a* neither in Czech Republic, nor in Slovakia.

The first hypothesis (*H1*) about the influence of structural and organizational power of energy companies on diversification of supply or sustaining Russian gas exporters as dominant suppliers, along with *H1a* and *H1b*, however, were not confirmed in case of both Hungary and Poland. Whereas in the former the initiative on the protraction of gas trade with Russian

Gazprom clearly belonged to the Hungarian Prime Minister Victor Orban's government and was stipulated by the same populist strategy as was observed in case of Slovakia, the latter's decision on complete diversification of supply was made by PiS government, headed by Kaczynski, and was stipulated by the economic and political calculations of the government, which benefited from the diversification of the suppliers and re-orientation towards the LNG from Norway, the US, and Qatar, firm conflicting governmental position on relations with Russia, and the response towards the construction of Russian-backed Nord Stream and Nord Stream 2 pipelines, which negatively affect economic and energy security of Poland. Thus, in the evidence on the decisive role of governments in gas policy preferences indicates that the second hypotheses (*H2*) have been confirmed in both of the foregoing cases, although no evidence in support of *H2a* and *H2b* was found in Polish case, while those hypotheses were confirmed for the case of Hungary.

Bibliography

Academic articles and books:

Aalto, Pami, and Dicle Korkmaz Temel. 2014. “European Energy Security: Natural Gas and the Integration Process”. *JCMS: Journal of Common Market Studies* 52(4): 758-774.

Abdelal, Rawi. 2013. “The profits of power: Commerce and realpolitik in Eurasia”. *Review of International Political Economy* 20(3): 421-456.

Abdelal, Rawi. 2015. “The multinational firm and geopolitics: Europe, Russian energy, and power.” *Business and Politics* 17(3): 553-576.

Abdelal, Rawi, Peter J. Katzenstein, and Lucia A. Seybert. 2018. “Firms in Firmament: Hydrocarbons and the Circulation of Power.” *Protean Power: Exploring the Uncertain and Unexpected in World Politics* 146: 147.

Adomeit, Hannes. 2016. Germany, the EU, and Russia: The Conflict over Nord Stream 2. *Centre for European Studies, CES Policy Brief*: 1-12.

Aidt, Toke S. 2016. “Rent seeking and the economics of corruption”. *Constitutional Political Economy* 27(2): 142-157.

Andersen, Svein S., and Nick Sitter. 2019. The EU’s Strategy Towards External Gas Suppliers and Their Responses: Norway, Russia, Algeria and LNG. *New Political Economy of Energy in Europe*. Palgrave Macmillan, Cham: 49-72.

Balmaceda, Margarita M. 2007. Energy dependency, politics and corruption in the former Soviet Union: Russia's power, oligarchs' profits and Ukraine's missing energy policy, 1995-2006. *Routledge*.

Balmaceda, Margarita Mercedes. 2013. The politics of energy dependency: Ukraine, Belarus, and Lithuania between domestic oligarchs and Russian pressure. Vol. 40. *University of Toronto Press*.

Barnett, Michael, and Raymond Duvall. 2005. “Power in international politics”. *International organization* 59(1): 39-75.

Beblavý, Miroslav, and Emília Sičáková-Beblavá. 2014. “The changing faces of Europeanisation: how did the European Union influence corruption in Slovakia before and after accession?”. Europe-Asia Studies 66(4): 536-556.

Binhack, Petr, and Lukáš Tichý. 2012. “Asymmetric interdependence in the Czech–Russian energy relations”. *Energy Policy* 45: 54-63.

Casier, Tom. 2011. “The rise of energy to the top of the EU-Russia agenda: from interdependence to dependence?”. *Geopolitics* 16(3): 536-552.

Cherp, Aleh, and Jessica Jewell. 2011. “The three perspectives on energy security: intellectual history, disciplinary roots and the potential for integration”. *Current Opinion in Environmental Sustainability* 3(4): 202-212.

Cherp, Aleh, and Jessica Jewell. 2014. “The concept of energy security: Beyond the four As”. *Energy policy* 75: 415-421.

Chester, Lynne. 2010. “Conceptualising energy security and making explicit its polysemic nature”. *Energy policy* 38(2): 887-895.

Coolidge, Jacqueline, and Susan Rose-Ackerman. 1999. High-level rent-seeking and corruption in African regimes: Theory and cases. *The World Bank*.

Culpepper, Pepper D. 2011. Quiet politics and business power: Corporate control in Europe and Japan. New York: *Cambridge University Press*.

Culpepper, Pepper D., and Raphael Reinke. 2014. “Structural power and bank bailouts in the United Kingdom and the United States”. *Politics & Society* 42(4): 427-454.

Culpepper, Pepper D. 2015. “Structural power and political science in the post-crisis era”. *Business and Politics* 17(3): 391-409.

Deák, András, and Csaba Weiner. 2018. “Hungary: Leveraging political influence.” *The Russian Economic Grip on Central and Eastern Europe. Routledge*: 136-150.

Deák, András, Dániel Bartha, and Sándor Léderer. 2019. “A difficult detachment–Hungarian energy policy with Russia after 2014”. *Expert Forum*.

Dreyer, Iana, Fredrik Erixon, and Robin Winkler. 2010. “The quest for gas market competition fighting Europe's dependency on Russian gas more effectively”. No. 1/2010. *ECIPE Occasional Paper.*

Dyduch, Joanna, and Artur Skorek. 2020. “Go South! Southern dimension of the V4 states’ energy policy strategies–An assessment of viability and prospects”. *Energy Policy* 140: 111372.

Dyduch, Joanna. 2015. “Europeanization of the Energy Policy within the European Union's System of Governance”.

Dyer, Hugh, and Maria Julia Trombetta. 2013. “The concept of energy security: broadening, deepening, transforming”. *International handbook of energy security*. Edward Elgar Publishing.

Enyedi, Zsolt. 2020. “Right-wing authoritarian innovations in Central and Eastern Europe”. *East European Politics* 36(3): 363-377.

Escribano Francés, Gonzalo. 2011. “Market or Geopolitics? The Europeanization of EU’s Energy Corridors”, ed. by John Psarras. *International Journal of Energy Sector Management* 5: 39-59.

Felsmann, Balázs Tibor. 2018. “Firm Performance Under Institutional Constraints.” *Summary of Thesis of the doctoral dissertation* – Doctoral School of Business Administration: Corvinus University, Budapest.

Finon, Dominique, and Catherine Locatelli. 2008. “Russian and European gas interdependence. Can market forces balance out geopolitics?”. *Energy Policy* 36(1): 423-442.

Frič, Pavol. 2016. “Populism and Czech Military Elite Under the Democratic Radar”. *The Visegrad Countries in Crisis. Warsaw*: 88-105.

Gawlikowska-Fyk, Aleksandra. 2019. Poland: Coping with the Challenges of Decarbonization and Diversification. *New Political Economy of Energy in Europe*. Palgrave Macmillan, Cham. 195-214.

Gel’man, Vladimir, and Cameron Ross, eds. 2010. The politics of sub-national authoritarianism in Russia. *Ashgate Publishing, Ltd*.

Gel’man, Vladimir. 2017. “Political foundations of bad governance in post-Soviet Eurasia: towards a research agenda”. East European Politics 33(4): 496-516.

Gel’man, Vladimir. 2011. “State power, governance, and local regimes in Russia: A framework for analysis”. *Russian Politics & Law* 49(4): 42-52.

Gerring, John, and Lee Cojocaru. 2016. Selecting cases for intensive analysis: A diversity of goals and methods. *Sociological Methods & Research* 45(3): 392-423.

Goldthau, Andreas. 2016. “Assessing Nord Stream 2: regulation, geopolitics & energy security in the EU, Central Eastern Europe & the UK”. *European Center for Energy and Resource Security. Strategy Paper* 10: 1-40.

Greene, Kenneth F. 2007. “Why dominant parties lose: Mexico's democratization in comparative perspective”. Cambridge University Press.

Handley, Antoinette. 2008. “Business and the State in Africa: Economic Policy-Making in the Neo-liberal Era”. *New York: Cambridge University Press*.

Hirschman, Albert O. 1980. “National power and the structure of foreign trade”. Vol. 105. *University of California Press*.

Heinrich, Andreas. 2018. “Securitisation in the gas sector: Energy security debates concerning the example of the nord stream pipeline”. *Energy Security in Europe*. Palgrave Macmillan, Cham, 61-91.

Hellman, Joel S., Geraint Jones, and Daniel Kaufmann. 2000. “Seize the state, seize the day: State capture, corruption, and influence in transition”. *The World Bank*.

Högselius, Per. 2012. “Red gas: Russia and the origins of European energy dependence”. *Springer*.

Innes, Abby. 2014. “The Political Economy of State Capture in Central E Urope”. *JCMS: Journal of Common Market Studies* 52(1): 88-104.

Jankowska, Karolina, and Andrzej Ancygier. 2017. “Poland at the renewable energy policy crossroads: an incongruent Europeanization?”. *A Guide to EU Renewable Energy Policy. Edward Elgar Publishing*.

Jääskeläinen, Jaakko J., et al. “Finland’s dependence on russian energy—Mutually beneficial trade relations or an energy security threat?”. *Sustainability* 10.10 (2018): 3445.

Jirušek, Martin. 2020. “The attitude of the Visegrad Group Countries towards Russian Infrastructural Projects in the gas sector”. *Energy Policy* 139: 111340.

Judge, Andrew, Tomas Maltby, and Jack D. Sharples. 2016. “Challenging reductionism in analyses of EU-Russia energy relations”.

Keohane, Robert O., and Joseph S. Nye Jr. 1973. “Power and interdependence”. *Survival* 15(4): 158-165.

Kesarchuk, Olga. 2016. “The Power and Powerlessness of the Post-Soviet Business in a Comparative Perspective”. Presented at the 21st Annual ASN World Convention, *Harriman Institute, Columbia University.*

Khrushcheva, Olga, and Tomas Maltby. 2016. “The future of EU-Russia energy relations in the context of decarbonisation”. *Geopolitics* 21(4): 799-830.

Krickovic, Andrej. 2015. “When interdependence produces conflict: EU–Russia energy relations as a security dilemma”. *Contemporary Security Policy* 36(1): 3-26.

Lambsdorff, Johann Graf. 2002. “Corruption and rent-seeking”. *Public choice* 113(1): 97-125.

Levitsky, Steven, and Lucan A. Way. 2010. Competitive authoritarianism: Hybrid regimes after the Cold War. *Cambridge University Press*.

Lindblom, Charles E. 1977. “Politics and Markets: The World's Political”. *Economic Systems*: 136.

Lyapina, Elmira. 2017. “Specifics of Gas Relations between the Czech Republic and the Russian Federation”. *Sborník conference Věda Výzkum Inovace 2017*. Retrieved from: http://vvvi.cz/konference/sbornik_konference_pri_VVVI_2017.pdf.

Månsson, André, Bengt Johansson, and Lars J. Nilsson. 2014. “Assessing energy security: An overview of commonly used methodologies”. *Energy* 73: 1-14.

Mayer, Maximilian, and Peer Schouten. 2011. Energy security and climate security under conditions of the Anthropocene”. *Energy Security in the Era of Climate Change*. Palgrave Macmillan, London: 13-35.

Mazzuca, Sebastián L. 2013. “Lessons from Latin America: The rise of rentier populism”. *Journal of Democracy* 24(2): 108-122.

Miliband, Ralph. 1969. “The state in capitalist society”.

Minarik, Martin. 2014. “Energy Cooperation in Central Europe: Interconnecting the Visegrad Region.” *Occasional Paper. Energy Charter Secretariat Knowledge Centre*.

Mišík, Matúš. 2015. “The influence of perception on the preferences of the new member states of the European Union: The case of energy policy”. Comparative European Politics 13(2): 198-221.

Mišík, Matúš. 2016. “On the way towards the Energy Union: Position of Austria, the Czech Republic and Slovakia towards external energy security integration”. *Energy* 111: 68-81.

Mišík, Matúš, and Andrej Nosko. 2017. “The Eastring gas pipeline in the context of the Central and Eastern European gas supply challenge”. *Nature Energy* 2(11): 844-848.

Młynarski, Tomasz. 2016. “The role of Polish gas investments in enhancing Central and Eastern Europe Energy Security”.

Mohtadi, Hamid, and Terry L. Roe. 2003. “Democracy, rent seeking, public spending and growth”. *Journal of Public Economics* 87(3-4): 445-466.

Němec, Daniel, et al. 2021. “Corruption, Taxation and the Impact on the Shadow Economy”. *Economies* 9(1): 18.

Nitoiu, Cristian. 2016. “Towards conflict or cooperation? The Ukraine crisis and EU-Russia relations”. *Southeast European and Black Sea Studies* 16(3): 375-390.

Nosko, Andrej. 2013. “Energy security in transition: Coping with energy import dependence in the Czech Republic, Slovakia and Hungary”. Doctoral Dissertation - *Central European University*

Nosko, Andrej, and Matúš Mišík. 2017. “No united front: The political economy of energy in Central and Eastern Europe”. *Energy Union*. Palgrave Macmillan, London: 201-222.

Nový, Michal. 2014. “Electoral and non-electoral participation in the Visegrad countries: complements or substitutes?”. *East European Politics and Societies* 28(4): 863-886.

O’Donoghue, Cillian. 2011. “Dealing with Russian Gas: Energy Management Dependecy Strategies in the Czech Republic and Hungary from Transition to Present”. Doctoral Dissertation - *Central European University*.

Oravcová, Veronika, and Matúš Mišík. 2018. EU funds and limited cooperation: energy infrastructure development in the Visegrad Group. *International Issues & Slovak Foreign Policy Affairs* 27(3-4): 11-26.

Paillard, Christophe-Alexandre. 2010. “Russia and Europe's mutual energy dependence”. *Journal of international affairs* 63(2): 65-84.

Pach-Gurgul, Agnieszka, and Marta Ulbrych. 2019. “Progress of the V4 Countries towards the EU's Energy and Climate Targets in the Context of Energy Security Improvement” *Entrepreneurial Business and Economics Review* 7(2): 175-197.

Pakulski, Jan, et al. 2016. “The Visegrad countries in crisis”. *Collegium Civitas*.

Posaner, Joshua. 2020. “Held Captive by Gas: The Price of Politics in Gazprom's Long-Term Contracts with Central European Buyers (2009 to 2014)”. *Springer Nature*.

Quester, George H. 2007. “Energy Dependence and Political Power: Some Paradoxes”. *Demokratizatsiya* 15(4).

Rupnik, Jacques. 2007. “Is East-Central Europe backsliding? From democracy fatigue to populist backlash”. Journal of Democracy 18(4): 17-25.

Ruszel, Mariusz. 2020. “The significance of the Baltic Sea Region for natural gas supplies to the V4 countries”. Energy Policy 146: 111786.

Siddi, Marco. 2020. “Theorising conflict and cooperation in EU-Russia energy relations: ideas, identities and material factors in the Nord Stream 2 debate”. *East European Politics* 36(4): 544-563.

Sharples, Jack D. 2016. “The shifting geopolitics of Russia’s natural gas exports and their impact on EU-Russia gas relations”. *Geopolitics* 21(4): 880-912.

Ślufińska, Monika, and Agnieszka Nitszke. 2017. “Activities of the Visegrad Group in the Context of the CFSP of the EU”. Historia i Polityka 22 (29): 9-27.

Solorio, Israel, and Helge Jörgens. 2020. “Contested energy transition? Europeanization and authority turns in EU renewable energy policy.” *Journal of European Integration* 42(1): 77-93.

Soukupová, Jana. 2013. “Corruption in Visegrad Four Countries”. *International Days of Statistics and Economics, Prague*.

Sovacool, Benjamin K. 2013. “An international assessment of energy security performance”. *Ecological Economics* 88: 148-158.

Stoddard, Edward. 2012. “A common vision of energy risk? Energy securitisation and company perceptions of risk in the EU”. *Journal of Contemporary European Research* 8(3).

Szanyi, Miklós. 2016. “From party state capture to party business capture Model feature of Visegrád countries?”.

Szanyi, Miklós. 2019. “The emergence of patronage and changing forms of rent-seeking in East Central Europe”. *Post-Communist Economies*: 1-20.

Szilárd, Berta. 2015. “Why Can Russia “Divide and Rule” Central and Eastern Europe in Energy Policy?”. *AARMS*: 357.

Szomolányi, Soňa, and Zsolt Gál. 2016. “Slovakia's Elite: Between Populism and Compliance with EU Elites”. *The Visegrad Countries in Crisis. Warsaw*: 67-86.

Tews, Kerstin. 2015. “Europeanization of energy and climate policy: The struggle between competing ideas of coordinating energy transitions.” *The Journal of Environment & Development* 24(3): 267-291.

Törőcsik, Ágnes, Enikő Kácsor, and Alfa Diallo. 2021. "Beyond gas beyond 2020: new vision on energy security for the Visegrad Four in 2020–2030". *International Issues & Slovak Foreign Policy Affairs* 27(3-4): 27-45.

Tsafos, Nikos E. 2007. Big Oil & Big Talk: Resource Populism in International Politics". *SAIS review of international affairs* 27(1): 147-157.

Ušiak, Jaroslav. 2018. Security-related Cooperation among the V4 States. *Politics in Central Europe* 14(2): 39-56.

Von Hippel, David, et al. 2011. "Energy security and sustainability in Northeast Asia". *Energy policy* 39(11): 6719-6730.

Wach, Krzysztof, et al. 2021. "Europeanization Processes of the EU Energy Policy in Visegrad Countries in the Years 2005–2018". *Energies* 14(7): 1802.

Weiner, Csaba. 2017. "Energy once again in the spotlight: New forms of Russian investment presence in Hungary": 194-214.

Weiner, Csaba. 2018. "Security of energy supply and gas diversification in Poland".

Yergin, Daniel. 2006. "Ensuring energy security". *Foreign affairs*: 69-82.

Electronic sources:

AA Energy. 2018. "Poland's PGNiG signs long-term deal for US LNG". https://www.aa.com.tr/en/energy/general/polands-pgnig-signs-long-term-deal-for-us-lng/22797. Retrieved: April 27, 2021.

Ace Group Consultants. 2021. "Hungary will be able to buy gas not only from Azerbaijan but also from Turkmenistan via the Southern Corridor". https://aceconsultants.az/en/news/258.html. Retrieved: April 24, 2021

AP News. 2020. "Poland fines Russia's Gazprom $7.6 billion over pipeline". https://apnews.com/article/poland-western-europe-archive-germany-europe-a98f0bd1fb950816 4c29fbfe5009440f. Retrieved: April 24, 2021

Austrian Gas Grid Management AG. 2020. "Coordinated Network Development Plan for the Gas Transmission System Infrastructure in Austria for the period from 2021 – 2030". https://www.e-control.at/documents/1785851/1811582/CNDP_2020_ECA_Konsultation.pdf/426f5d41-475c-36e9-894c-f26d2ff375c0?t=1607690492587. Retrieved: April 25, 2021

Baltic Pipe Project. Poland Onshore Projects Overview. https://www.baltic-pipe.eu/the-project/poland-onshore/. Retrieved: April 27, 2021

Bartuska, et. al. 2019. "The Geopolitics of Energy Security in Europe - Carnegie Europe". https://carnegieeurope.eu/2019/11/28/geopolitics-of-energy-security-in-europe-pub-80423. Retrieved: April 25, 2021

Bauerova, Ladka. 2012. Bloomberg: “RWE’s Net4Gas Plans Natural-Gas Pipeline Extension to Poland”. https://www.bloomberg.com/news/articles/2012-04-30/rwe-s-net4gas-plans-natural-gas-pipeline-extension-to-poland. Retrieved: May 15, 2021

Budapest Business Journal. 2008. “Hungary to make political step to accelerate Nabucco”. https://bbj.hu/conferences/events/budapest/hungary-to-make-political-step-to-accelerate-nabucco14483. Retrieved: May 10, 2021

CEE Energy News. 2020. “BRUA pipeline to face difficulties due to stalled Black Sea gas project”. https://ceenergynews.com/oil-gas/brua-pipeline-to-face-difficulties-due-to-stalled-black-sea-gas-project/. Retrieved: May 15, 2021

Central European Energy Partners. 2019. “Inauguration of the construction work of Polish section of the gas interconnector Poland – Slovakia”. https://www.ceep.be/inauguration-of-the-construction-work-of-polish-section-of-the-gas-interconnector-poland-slovakia/. Retrieved: May 17, 2021

Czech Radio – Prague International. 2018. Controversial Russian gas pipeline makes Czech progress”. https://english.radio.cz/controversial-russian-gas-pipeline-makes-czech-progress-8166984. Retrieved: May 17, 2021

Dunai, Marton. 2017. Reuters: “Hungary joins Gazprom pipeline, as Trump touts U.S. LNG”. https://www.reuters.com/article/us-russia-hungary-gas-idUSKBN19Q1YE. Retrieved: May 17, 2021

Elliott, Stuart. 2020. S&P Global: “Shell to supply 0.25 Bcm/year of LNG to Hungary via Croatia terminal”. https://www.spglobal.com/platts/en/market-insights/latest-news/natural-gas/090420-shell-to-supply-025-bcmyear-of-lng-to-hungary-via-croatia-terminal-minister. Retrieved: May 15, 2021

Enerdata. 2021. “Hungary extends gas supply contract with Russia's Gazprom”. https://www.enerdata.net/publications/daily-energy-news/hungary-extends-gas-supply-contract-russias-gazprom.html#:~:text=Hungary%20and%20Russia%20have%20agreed,import%206.2%20bcm%20in%202021. Retrieved: May 17, 2021

Energy Regulatory Office of Poland. 2019. “Report on energy regulations, 2019”. https://www.ure.gov.pl/en/markets/gas/gas-information-package/295,Gas-Information-package.html. Retrieved: May 20, 2021

E.ON SE. 2013. “E.ON sells stake in Slovenský Plynárenský Priemysel”. https://www.eon.com/en/about-us/media/press-release/2013/eon-sells-stake-in-slovensk--plyn-rensk--priemysel.html. Retrieved: May 17, 2021

Euobserver. 2014. “Hungary moves ahead with South Stream pipeline”. https://euobserver.com/news/126388. Retrieved: May 15, 2021

EurActiv, 2009. “Russia wins Hungary’s support for South Stream pipeline”. https://www.euractiv.com/section/med-south/news/russia-wins-hungary-s-support-for-south-stream-pipeline/. Retrieved: May 22, 2021

EurActiv. 2012. “Nabucco suffers friendly fire from Budapest”. https://www.euractiv.com/section/central-europe/news/nabucco-suffers-friendly-fire-from-budapest/. Retrieved: May 19, 2021

EurActiv, 2014. “Hungary and Slovakia link their gas grids”. https://www.euractiv.com/section/energy/news/hungary-and-slovakia-link-their-gas-grids/. Retrieved: May 17, 2021

Europäische Investitionsbank. 2009. “Hungary-Croatia Gas Interconnection”. https://www.eib.org/de/projects/pipelines/all/20090128#. Retrieved: May 19, 2021

European Commission. 2019. “Energy Union: EU invests to upgrade Polish Liquefied Natural Gas terminal in Świnoujście”. https://ec.europa.eu/info/news/energy-union-eu-invests-upgrade-polish-liquefied-natural-gas-terminal-swinoujscie-2019-oct-18_en. Retrieved: May 17, 2021

Eurostat. 2020. “EU imports of energy products - recent developments”. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=EU_imports_of_energy_products_-_recent_developments&oldid=512866. Retrieved: May 15, 2021

Eustream – Slovak Gas TSO. “Project of common interest (PCI) No. 6.2.1: Poland – Slovakia Interconnection”. https://www.eustream.sk/en_transmission-system/en_pl-sk-interconnector/en_project-of-common-interest-pci. Retrieved: May 17, 2021

Financial Times. 2013. “Hungary: renationalisation speeds up”. https://www.ft.com/content/9ffb3780-bfd0-3e83-b841-d2f797597f4c. Retrieved: May 20, 2021

GazpromExport. Foreign partners - Czech Republic. http://www.gazpromexport.ru/en/partners/czech/. Retrieved: May 19, 2021

GazpromExport. Foreign partners - Hungary. http://www.gazpromexport.ru/en/partners/hungary/#:~:text=From%20October%202018%2C%20Gazprom%20Export,basis%20of%20short%20term%20contracts.&text=As%20of%2031%20December%202019,bcm%20via%20WIEE%20Hungary%20Kft. Retrieved: May 21, 2021

GazpromExport. Foreign partners - Poland. http://www.gazpromexport.ru/en/partners/poland/. Retrieved: May 19, 2021

GazpromExport. Foreign partners - Slovakia. http://www.gazpromexport.com/en/partners/slovakia/. Retrieved: May 19, 2021

Gazprom Group Export Report. 2014. https://www.gazprom.com/f/posts/53/907625/background-press-conf-2014-06-03-en.pdf. Retrieved: May 19, 2021

Gazprom Press Release. 2010. “Gazprom, PGNiG and EuRoPol GAZ sign long-term Agreement of Cooperation in gas sector”. https://www.gazprom.com/press/news/2010/january/article75614/. Retrieved: May 19, 2021

Gazprom Press Release. 2013. “Gazprom and MND Group embark on new UGS facility construction in Czech Republic”. https://www.gazprom.com/press/news/2013/march/article158442/. Retrieved: May 19, 2021

Gazprom Press Release. 2014. “Gazprom developing NGV market in Czech Republic”. https://www.gazprom.com/press/news/2014/june/article192914/. Retrieved: May 19, 2021

Gazprom Press Release. 2021. “Gazprom and Hungary expanding cooperation in gas sector”. https://www.gazprom.com/press/news/2021/january/article522671/. Retrieved: May 22, 2021

Gaz-System SA. LNG Terminal Expansion Program. https://terminallng.gaz-system.pl/en/lng-terminal/lng-terminal-expansion-program/. Retrieved: May 25, 2021

Gaz-System SA. LNG Terminal in Świnoujście. https://terminallng.gaz-system.pl/en/lng-terminal/lng-terminal-in-swinoujscie/. Retrieved: May 19, 2021

Gaz-System SA. 2020. “Shareholders structure report”. https://en.gaz-system.pl/about-us/key-facts/authorities-of-the-company/. Retrieved: May 20, 2021

Gotev, Georgi. 2015. EurActiv: “Former Czech PM promotes Eastring gas pipeline”. https://www.euractiv.com/section/central-europe/news/former-czech-pm-promotes-eastring-gas-pipeline/. Retrieved: May 17, 2021

Groszkowski, Jacub. 2013. Centre for Eastern Studies. “Changes in the ownership structure of the Slovak gas company SPP”. https://www.osw.waw.pl/en/publikacje/analyses/2013-09-11/changes-ownership-structure-slovak-gas-company-spp. Retrieved: May 19, 2021

Independent Commodity Intelligent Services. 2006. PGNiG signs framework deal for Norwegian gas with Statoil”. https://www.icis.com/explore/resources/news/2006/06/19/9288169/pgnig-signs-framework-deal-for-norwegian-gas-with-statoil/. Retrieved: May 24, 2021

International Energy Agency. 2016. “Energy Policies of IEA Countries 2016 Review - Czech Republic”. https://www.iea.org/reports/energy-policies-of-iea-countries-czech-republic-2016-review. Retrieved: May 26, 2021

Jencova, Irena. 2021. EurActiv: “Bratislava port to get its own €40 million LNG terminal”. https://www.euractiv.com/section/politics/short_news/bratislava-port-to-get-its-own-e40-million-lng-terminal/. Retrieved: May 18, 2021

Kaderják, Peter. 2009. The January 2009 Gas Crisis: What Happened in Central and South Ea st Europe? https://www.ceer.eu/documents/104400/-/-/c25e042e-1a94-4877-78cf-bb964fedb004. Retrieved: May 19, 2021

Kowalski, Janusz. 2017. Warsaw Institute: “Will Poland Liberate East-Central Europe from Gazprom’s Dictates?”. https://warsawinstitute.org/will-poland-liberate-east-central-europe-from-gazproms-dictates/. Retrieved: May 14, 2021

Ministry of Industry and Trade of Czech Republic. 2019. “Preventive Action Plan required for removing or mitigating identified risks for providing deliveries of natural gas in the Czech Republic”. https://ec.europa.eu/energy/sites/default/files/documents/2019.03.18-pap_czech_rep_en.pdf. Retrieved: May 19, 2021

MND Press Release. 2016. “Moravia Gas Storage Opens a New Gas Storage Facility in Dambořice”. https://kkcg.com/upload/article/pr-as-storage-damborice-27-6-2016-eng-09795.pdf. Retrieved: May 22, 2021

MOL - Hungary. Arad-Szeged Gas Pipeline Inaugurated. https://mol.hu/en/about-mol/media-room/2656-arad-szeged-gas-pipeline-inaugurated/. Retrieved: May 19, 2021

Money PL. 2018. Grażyna Piotrowska-Oliwa wygrała z PGNiG, ale nie jest usatysfakcjonowana. Rozważa pozew przeciw Tuskowi https://www.money.pl/gospodarka/wiadomosci/artykul/grazyna-piotrowska-oliwa-wygrala-z-pgnig-ale,76,0,2414924.html. Retrieved: May 21, 2021

Morgan, Sam. 2017. Central-Eastern European pipeline gets go-ahead. https://www.euractiv.com/section/energy/news/central-eastern-european-pipeline-gets-go-ahead/. Retrieved: May 17, 2021

NeftegazRU. 2017. "The Czech Republic supports the construction of the Nord Stream 2 gas pipeline and hopes for mutually beneficial cooperation with Russia ". https://neftegaz.ru/news/politics/205237-chekhiya-podderzhivaet-stroitelstvo-gazoprovoda-severnyy-potok-2-i-nadeetsya-na-vzaimovygodnoe-sotru/. Retrieved: May 27, 2021

NeftegazRU. 2019. "Hungary's Foreign Minister Péter Szijjártó met CEOs of Gazprom and Rosatom for talks in Budapest". https://neftegazru.com/news/energy/503619-hungary-s-foreign-minister-p-ter-szijj-rt-met-ceos-of-gazprom-and-rosatom-for-talks-in-budapest/. Retrieved: May 23, 2021

New Europe. 2009. "SPP signs five-year contract with GDF Suez". https://www.neweurope.eu/article/spp-signs-fiveyear-contract-gdf-suez/. Retrieved: May 21, 2021

News Now. 2017. "Fico: Purpose of Extraordinary Session to Stir Up Conflict and Fuel Apathy". https://newsnow.tasr.sk/policy/fico-purpose-of-extraordinary-session-to-stir-up-conflict-and-fuel-apathy/. Retrieved: May 19, 2021

Offshore Energy. 2013. "Russia: Gazprom Export Appeals against RWE Transgas Court Decision". https://www.offshore-energy.biz/russia-gazprom-export-appeals-against-rwe-transgas-court-decision/. Retrieved: May 20, 2021

PGNiG Press Release. 2009. "Information on Natural Gas Supplies to Poland". https://en.pgnig.pl/news/-/news-list/id/information-on-natural-gas-supplies-to-poland/newsGroupId/1910852?changeYear=2009&currentPage=4. Retrieved: May 19, 2021

PGNiG Press Release. 2011. "PGNiG SA Signs Two Gas Supply Agreements". https://en.pgnig.pl/news/-/news-list/id/pgnig-sa-signs-two-gas-supply-agreements/newsGroupId/1910852?changeYear=2011&currentPage=3. Retrieved: May 19, 2021

PGNiG Press Release. 2013. "Announcement by PGNiG SA concerning EuRoPol Gaz SA". https://en.pgnig.pl/news/-/news-list/id/announcement-by-pgnig-sa-concerning-europol-gaz-sa/newsGroupId/1910852?changeYear=2013&currentPage=2. Retrieved: May 19, 2021

PGNiG Press Release. 2014. "PGNiG and Qatargas sign memorandum of understanding for the LNG supplies contract". https://en.pgnig.pl/news/-/news-list/id/pgnig-and-qatargas-sign-memorandum-of-understanding-for-the-lng-supplies-contract/newsGroupId/1910852?changeYear=2014&currentPage=1. Retrieved: May 19, 2021

PGNiG Press Release. 2014. "PGNiG commences price negotiations with Gazprom". https://en.pgnig.pl/news/-/news-list/id/pgnig-commences-price-negotiations-with-gazprom/newsGroupId/1910852?changeYear=2014&currentPage=2. Retrieved: May 19, 2021

PGNiG Press Release. 2017. “PGNiG purchased LNG from Norway”. https://en.pgnig.pl/news/-/news-list/id/pgnig-purchased-lng-from-norway/newsGroupId/1910852?changeYear=2017&currentPage=2. Retrieved: May 19, 2021.

PGNiG Press Release. 2017. “Polish government supports PGNiG in OPAL case”. https://en.pgnig.pl/news/-/news-list/id/polish-government-supports-pgnig-in-opal-case/newsGroupId/1910852?changeYear=2016&currentPage=1. Retrieved: May 19, 2021

PGNiG Press Release. 2017. “Statement by PGNiG SA on the start of another renegotiation of gas prices from the PAO Gazprom and OOO Gazprom Export”. https://en.pgnig.pl/news/-/news-list/id/statement-by-pgnig-sa-on-the-start-of-another-renegotiation-of-gas-prices-from-the-pao-gazprom-and-ooo-gazprom-export/newsGroupId/1910852?changeYear=2017&currentPage=1. Retrieved: May 19, 2021

PGNiG Press Release. 2020. “Victory for PGNiG: the Arbitral Tribunal in Stockholm rules to lower the price of the gas sold by Gazprom to PGNiG”. https://en.pgnig.pl/news/-/news-list/id/victory-for-pgnig-the-arbitral-tribunal-in-stockholm-rules-to-lower-the-price-of-the-gas-sold-by-gazprom-to-pgnig/newsGroupId/1910852. Retrieved: May 19, 2021

PGNiG SA. 2020. “Shareholder structure report”. https://en.pgnig.pl/investor-relations/stock-informations/shareholder-structure. Retrieved: May 19, 2021

Plinacro. 2020. Reverse flow with Hungary enabled. https://www.plinacro.hr/default.aspx?id=1131. Retrieved: May 22, 2021

Poland In. 2021. “PiS MEPs file anti-Nord Stream 2 draft resolution ready”. https://polandin.com/53441757/pis-meps-file-antinord-stream-2-draft-resolution-ready. Retrieved: May 24, 2021

Polityka Insight. 2019. “What kind of gas policy did PiS carry out”. https://www.politykainsight.pl/en/politics/poland2019/1921914,1,what-kind-of-gas-policy-did-pis-carry-out.read. Retrieved: May 21, 2021

Reuters. 2016. “PGNiG mulls selling gas outside Poland, wants to lower import costs”. https://www.reuters.com/article/pgnig-poland-strategy-idUKL5N1780QW. Retrieved: May 19, 2021

Reuters. 2008. “Update 1-Slovak govt seeks veto rights on gas price rises”. https://www.reuters.com/article/slovakia-gas-idUSL444244820081104. Retrieved: May 18, 2021

Reuters. 2011. “Hungary bought back Surgut's stake in MOL-PM Orban”. https://www.reuters.com/article/mol-surgut-idUSTST00206120110524. Retrieved: May 26, 2021

Reuters. 2012. “RWE Transgas says wins contracts dispute with Gazprom”. https://www.reuters.com/article/us-gazprom-rwe-dispute-idUSBRE89N0Z620121024. Retrieved: May 22, 2021

Reuters. 2012. “Update 1-Hungary MOL ready to sell Nabucco stake if needed”. https://www.reuters.com/article/mol-nabucco-idUSL6E8FQ6XT20120426. Retrieved: May 19, 2021

Reuters. 2016. “EU leaders sign letter objecting to Nord Stream 2 gas link”. https://www.reuters.com/article/uk-eu-energy-nordstream-idUKKCN0WI1YV. Retrieved: May 23, 2021

Reuters. 2019. “Russia proposes Slovakia join Nord Stream-2 and Turkstream: agencies”. https://www.reuters.com/article/us-russia-slovakia-gas-idUSKCN1T61FX. Retrieved: May 20, 2021

Reuters. 2020. “Poland, Russia to cut decades-old gas transit ties”. https://www.reuters.com/article/russia-poland-gas-idUSL8N2CX3EF. Retrieved: May 19, 2021

Reuters. 2020. “Update 1-Hungary to triple capacity of gas pipeline to Slovakia”. https://www.reuters.com/article/hungary-slovakia-gas-interconnector-idAFL8N2DF2M5. Retrieved: May 20, 2021

RIA News. 2021. “Poland reacted on Danish withdrawal of Baltic Pipe construction permission”. https://ria.ru/20210604/daniya-1735548692.html. Retrieved: May 28, 2021

Rodova, Nadya, and Geller, Maurice. 2012. S&P Global: “Russia's Gazprom, Poland's PGNiG agree on gas price adjustment”. https://www.spglobal.com/platts/ru/market-insights/latest-news/natural-gas/110612-russias-gazprom-polands-pgnig-agree-on-gas-price-adjustment. Retrieved: May 26, 2021

Russia Business Today. 2018. “Hungary to Start Talks on 2020 Gas Supplies from Gazprom”. https://russiabusinesstoday.com/energy/hungary-to-start-talks-on-2020-gas-supplies-from-gazprom/. Retrieved: May 20, 2021

Simion, Karmen. 2017. „Intellinews: Bulgaria, Romania, Hungary and Austria pledge to go ahead with BRUA gas project”. https://www.intellinews.com/bulgaria-romania-hungary-and-austria-pledge-to-go-ahead-with-brua-gas-project-129793/. Retrieved: May 22, 2021

Siwecka, Anna. 2020. Montel: “PGNiG to “protect Poland’s interest” in Nord Stream 2 appeal”. https://www.montelnews.com/fr/story/pgnig-to-protect-polands-interest-in-nord-stream-2-appeal/1135661. Retrieved: May 22, 2021

SPP Annual Report. 2003. https://www.spp.sk/en/all-segments/about-us/profil-and-structure/annual-reports/. Retrieved: May 23, 2021

SPP Annual Report. 2015. https://www.spp.sk/en/all-segments/about-us/profil-and-structure/annual-reports/. Retrieved: May 23, 2021

SPP Annual Report. 2016. https://www.spp.sk/en/all-segments/about-us/profil-and-structure/annual-reports/. Retrieved: May 23, 2021

SPP Annual Report. 2017. https://www.spp.sk/en/all-segments/about-us/profil-and-structure/annual-reports/. Retrieved: May 23, 2021

SPP Annual Report. 2018. https://www.spp.sk/en/all-segments/about-us/profil-and-structure/annual-reports/. Retrieved: May 23, 2021

The Budapest Beacon. 2016. “Lucrative MET gas trading scheme gave Fidesz oligarchs something to really cheer about, study reveals”. https://budapestbeacon.com/lucrative-met-

gas-trading-scheme-gave-fidesz-oligarchs-something-to-really-cheer-about-study-reveals/. Retrieved: May 19, 2021

The European Commission. 2021. “EU energy statistical pocketbook and country datasheets”. https://ec.europa.eu/energy/data-analysis/energy-statistical-pocketbook_en. Retrieved: May 11, 2021

The Moscow Times. 2014. “Slovakia Could Allow EU to Turn Back on Russia Without South Stream”. https://www.themoscowtimes.com/2014/11/28/slovakia-could-allow-eu-to-turn-back-on-russia-without-south-stream-a41824. Retrieved: May 22, 2021

The Slovak Spectator. 2009. “Energy crisis looms as all gas imports cease”. https://spectator.sme.sk/c/20031503/energy-crisis-looms-as-all-gas-imports-cease.html. Retrieved: May 20, 2021

The Slovak Spectator. 2013. “Fico: Gas prices will not go up”. https://spectator.sme.sk/c/20048427/fico-gas-prices-will-not-go-up.html. Retrieved: May 23, 2021

The Slovak Spectator. 2017. “Gazprom and Eustream sign deal on gas transports”. https://spectator.sme.sk/c/20507556/gazprom-and-eustream-sign-deal-on-gas-transports.html. Retrieved: May 23, 2021

The Visegrad Group. 2010. Declaration of the Budapest V4+ Energy Security Summit. https://www.visegradgroup.eu/2010/declaration-of-the. Retrieved: May 10, 2021

The Visegrad Group. 2013. Road Map towards the regional gas market among Visegrad 4 countries. https://www.visegradgroup.eu/download.php?docID=212. Retrieved: May 10, 2021

The Visegrad Group. 2016. Energy security in V4. https://www.visegradgroup.eu/energy-security-in-v4. Retrieved: May 10, 2021

The Slovak Spectator. 2008. “Quit gouging households - or else”. https://spectator.sme.sk/c/20030781/quit-gouging-households-or-else.html. Retrieved: May 23, 2021

Zapletnyuk, Katya. 2012. “Czech natural gas storage operator finalises Vemex stake buy”. https://www.icis.com/explore/resources/news/2012/01/19/9525417/czech-natural-gas-storage-operator-finalises-vemex-stake-buy/. Retrieved: May 20, 2021