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RUSSIA'S FALIN–KVITSINSKY ENERGY DOCTRINE: HISTORY AND EXPERIENCE APPLIED TO SELECTED CENTRAL EUROPEAN COUNTRIES

ABSTRACT

This article discusses the evolution of the energy security of Belarus, Estonia, Latvia, Lithuania, Poland and Ukraine since the collapse of the Union of Soviet Socialist Republics (USSR), in terms of natural gas supplies. Instead of framing energy dependencies on Russia in a descriptive way, this article shows the empirical validation of the Falin–Kvitsinsky doctrine, which includes the use of energy resources as tool in foreign policy. Therefore, the authors propose a three-element Falin–Kvitsinsky doctrine indicator to measure the power of this doctrine using the yearly data for 1991–2021. Authors argue that the impact of this doctrine should be assessed through the lens of energy supply security and then measured by appropriate indicators. This approach might be seen as opposite to the mainstream publications which are mostly descriptive in this field. In the article, the authors provided clear evidence of the Falin–Kvitsinsky doctrine existence until the end of 2021, which was applied during the Russian-Ukrainian war. Actions taken by Russia over the years were aimed at making Central European countries dependent on natural gas supply, which would then prompt these countries to limit their aid to Ukraine during the conflict that began in 2022. In conclusion, Russia is able to pursue its political goals in the manner suggested by the Falin–Kvitsinsky doctrine as long as each Central European country tries to ensure its own energy security.

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However, the Falin-Kvitsky doctrine did not fully meet its objectives, as Central European countries, as a result of the Russian-Ukrainian war, were able to quickly take steps to diversify the sources and directions of natural gas supplies by taking comprehensive measures and strengthening cooperation.

Keywords: Falin–Kvitsinsky doctrine, Union of Soviet Socialist Republics, energy security, natural gas, infrastructure

1. INTRODUCTION

Since the collapse of the Union of Soviet Socialist Republics in 1990/1991, energy supply security has been a core issue for all post-communist countries. Belarus, Estonia, Latvia, Lithuania and Ukraine just recently celebrated 30 years of independence (1990/1991). In the case of Poland, the important political changes linked with post-communist history took place a little earlier, in 1989. However, due to their common history, all these states were forced to develop strategies for energy security and to adapt their energy policies to the new political and economic landscape. For each of these countries, stability of energy supplies is one of their primary objectives (Skalamera, 2015).

In general, the Falin–Kvitsinsky doctrine relates to the influence of Russia on energy-dependent states (Fedorov, 2013). Despite rich publication achievements in this field, the literature still leaves unanswered questions concerning the quantitative validation of this political doctrine. Therefore, in this article we look closely at a relatively poorly explored area: empirical verification of the Falin–Kvitsinsky doctrine. We argue that the impact of this doctrine should be assessed through the lens of energy supply security and then measured by appropriate indicators. This approach might be seen as opposite to the mainstream publications in this field, which are mostly descriptive.

Thus, we can state our research questions as follows: What impact has the Falin–Kvitsinsky doctrine had on the energy security of post-communist countries such as Belarus, Estonia, Latvia, Lithuania, Poland and Ukraine? What kinds of strategies have been pursued by these countries to ensure their energy security in the case of natural gas supply? Did the doctrine prove to be effective as a result of the outbreak of the Russian-Ukrainian war in 2022?

We argue that the effectiveness of the Falin–Kvitsinsky doctrine is inversely proportional to the energy security of these post-communist countries. Based on this assumption, the quantitative analysis is prepared in three dimensions: the evolution of natural gas infrastructure, with particular indication of the technical possibilities of diversification options; changes in the energy mix to define the role of natural gas supply in each of these countries; and diversification of natural gas imports, linked with the exporter's stability. We state that, in the light of the Falin–Kvitsinsky doctrine, only full analyses of these elements might provide a general view of the process of changes in the energy sectors in these countries since 1990/1991.

This paper is organized as follows. Section 2 provides a scientific discussion of energy security and its relationship with the Falin–Kvitsinsky doctrine. Section 3 contains the detailed methodology of quantitative measurement of this doctrine in the light of energy supply security. Section 4 contains the analysis using a three-element indicator to confirm or deny the existence of a Falin–Kvitsinsky doctrine in practice. In section 5, we discuss how these post-

communist countries reacted and what diversification measures they took when the Russian-Ukrainian war broke out in 2022. Section 6 concludes.

2. ENERGY SECURITY THROUGH THE LENS OF THE FALIN–KVITSINSKY DOCTRINE

Belarus, Estonia, Latvia, Lithuania, Poland and Ukraine have been in a unique situation for years: before the 1990s, instead of boosting domestic production or diversifying the sources of their imports, they had focused on importing energy from Russia (mostly natural gas and crude oil). These strong energy import dependencies left ample room for the Falin–Kvitsinsky doctrine, which assumes that “[...] the issue of energy exports to Eastern Europe must be seen as a very important instrument of our [the USSR’s] overall strategy in this region” (Menskizak, 2019). This doctrine, which was formulated in 1989, came into force in the 1990s and thus assumed the maintenance of significant Russian political and economic influence in the region. Consequently, these six post-communist states have historically been dependent on one gas supplier, and mostly via two transmission channels – the *Yamal* and *Brotherhood* pipelines. This strategic infrastructure has also become the basis for binding the countries of the region into long-term energy supply contracts with Russia.

The power of Russia to influence energy-dependent countries is seen in the processes of changes in the volume of gas and oil transported via pipelines or the degree of dependence of individual countries on imports (Górnikiewicz et al., 2020). Hence, the assessment of the effectiveness of the doctrine might be presented through the prism of the energy security perspective.

However, an extensive review of contemporary theoretical research on energy security turned up several hundred papers dealing with this issue and delivered dozens of different definitions of the phenomenon, and these numbers are still rising (for example, between 2001 and 2014, we identified 104 papers dealing with energy security and these delivered 83 different definitions of the phenomenon). These publications note that difficulties have been encountered in developing a clear and precise concept of energy security (Knox-Hayes et al., 2013; Šumskis & Giedraitis, 2015). Definitions of energy security address, but are not limited to, aspects such as energy availability, infrastructure, prices and societal effects, energy governance, and energy efficiency. Energy availability refers mainly to energy supply diversity, either in the form of import diversification, energy mix, technology or transport routes. Thus, the correct definition often depends on the context (Chester, 2010; Gupta, 2008; Sovacool, 2016) so it is difficult to arrive at a universal definition. However, many different definitions contain important common elements, like “the uninterrupted availability of energy sources at an affordable price” (EIA, 2019) and therefore these elements could be seen as crucial for this concept.

Nevertheless, Belarus, Estonia, Latvia, Lithuania, Poland and Ukraine share one common element of this concept: security of energy supply. The National Energy Strategy of Ukraine until 2030 defined the concept of energy security as the state’s ability to ensure the efficient use of fuel and energy sources, diversify the sources and routes of supplies of raw materials and energy carriers in times of peace or war, and adapt the Ukrainian energy sector to changes in the European situation (Gomółka, 2019). Belarus sees energy security as “the state of pro-

tection of citizens, society, the state and the economy against the threat of a deficit in meeting their energy needs with the use of economically affordable energy sources of acceptable quality” (Novikau, 2019). In turn, Poland’s Energy Law of 10 April 1997 defines energy security as “the condition of the economy which enables full coverage of the customer’s ongoing and prospective demand for fuels and energy in a technically and economically justified manner, with the observance of the environment protection requirements” (article 3, point 16, Government of Poland, 1997). The situation is similar in the three Baltic countries. In terms of stability of supply, The Republic of Lithuania’s Energy Law of 16 May 2002 states: “Security of supply shall mean the reliability and technical safety of supply of energy sources and/or energy” (article 2, point 30, Government of the Republic of Lithuania, 2002). According to the National Security Concept of Estonia, “Energy security is ensured through the security of supply, the security of infrastructure, interconnection with energy networks of other EU member states, and diversity of sources of energy” (Government of the Republic of Estonia, 2010). Latvia also regards energy security as involving sufficient supply and safe delivery, and connects it directly with reducing dependency on a single provider (Weyers, 2013). Thus, uninterrupted availability of energy is crucial for all these post-communist countries. This type of threat had a fundamental impact on the actions taken with the beginning of the Russian-Ukrainian war.

In sharp contrast, Russia as the dominant natural gas and crude oil exporter in the region has almost unlimited access to domestic energy resources. Therefore, from its perspective, energy security would be seen as the availability of sufficient energy exports at reasonable prices. This approach follows from revenues from exports of hydrocarbons, mainly crude oil and natural gas, which are responsible for roughly a quarter of Russia’s gross domestic product (GDP) and two-thirds of its export earnings (Novikau, 2020). Hence, in the Doctrine of Energy Security of the Russian Federation, which was signed into law by President Vladimir Putin on 13 May 2019, this concept is defined merely as the “condition of security of the economy and the population of the country from threats to homeland security in the field of power in case of which accomplishment is stipulated by the legislation requirements of the Russian Federation to fuel – and to power supplies for consumers, and also accomplishment of export contracts and international obligations of the Russian Federation is provided” (Energy security doctrine, 2019).

3. METHODOLOGY OF QUANTITATIVE MEASUREMENT OF THE FALIN–KVITSINSKY DOCTRINE

Due to the lack of an unambiguous definition of energy security, there are many different quantitative methods for assessing this issue in practice. These indicators might be grouped depending on the purpose of the analysis. The first group includes measures regarding the degree of concentration in imports. These are based on the commonly proclaimed thesis that diversification of supply and suppliers is the right solution for ensuring energy security (Correljé & van der Linde, 2006). The scale of diversification of imports can be evaluated by using an import concentration index (e.g., the Herfindahl-Hirschman index (HHI) (Lefevre, 2010)).

The second group includes indicators based on the analysis of the costs of interruptions in energy supply (Beccue et al., 2004). However, these are often referred to as supply cost estimates, rather than energy security measures. These methods allow for a quantitative analysis of supply shocks and their impact on the economy.

The third group covers the indicators based on measuring energy security through the prism of its complexity. Research on this issue is based on advanced measures of energy security. These measures comprise many elements relating to such issues as domestic fuel resources, reliability of transmission infrastructure, or the dependence of the importing country on foreign supplies of energy resources (Cabalu, 2010). They are published by international organizations such as the International Energy Agency (Model of Short-Term Energy Security), the World Energy Council (Energy Trillema Index), and the American Chamber of Commerce in cooperation with the Global Energy Institute (Energy Security Index) (Nyga-Łukaszewska, 2019).

However, it should be borne in mind that comprehensive measures serve the analysis of the general state of energy security; more precise research requires the creation of adequate partial indicators focusing selectively on the subject under study (here, the dedicated Falin–Kvitsinsky doctrine). Moreover, the vast majority of research on energy security is concerned only with a specific, usually short, point or moment of time. Therefore, this paper contributes to the existing literature by providing a detailed and sequential analysis of the Falin–Kvitsinsky doctrine through the lens of natural gas supply security for Belarus, Estonia, Latvia, Lithuania, Poland and Ukraine, nearly three decades after the collapse of the USSR. Thus, this article should deepen existing insights through seeking to fill key gaps in the empirical understanding of the impacts of the Falin–Kvitsinsky doctrine in three different areas at once:

- First, it builds on findings from the analysis of key gas infrastructure projects that have been undertaken since 1991 in Belarus, Estonia, Latvia, Lithuania, Poland and Ukraine (variable I).
- Second, it indicates the growing number of alternative energy sources that allow states to become more independent from natural gas (variable S).
- Third, it explores the process of diversification, which is linked directly with the stability of the counterparty (variable D).

Additionally, since it is difficult to objectively assess which of these is the most significant value for energy security and then indicate the appropriate rank for each component separately, we assume that each of these components is equally important. Therefore, we propose a three-element Falin–Kvitsinsky doctrine indicator (D_{F-K}) to measure the power of this doctrine using the yearly data for 1991–2021:

$$D_{F-K} = I + S + D, \text{ if assuming that } D_{F-K} \in \langle 0; 3 \rangle, \quad (1)$$

Where:

I – Infrastructure capacity for alternatives to Russian imports, in relation to current demand; if I is more than 1 (100%), it takes the value 1.

S – Share of other than a given energy source in the energy mix.

D – Diversification and stability of energy resource supplies to the country, according to the formula below:

$$D = \sum_i (G_{ai} r_i), \quad (2)$$

Where

G_{ai} – Net value of energy resource supplies from given sources. In the case of imports: net value of supplies from country i to country a .

r_i – Stability of the supplier (here, the value of HDI due to the comparability of data throughout the entire period of this research); in case of own production, this takes the value 1 and it is based on the assumption that the supplier's political stability results in long-term socioeconomic stability; that is, there is a high correlation between countries with long-term future political stability and countries with a high current HDI score (see Jansen et al., 2004).

It should be noted that although the D_{F-K} indicator does not strictly contain other detailed elements, it relates to them indirectly. For example, elements like length of the contract, price conditions and additional clauses are taken into account in the diversification strategy (variable D).

Additionally, each of these partial indicators takes a value between 0 and 1; the general assumption is that the closer to 1, the higher the level of supply security. Hence, the overall three-element index takes a value between 0 and 3.

The main advantage of the presented indicator is definitely its high application value due to lack of any need to use hard-to-reach data. In the case of the Falin–Kvitsinsky doctrine, it is particularly difficult to obtain reliable data for the period just after the collapse of the USSR; this is, however, important for the correct determination of the initial state. Moreover, from a cognitive point of view, the proposed Falin–Kvitsinsky doctrine index might be used in other research in the context of doctrines with similar nature, *per analogiam*. Therefore, there is a potential application function for the indicated formula in other research into export dependency, where there is a key importer or a consortium of importers.

4. THE VALIDITY OF THE FALIN–KVITSINSKY DOCTRINE AND ITS CONSEQUENCES FOR SELECTED POST-COMMUNIST COUNTRIES

The implementation of the Falin–Kvitsinsky doctrine would not have been possible without the high level of natural gas production in Russia. In 1985, Russian natural gas production was 425 bcm/y (billion cubic meters per year); 26% of world natural gas production at that time. Just before the collapse of the USSR, production amounted to slightly less than 600 bcm/y, and Russia's share was the highest in history, at 30% (Figure 1). In the following years, the collapse of the USSR and the lack of financial resources resulted in a gradual decline in production. Nevertheless, Russia took steps to build new routes for natural gas exports to Europe. The *Yamal* pipeline was completed in 1999 (construction was initiated in 1993) and was intended to supply Europe with Russia's natural gas (total capacity amounts to 33 bcm/y). Thus, Russian influence was preserved after the collapse of the USSR, and the post-communist countries became important recipients of Russian natural gas (Yermakov & Sobczak, 2020). The high share of natural gas in the energy mix and the lack of alternative infrastructure limited opportunities for diversification and forced these countries to import natural gas from the East. For the 1991–2000 period, high dependency was noted for Bela-

rus and Ukraine: their shares of natural gas imported from Russia rose from 31% to 59% and 38% to 47%, respectively. In Estonia, however, the share only rose from 13% to 14%; Poland 8% to 11%; Latvia 31% to 34%; and Lithuania 27% to 31%.

However, the situation and optics of natural gas supplies from Russia to Europe changed dramatically when Vladimir Putin came to power. In the first year of his presidency (2001), production decreased due to the lack of investment in the previous years and the natural depletion of natural gas deposits. However, in the following years there was a dynamic increase in production. Due to the evolution of technology since the late 1990s, Russia has been able to use multiple routes to supply Europe, through the construction of several key offshore gas pipelines. The aim of this strategy was to increase the pressure on post-communist countries (the threat of suspension of supplies) and to eliminate the need to cooperate with transit countries. For example, the *Blue Stream* pipeline (constructed 1997–2005) with a capacity of 16 bcm/y, enabled Russia to supply gas to the developing and hungry Turkish market, and at the same time to reduce the need to supply via transit countries, including Ukraine (Kaynak, 2018). This meant a radical change in the approach to the Falin–Kvitsinsky doctrine. The main goal of the strategy was further monopolization of the markets of post-communist countries, ensuring their economic dependence on Russia (Åslund, 2021). In order to achieve an important goal – the subordination of Belarus and Ukraine – it was necessary to limit the importance and role of these countries in the transit of natural gas from Russia to Europe. The role of Poland as a transit country has also been reduced. That was also the purpose of the construction of the *Nord Stream* (2006–2012) and *Nord Stream 2* (under construction) gas pipelines, with a total capacity of 110 bcm/y.

The diminishing role of the transit countries (Belarus, Poland, Ukraine) caused their position within Europe to worsen (Pirani, Sharples, Yafimava, & Yermakov). Importantly, the Russian projects, together with enterprises from Europe, aimed to hinder the development of a common European Union energy policy. This situation made it difficult to build alternative natural gas connections. Hence, construction of the *Nord Stream* and *Nord Stream 2* pipelines has naturally made it harder to diversify the sources and directions of natural gas supplies to Europe. For the Baltic states, apart from the abovementioned political (lack of unity in the EU) and market threats (Russia's monopoly position), the construction of *Nord Stream* and *Nord Stream 2* poses a primarily environmental threat (e.g., leaks in the gas pipeline).

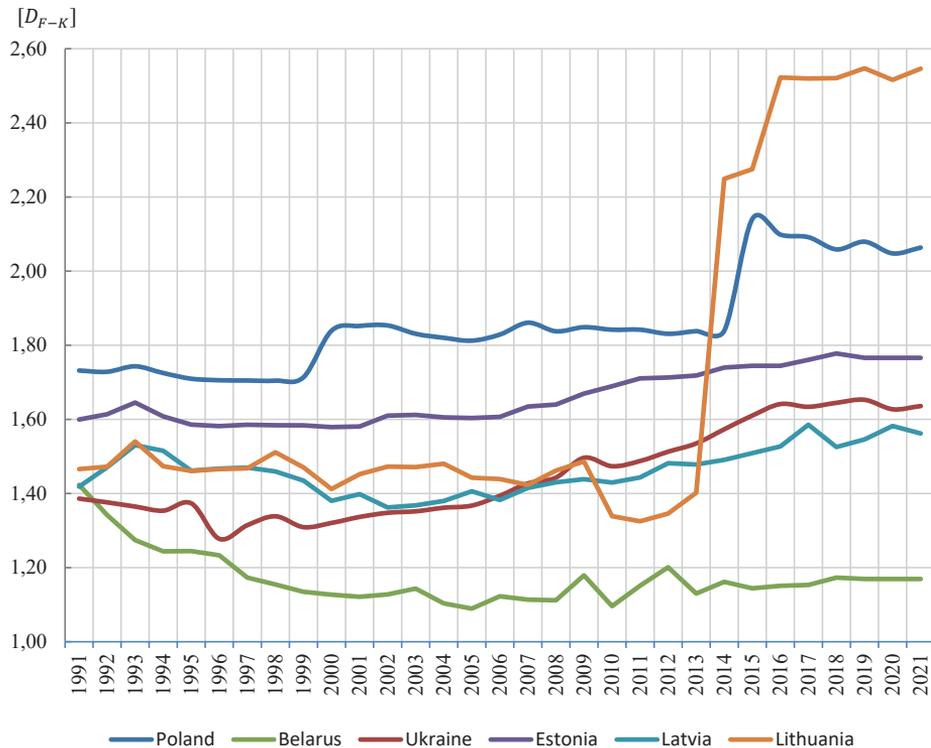
According to the *Energy Policy of Poland until 2040*, natural gas is to be a transitional fuel. Therefore, a further increase in its use is expected in the next few years. In the full analyzed period, the share of gas in the energy mix in Poland increased from 8% in 1991 to 19% in 2021. At the same time, an ongoing process of diversification allowed a reduction in the riskiness of natural gas supply (variable D), from 0.81 in 1991 to 0.93 in 2021 (a reduction of about 14,8%). That would not have been possible without adequate infrastructure connections, which guarantee imports from outside Russia to the level of 32% local use; new connections are currently ongoing. Taking into account other new gas connections (e.g., LNG terminal Świnoujście) and the small amount of progress in the use of renewable energy, between 1991 and 2021 the level of D_{F-K} increased by about 18% (from 1.84 to 2.06); that means a decrease in the Falin–Kvitsinsky doctrine for this value (Figure 2).

In the case of Belarus, the reasons for the decline in the value of energy security in relation to natural gas are the significant increase of this commodity in the energy mix and the lack of initiatives towards further diversification of supplies, or measures to create alternative gas

infrastructure (D_{F-K} decreased from 1.42 in 1991 to 1.17 in 2021; about 18%). For Ukraine, the role of natural gas is still significant, although a downward trend has been observed since 1996, from nearly 50% of the energy mix to 32% in 2021. The increased use of domestic resources also contributed to the increased security of gas supplies. On the other hand, renewables are still developing, only slowly, accounting for a mere 3% of the energy mix. The problem of energy security in the case of Belarus and Ukraine is the lack of infrastructure to enable real diversification of natural gas supplies (value of I equal to 0). The existing infrastructure allows only a virtual reverse, which is not conducive to increasing energy security and supply independence. Moreover, both of these countries are still struggling to reduce the role of natural gas in their energy mix. In the case of Belarus, the share of other energy sources has fallen by about 50%.

Figure 1

Falin–Kvitsinsky doctrine indicator for Belarus, Estonia, Latvia, Lithuania, Poland and Ukraine (1991–2021)



Of all the analyzed countries, Lithuania has the highest level of D_{F-K} at around 2.55 in 2021 (between 1991 and 2020, D_{F-K} rose by about 73%). This makes it the least influenced country. Through investment in the terminal LNG in Klaipeda, since January 2016, Lithuania has been able to diversify its supplies almost completely. Surprisingly, due to the still at-

tractive price of gas, in 2021 nearly 70% of its supplies still came from Russia via pipeline, and another 7% was delivered via the LNG terminal. However, this alternative ensures security of supply and also introduces a price mechanism into the local market. In this way, the possibilities of pressure applied by the Falin–Kvitsinsky doctrine are significantly lightened. In contrast, Latvia and Estonia do not have their own LNG terminals, so non-Russian imports are released only from Klaipeda. In both these countries, the value of D_{F-K} has systematically risen (from 1.60 for Estonia and 1.42 for Latvia in 1991 to 1.77 and 1.56 in 2021). This is due to the fact that both are developing renewables and limiting reliance on natural gas in their energy mix. Additionally, since the end of 2014 and 2017 respectively, Latvia and Estonia have started to diversify their supplies, mostly importing from Norway and the US.

Summing up, in the first stage of implementing the doctrine, the aim was to increase Russia's ability to influence transit states. At that time, it was possible to use the existing gas pipelines, and to construct new pipeline connections. Nevertheless, technological advances (construction of offshore gas pipelines) have led to a change in the doctrine. A new key element was the need to bypass transit countries, while still being able to influence them. Therefore, the construction of the *Nord Stream*, *Nord Stream 2* and *TurkStream* gas pipelines was nothing more than the next stage in the implementation of the Falin–Kvitsinsky doctrine.

5. NATURAL GAS INFRASTRUCTURE – EXPANSION AGAINST THE FALIN–KVITSINSKY DOCTRINE

Natural gas supplies remain one of the greatest challenges for post-communist countries. Over the years, Russia has increased its exports, limiting efforts to diversify supplies. Nevertheless, these countries, aware of the risks, have taken steps to expand their energy infrastructure, building LNG terminals (Lithuania, Poland) and bilateral natural gas interconnectors. This type of infrastructure and greater cooperation with LNG suppliers enabled these countries to counter the Falin-Kvitsinsky doctrine when the Russian-Ukrainian war broke out.

The key tools used by post-communist countries have been the expansion of energy infrastructure through the construction of LNG terminals, interconnectors and greater cooperation with natural gas producers. Importantly, even while Russian natural gas production increased after 2002, there was a systematic decline in Russia's share in world gas production. In 1999, 30% of global production came from Russia; by 2020 this had dropped to 17%. This was the result of an increase in production, for example, in the Middle East (mainly Qatar) and North America (the US, through the development of unconventional energy sources) (Greenwood, 2016). In the period 2006–2020, Qatar's share of the world's natural gas production increased from 2% to 22%, while the US share increased from 18% to 57%. Only cooperation with natural gas producers and increasing the availability of natural gas from various directions (via LNG) created the possibility of reducing Russia's monopoly position in the post-communist countries.

Apart from Ukraine, Belarus is one of Europe's most energy-dependent countries, and natural gas plays the most important role in the energy mix, providing 97% of Belarus's electricity. In 2020, domestic production was small, accounting for only 3% of total use; the remainder came from Russia (Paszkowski & Szabaciuk, 2020). Being landlocked, Belarus can only receive imports through pipelines. However, the prospects for diversifying the sources

and directions of natural gas supplies are minimal due to the pipeline ownership structure (the most important gas infrastructure in Belarus is owned by the Gazprom Transgaz Belarus company, which belongs to Gazprom) (Socor, 2021). After the outbreak of the Russian-Ukrainian war and Belarus' involvement in this conflict, there are currently no alternatives for diversifying the sources and directions of natural gas supplies. Only an improvement in the geopolitical situation can influence the establishment of such cooperation. At the same time, a power plant has been built in Belarus to reduce natural gas supplies from Russia. However, this was only enabled by a credit obtained from Russia and a state-owned Russian company (Atomstroyexport). Therefore, the dependence on Russia remains (Chowdhary, 2019).

Due to the lack of infrastructure or real alternatives, the Baltic states have for years imported natural gas mainly from Russia, but war changed everything. Lithuania was supplied with natural gas through pipelines from Belarus and Latvia, while Latvia and Estonia were supplied only by the Russian gas pipeline system. One of the biggest challenges was the proper integration of these states' natural gas markets, which would enable the full use of the infrastructure developed over the years. The key event here was the construction of the FSRU LNG terminal in Klaipeda in December 2014, which created the foundations for the diversification of natural gas supply. Another step was the construction of the *Balticconnector* gas pipeline between Finland and Estonia in December 2019 (Jakstas, 2019). This infrastructure has been put to good use in connection with the suspension of natural gas supplies in 2022. Both the Baltic States and Finland have taken advantage of access to natural gas imported by sea through the Klaipeda LNG terminal. The terminal ultimately played an important role in increasing competitiveness in the region, lowering the price of natural gas supplies, attracting new suppliers (Hirss & Sprūds, 2014) and enhanced energy security. In addition, the Baltic states now have access to the Polish market through the Poland-Lithuania interconnector, which has been in operation since 2022. At the same time, the war accelerated the process of building FSRU-type LNG terminals in the Baltic Sea, and the countries simultaneously reduced their consumption, making it possible to adequately overcome potential problems in the availability of natural gas.

Europe has witnessed several disruptions to gas supply (2006, 2008/2009); these led to the perceived need to abandon the transportation of natural gas through transit countries. This was the purpose of the construction of the *Nord Stream*, *TurkStream* and *Nord Stream 2* gas pipelines. For years, Ukraine's ability to counteract the functioning of the doctrine, and thus reduce the impact of the Russian strategy, is key to ensuring energy security. However, the Russian-Ukrainian war has fully changed the market picture for both Central European countries and Ukraine itself. Under these circumstances, Ukraine took steps to increase natural gas supplies from other directions, while continuing to serve as an important transit state. Despite the decline in the level of gas shipments to Western European countries, along with greater regional cooperation, the potential reduction in the availability of natural gas for businesses, as well as for households, was overcome. Undoubtedly, the strategy pursued for many years to bypass Ukraine through the construction of alternative pipelines (Nord Stream 1, Nord Stream 2, TurkStream/Balkan Stream) eventually led to the Russian-Ukrainian war in 2022. Thus, tangibly, Russia abandoned the implementation of the Falin-Kvitsinsky doctrine expecting that its application would sooner bring the expected results.

For many years, Poland played a transit role for natural gas supplies from Russia to Europe (the *Yamal* pipeline). Nevertheless, Russia's actions aimed at increasing the dependence of post-communist countries, its foreign policy (aggressive actions in Georgia and Ukraine), and its projects for bypassing Ukraine (and indirectly also Belarus and Poland) have changed Poland's approach to cooperation with Russia. For several years, measures have been taken to diversify the sources and directions of natural gas supplies. The creation of the *Baltic Pipe* pipeline (which connects Norway via Denmark with Poland, with transmission capacities of 10 bcm/y); the expansion of the LNG terminal in Swinoujscie (from 5 bcm/y to 7.5 bcm/y); and the planned construction of the FSRU LNG terminal in Gdansk (4.5 bcm/y) served this purpose. With the outbreak of war and Russia's subsequent unilateral suspension of natural gas supplies to Poland, cooperation between the two countries ended. Counteracting potential shortages in the availability of this commodity was to increase LNG supplies from the US and Qatar. With the construction of gas pipelines to Lithuania (GIPL) and Slovakia (interconnector), regional cooperation intensified. In this changed environment, Poland has become energy independent of Russia and in the future can also significantly increase regional cooperation and act as a guarantor of natural gas supplies to post-communist countries.

Summing up, with the outbreak of war, Russia has definitively ceased to apply the Falin-Kvitsynsky doctrine. The ability to influence Belarus (the lack of extensive infrastructure and the ownership structure make it practically impossible to change the structure of natural gas supplies) still remains. With regard to the other post-communist countries, the ability to apply the Falin-Kvitsynsky doctrine has, in fact, proved to be ineffective. Central European countries have taken appropriate measures to overcome potential resource shortages and increase regional cooperation and energy security during the Russian-Ukrainian war.

6. CONCLUSIONS

The main contribution of this article has been to empirically validate the impact of the Falin-Kvitsynsky doctrine on the energy security strategies of Belarus, Estonia, Latvia, Lithuania, Poland and Ukraine since the collapse of the USSR. Thus, this analysis deals with the past and present state of their energy security in terms of natural gas supply. The article points out that the Falin-Kvitsynsky doctrine, with the outbreak of the Russian-Ukrainian war, no longer works. The measures taken by Russia, despite the heavy dependence of Central European countries on natural gas supplies, did not lead to the economic collapse of these countries in 2022.

From the collapse of the USSR until the outbreak of the Russian-Ukrainian war, none of the countries has achieved full energy independence from Russia. However, the war changed the approach of most countries to cooperating with Russia. Nevertheless, the most dependent remains Belarus, as over the years, due to its lack of infrastructure and ownership restrictions, it has developed no alternative tools to limit Russian influence. In fact, it has done the opposite: a process of increasing energy dependence on Russia has taken place. The Astravec nuclear power plant, which aims to reduce the need for natural gas, is being built with Russian credits and based on Russian technology. Additionally, since 1991, an increase in the importance of gas in the economy can be noted. As a result, with the Falin-Kvitsynsky Doctrine Indicator falling by 18%, from 1.42 in 1991 to 1.17 in 2021, it can be concluded that the doctrine works, and Russia's actions are aimed at increasing dependency in Belarus.

For many years, the Baltic states were in an extremely difficult situation, and the lack of alternatives made the price of natural gas for these countries one of the highest in Europe (Martkiewicz & Strzelecki, 2014). The lack of alternatives made Russia's energy pressure on the Baltic states extremely strong. Nevertheless, their maritime location and efforts to change sources of supply led to the construction of an LNG terminal in Klaipėda. With the outbreak of the Russian-Ukrainian war, given the existing infrastructure (including the commissioned GIPL pipeline in 2022) and the planned new LNG terminals, these countries managed to adequately minimize the threat of a supply shortage by also reducing natural gas consumption.

In the case of Ukraine, the years 1991–2022 also saw a strong effect of the doctrine. However, in the first two decades of the 21st century, the share of natural gas in the energy mix decreased from 47% to 32%. During that time we can see an increase in the importance of domestic natural gas production. The war caused Ukraine's energy situation to undergo a significant transformation. The measures taken by Russia over many years to “bypass” Ukraine eventually led to the outbreak of armed conflict in 2022. Despite this, taking into account greater regional cooperation, Ukraine has managed to overcome the crisis situations for the most part, but the future remains uncertain.

Finally, in the case of Poland, the impact of the Falin–Kvitsinsky doctrine has changed over the years. In addition, appropriate measures in the form of infrastructure development have allowed natural gas to be imported from other directions, allowing for an increase in the security of supplies by 13% compared to 1991. Thus, through the expansion of infrastructure, the energy situation of Poland during the war period was stable despite the unilateral termination of the agreement by Russia. However, it should also be noted that the importance of natural gas in Poland's energy mix has been gradually increasing (by 12% in 1991–2020) due to the indirect role of this commodity in the policy of energy transformation.

This analysis allows us to conclude that Russia is able to pursue its political goals in the manner suggested by the Falin–Kvitsinsky doctrine but the policy ended with the Russian-Ukrainian war. Russia hoped that the dependencies built up over the years would make the reaction of Western countries to an attack on Ukraine in 2022 limited. Nonetheless, the post-communist countries began to jointly shape their energy security in a comprehensive and contextual way, which made it possible to become independent of Russia (except for Belarus) in a short period of time. The situation remains uncertain, but regional cooperation at the level of natural gas supply is highly desirable.

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