



Gönderiliş Tarihi: 26/12/2024
Kabul Tarihi: 02/05/2025
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UKRAYNA KRİZİ VE AB'NİN ENERJİ POLİTİKASINDA KAYMA: RUS DOĞALGAZINDAN EKONOMİK RİSKLER VE STRATEJİK ÖZERKLİK ARASINDAKİ DENGİ

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ÖZ

Bu makale, Avrupa Birliği'nin (AB) doğalgaz pazarında Rusya'nın tarihsel hakimiyetinin altındaki faktörleri ve 2022 Rusya-Ukrayna çatışmasını takiben Rus ihracatındaki ani düşüşü inceliyor. Jeopolitik krize doğrudan bir yanıt olarak, AB'nin sıfır Rus gaz ithalatı hedefine yönelik iddialı politikası, enerji bağımsızlığının potansiyel ekonomik faydaları ve enerji kıtlığı, fiyat dalgalanmaları ve ekonomik durgunluk olasılığı da dahil olmak üzere ilişkili riskler dikkate alınarak analiz ediliyor. Çalışma, ekonomik bozulmayı en aza indirirken enerji bağımsızlığına geçişi kolaylaştırmak için hafifletme stratejileri ve alternatif enerji kaynaklarını inceleyerek son buluyor.

Anahtar Kelimeler: Doğal Gaz, Enerji Politikası, İktisat, Siyaset, Rusya ve Avrupa

Jel Kodları: F15, H56, Q48

THE UKRAINE CRISIS AND THE EU'S ENERGY POLICY SHIFT: BALANCING ECONOMIC RISKS AND STRATEGIC AUTONOMY FROM RUSSIAN NATURAL GAS

ABSTRACT

This paper examines the factors underpinning Russia's historical dominance in the European Union's (EU) natural gas market and the subsequent sharp decline in Russian exports following the 2022 Russia-Ukraine conflict. The EU's ambitious policy of achieving zero Russian gas imports, a direct response to the geopolitical crisis, is analysed, considering both the potential economic benefits of energy independence and the associated risks, including energy shortages, price volatility, and the possibility of economic recession. The study concludes by exploring mitigation strategies and alternative energy sources to facilitate a transition to energy independence while minimizing economic disruption.

Keywords: Natural gas, Energy policy, Economics, Politics, Russia, and Europe

Jel Codes: F15, H56, Q48

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1. INTRODUCTION

For decades, Europe has been heavily reliant on Russia's natural gas, with a significant portion of its energy needs being met by Russian oil and gas exports. The energy trade between the two sides dates back to the post-World War II era. Initially, Russia established energy relations with Eastern European countries, followed by the signing of contracts to export natural gas to Western European countries in the 1960s. Since then, Russia has gradually increased its share in the European energy market. According to the European Council (2024), in 2021, approximately 40% of the natural gas imported to the European region came from the Russian Federation (European Council 2024).

This dependence has left many European nations vulnerable to the unpredictability of Russian politics and the volatility of global energy markets. Throughout the 20th and 21st centuries, Soviet and Russian leaders have tended to utilize all available tools, including energy, to increase their hegemony in the world. Following the ascension of Vladimir Putin to the presidency of Russia in 2000, the concept of utilizing Russian energy as a strategic tool to bolster the nation's economic and political standing on the global stage, particularly in Europe, gained greater prominence compared to previous years.

This increases the concerns by many European countries that Russia will use the energy as a political leverage to pressure Europe. Consequently, over the past two decades, Europe has endeavoured to reduce its dependence on Russian energy. This effort has been intensified following the Russian invasion of Ukraine in 2022, driven by a consensus that Russia utilizes its energy as a lever of pressure on Europe, while concurrently employing the energy revenues to escalate geopolitical tensions and energy security concerns.

To achieve this goal, Europe has been pursuing different strategies, including replacing Russian pipeline gas with Liquefied Natural Gas (LNG), decreasing gas demand, finding alternatives to Russia, imposing sanctions on Russia's natural gas sector, and increasing the share of renewable energy sources. These strategies, while driven by vital security concerns, presents significant economic challenges. This article examines the complex balancing act between economic risks and energy independence that the EU faces in its pursuit of this ambitious goal. In this research we assess the long-term viability of the EU's zero Russian gas imports policy, considering the political, and economic at play. We further explore the strategies being implemented by the EU to reduce its dependence on Russian natural gas and the economic implications of the policy, considering potential disruptions to energy supply, increase inflation, price volatility, and the impact on individual and industrial competitiveness in the EU.

Given Russia's significant share in the European natural gas market and the EU's plans to reduce this share, this research aims to answer the following research questions: Firstly, how did Russia become the largest exporter of natural gas to Europe? Secondly, why did EU countries decide to cut gas imports from Russia? Furthermore, what measures have EU countries taken to reduce Russia's share in their natural gas market? Lastly, what is the impact of the strategies employed by the EU on its economy.

To answer these research questions, this article is structured into four sections. Following the introduction, Section 1 discusses how Russia dominated the European natural gas market. Section 2 explores the reasons behind the EU's decision to achieve independence from Russian gas. Section 3 investigates the strategies employed by Europe to reduce importing gas from Russia. Section 4 examines the effect of these strategies on the EU economy. Finally, some conclusions are drawn.

2.THE EU'S TRANSITION FROM ENERGY PARTNERSHIP TO ZERO RUSSIAN GAS IMPORTS

The intricate web of energy relations between the European Union and Russia has a long and complex history, marked by a delicate balance of power and dependence. Their relations date back to the beginning years after World War II when the Soviet Union expanded into Eastern and Central Europe, driving its energy export ambitions. This led to the establishment of the Council for Mutual Economic Assistance (CMEA) in 1949 and a surge in Communist multilateral institutions from 1955 onwards. Key among these developments was the launch of the Druzhba pipeline in 1959, a joint effort by the USSR, Hungary, Czechoslovakia, Poland, and the German Democratic Republic. The pipeline, the largest of its time, aimed to reduce dependence on oil transported by train. The project strengthened the energy partnership between Russia and Eastern and Central European nations, increasing their reliance on Soviet oil and natural gas supplies (Lee & Connolly, 2016).

The Eastern European countries, as part of the Soviet Union, were the primary destination of Russian gas. However, this dynamic changed a decade after the Cold War, as some European countries began to establish energy relations with Russia. The foundations of contemporary Russo-European energy interdependence were laid in the 1960s. At that time and at the height of the Cold War, massive reserves of oil and gas were discovered in Siberia. These reserves drew the attention of Austria, a neutral country at the time, which sought to capitalize on this opportunity. In June 1968, Austria's state-owned monopoly oil and gas company, the OMV Group, signed an agreement to import Soviet gas. This development paved the way for other European countries to establish their energy relations with Russia. In addition to Austrian authorities, Willy Brandt, the Foreign Minister and later Chancellor of the Federal Republic of Germany (FRG, also known as West Germany), played a significant role in shaping these relations by launching Ostpolitik, a policy that would form the foundation of European energy ties with Russia and underpin European security for the next five decades (Holland, 2022: 80).

Consequently, the annual import of gas by Western Europe from Russia increased from 1 or 3.6 billion cubic meters (Bcm) to 26.5 Bcm annually between 1970 and 1980. Then, in order to enhance the export of gas from Russia to Western European countries, in 1982 Russia and the Some EU countries signed contracts for importing natural gas from Siberia to Western Europe (Vicari, 2016). After the collapse of the Soviet Union, the volume of energy exports to the EU by Russia increased significantly. From 1995 to 2005, Gazprom, the state-controlled gas monopoly in Russia, underwent a transformation. No longer simply delivering gas at the West German border, Gazprom dominated the European gas market, thanks to its collaboration with the German conglomerate Winter-shall (Holland, 2022: 81). The share of Russian gas in the EU's market increased over the time. In 2012, more than half of Russian gas exports went to the EU, and in 2013, Russia's export of natural gas to the EU was recorded at approximately 139 bcm (Godzimirski, 2016: 91). In 2019, the EU's imports of natural gas came from Russia, accounting for 41%, and it rose to 45% in 2021, as 140 bcm of pipeline gas was shipped from Russia to the EU, in addition to around 15 bcm of liquefied natural gas (LNG) (Eurostat, 2022; International Energy Agency, 2022).

However, this situation has undergone a significant transformation since Russia's invasion of Ukraine in 2022. The proportion of Russia's pipeline gas in EU imports has experienced a gradual decline, decreasing from over 40% in 2021 to approximately 8% in 2023 (European Council, 2024). This substantial reduction can be attributed, in part, to Russia's curtailment of gas supplies following the Ukrainian crisis in 2022. Nevertheless, a considerable share of this reduction has also been achieved through the implementation of strategies by the EU as part of its decisions targeting the

Russian energy sector, thereby demonstrating the EU's resolve to exclude Russian natural gas from its economy.

3.FACTORS INFLUENCING EUROPEAN REDUCTION OF RUSSIAN GAS DEPENDENCE

For decades, the European Union has been bound to Russia's natural gas pipeline, relying heavily on imports to fuel its economies and heat its homes. However, this dependence has come at a steep cost, exposing the EU to a myriad of risks and challenges that threaten its energy security, economic stability, and even its sovereignty.

At the beginning of the 1980s, the improvement of the energy partnership via presenting Yamal pipeline project between Russia and the EU led to warnings from the United States (US) about the perverse effects of the EU's pipeline policy. The US, as the primary ally of Western Europe at that time, expressed its objection to the project for several reasons. The White House was concerned that the project would increase Western Europe's dependence on Russia, thereby empowering Russia, as the primary supplier of gas to those countries, to exert political leverage against them if they did not conform to Moscow's foreign policy. Another reason was that the White House feared that the Soviets would intensify their military spending with the \$8 billion in currency earned from gas exports to Europe (Schutte Jr, 1982: 137; Vicari, 2016).

Despite the American concerns and pressures, the Europeans emphasised on improve their energy relations with Russia. The energy relations between the EU and Russia have been affected by numerous events, including the Cold War, German reunification, the collapse of the Soviet Union, and the creation of the single market in Europe. Despite all of those factors, the Russo-European gas relationship has survived until the recent years. However, this has changed since the Russia-Ukraine in 2022 war in 2022. The crisis was started on 21 February 2022 Ukraine's Donetsk and Luhansk regions were recognised as independent states by Kremlin and sending Russian soldiers to these area troops to these places as peacekeepers (Ahmed et al., 2023).

Due to Russia's invasion of Ukraine, the EU experienced one of the biggest energy challenges since the establishment the union due to the its heavy reliance on Russia's pipeline gas. With starting the war, the EU has faced the decline in gas supply and surge in price of natural gas experienced. In the first two weeks after Russian-Ukrainian war in 2022, the prices of gas went up by 180% which also led drove up wholesale electricity prices in the Euro area (Adolfson et al., 2022).

The ongoing gas dispute between Russia and the EU is widely perceived as a consequence of undue political influence in Russia's energy sector. With the election of Vladimir Putin as president of the Russian Federation in 2000, the idea of using Russian energy as a leverage to strengthen the economic and political position of Russia in the globe, especially in Europe, was more prominent than in the past. The rise in oil prices and the increasing reliance of European countries on Russian energy paved the way for the implementation of the strategy of using energy as a lever of pressure on European countries, especially in the post-Soviet space and Central-Eastern Europe (Fedorov, 2013; Esen & Oral, 2016).

The frequent interruptions of gas supplies to Europe underscore this notion. The first phase began after as the gas supplies from Russia were suspended between January 2006 and January 2009 due to the emergence of a disagreement between Russia and Ukraine over gas pricing and transit tariffs. Some analysts view these incidents as a sign of Russia's desire to exploit natural gas as a tool for exerting political sway. (Bilgin, 2009). In 2014, the price of exported gas from Russia was

increased after Russia annexed the Crimean Peninsula, which increased the price of Russian gas to Europe. The reason for this increase was that before this event, Gazprom had paid a special discount for the use of the Sevastopol port as part of Ukraine's territory, but with the seizure of this port by Russia, this discount was also cancelled, and the price was retroactively increased to \$485 per mcm (Umbach, 2014). Furthermore, after the Russian invasion of Ukraine in 2022, Russia resorted to several measures to pressure Europe. Firstly, Moscow cut volumes that passed through the Nord Stream 1 pipeline for months, reducing supplies by 75%, from 170 MCM of gas per day to approximately 40 MCM. Subsequently, Russia shut down the flow for 10 days, citing a maintenance shutdown. When the flow was resumed, it was at half the previous rate, with 20 MCM per day. Finally, due to equipment failures, Nord Stream 1 was shut down entirely and has remained idle ever since (BBC, 2022).

The situation is further complicated by Russia's use of energy as a political tool, leveraging its dominant position to exert influence and manipulate European countries. This has raised questions about the long-term sustainability and security of Europe's energy supply. Consequently, Russia's full-scale war in Ukraine, set off the EU looking to find ways to reduce its dependence on Russia.

Prior to the onset of the Russo-Ukrainian conflict, European energy policy prioritized reducing reliance on Russian natural gas as a means of enhancing regional energy security. However, following the commencement of Russia's military operations in Ukraine, European nations have adopted a dual-pronged approach, incorporating economic sanctions against Russia alongside a reduction in energy imports. This strategic shift aims to inflict economic pressure on Russia the substantial revenue generated from Russia's energy exports to Europe constitutes a significant pillar of the Russian economy. According to Henderson (2016) oil and gas exports account for around 20% of Russia's GDP, two-thirds of its exports, and half of its federal budget revenues. The lion's share of the revenues comes from European exports constitute the largest share of Gazprom's gas revenues (accounting for almost 60% in 2014) and contribute up to 5% of Russia's budget revenues.

Western governments posit that the revenue derived from energy exports plays a crucial role in financing the ongoing conflict. "Putin is using Russia's energy resources to coerce and manipulate its neighbours," Mr Biden told reporters in Brussels. "He's used the profits to drive his war machine." (BBC News, 2022). Consequently, European nations, with the support of the United States, have implemented policies aimed at curtailing Russia's energy income. These policies, often characterized as economic sanctions, involve a reduction in the purchase of Russian energy resources, thereby seeking to diminish Russia's financial capacity and potentially limit its ability to sustain military operations. According to Agency (2023) in the years after Russia's invasion, the United States government set a goal of cutting Russia's oil and gas profits in half by the decade's end. Russian oil and gas exports might drop "by at least 40-50 per cent by 2030" according to the International Energy Agency's prediction, which assumes that Western sanctions on the country's energy sector would remain in place.

The European Union has been actively pursuing energy independence, signaling a decisive shift away from reliance on Russian natural gas. This transition necessitates the implementation of strategies that effectively balance energy security with the mitigation of economic risks.

4.EUROPEAN STRATEGIES TO REDUCE RUSSIAN GAS DOMINANCE

It can be contended that the European Union's energy policy has historically prioritized reducing its reliance on Russian natural gas. Indeed, since 2000, EU authorities have consistently identified this objective as a key policy priority. In order to mitigate Russia's potential influence in the

gas sector, a multifaceted approach has been employed by Europe. This strategy encompasses a range of initiatives, including the diversification of supply sources, demand management, and the implementation of legislative measures aimed at preventing monopolistic practices and fostering a competitive market environment. The primary objective of these measures is to reduce reliance on Russian energy supplies by augmenting domestic energy production and diversifying the energy supply chain (Godzimirski, 2016: 104).

In 2002, the European Commission initiated negotiations on the Nabucco pipeline project, aiming to decrease the EU's reliance on Russian energy. This 3,800-kilometer project was designed to connect Turkey, Bulgaria, Romania, Hungary, and Austria, with funding from both the United States and the European Union (Afifi et al., 2013; Sönmez, 2017). However, in 2018, the Nabucco project was replaced by the 2,000 km Trans-Anatolian Natural Gas Pipeline (TANAP), which will transport natural gas from the Shah Deniz II gas field in Azerbaijan to Europe via Turkey, with the potential to add natural gas from other Caspian regions and the Middle East (Tagliapietra, 2014; Finon, 2011). TANAP was initially a bilateral initiative between Azerbaijan and Turkey, but it has since become a key component of the EU's energy diversification strategy. By the same way, in 2015, Qatar proposed the Qatar-Europe Pipeline, which would link Qatar to Europe via Saudi Arabia, Jordan, Syria, and Turkey. Although this project seemed promising, it was eventually superseded by the TANAP pipeline (Gürkan Abay, 2016).

Since the Russia's invasion of Ukraine, the EU countries brought this goal into sharper focus. The shipment of Russian fossil fuels into EU countries underwent a momentous decrease, from a peak of approximately \$16 billion per month at the beginning of 2022 to a significantly lower amount of around \$1 billion per month by the end of 2023. Simultaneously, the proportion of Russian natural gas in the EU market witnessed a noteworthy decline, decreasing from 45% in 2021 to less than 15% in 2023. (Williams et al., 2024 and European Council, 2024). Although this decline was partly recorded due to the cut in gas supply by Russia before and after the war, but this was mainly achieved by some strategies that the EU followed after the Ukrainian crisis. Firstly, the EU replaced Russian pipeline natural gas with liquefied natural gas (LNG). In response to declining Russian gas imports, the European Union (EU) has diversified its energy sources by significantly increasing its imports of LNG. Notably, the proportion of LNG in total gas imports has changed from 20% in 2019 to 40% in 2023. Notably, there has been a rise in imports of liquefied natural gas (LNG) from Russia as well, but the increased amount is not notable when compare this increase is dwarfed by the volume of gas transported through the Nord Stream pipeline, accounting for less than one-tenth of the latter (Williams et al., 2024). The European Union consider LNG as a viable and promising alternative energy source to Russian gas, owing to its unique logistical advantage. Specifically, the flexibility of LNG transportation enables the EU to diversify its energy imports by engaging with alternative markets beyond Russia, such as the United States or Qatar. Another reason is that the geographical flexibility of LNG infrastructure, comprising tankers and terminals, reduces spatial constraints and facilitates market entry for third-party actors, thereby promoting increased competition in the energy sector (Leal-Arcas et al., 2015).

Secondly, shortly after the Russo-Ukrainian war, the heads of state and government agreed to counter the decline in Russian gas imports by reducing gas demand. A notable decline in European Union natural gas demand is observed, with a 12% reduction in 2022 and a more pronounced 19% decrease in 2023, relative to the average demand levels recorded between 2019 and 2021 (Williams et al., 2024).

Another strategy is that the West has accelerated its efforts to impose sanctions on Russia's energy sector, aiming to reduce Europe's dependence on Russian gas and diminish Russia's income. On June 2024, the EU ambassadors agreed on another sanctions package, which mainly targets the Russian gas sector, including excluding the EU ports from reselling Russian liquid natural gas (LNG) and restricting financial backing for Russia's proposed liquefied natural gas terminals situated in the Arctic and Baltic regions (Baha, 2024). The International Energy Agency predicts a decrease of 40-50% in Russia's oil and gas exports, which could decline by at least 40-50% by 2030 if western sanctions on Russia's energy industry continue (Russian News Agency, 2023).

Other strategy which emphasized by the EU is energy efficiency and increasing the share of renewable energy in its energy portfolio. These strategies predated the Russian invasion of Ukraine and have been a cornerstone of the EU's energy security, but after the Ukrainian crisis, those strategies are more emphasized. "Energy efficiency refers to the efficient use of energy, where an appliance, process, or installation consumes less energy than average to perform an activity" (Diaz et al., 2022). The updated 2023 edict elevates the EU's energy efficiency quota, mandating that member states collaborate to achieve a further 11.7% decrease in energy usage by 2030, surpassing the 2020 benchmark (European Commission, n.d.). Furthermore, the EU has set ambitious targets for renewable energy. The EU countries made a plan to boost the percentage rate of renewable energies in their energy sources to 42% to 45%. This ambitious goal represents a significant increase from the rate of 22% in 2021 (Reuters, 2023).

The EU's diversification strategy and its path to energy independence are fraught with complex challenges and opportunities. By embracing a diversified energy mix, fostering innovation, and promoting regional cooperation, the EU will bolster its energy security. However, achieving these goals will necessitate sacrifices, particularly in the short term, as it will have far-reaching implications for certain economic sectors and the social lives of its citizens.

5.THE ECONOMIC CONSEQUENCES OF THE EU ENERGY INDEPENDENCE POLICY

Prior to the onset of the Russo-Ukrainian conflict, European energy policy prioritized reducing reliance on Russian natural gas as a means of enhancing regional energy security. However, following the commencement of Russia's military operations in Ukraine, European nations have adopted a dual-pronged approach, incorporating economic sanctions against Russia alongside a reduction in energy imports. This strategic shift aims to inflict economic pressure on Russia while simultaneously safeguarding European energy independence. The substantial revenue generated from Russia's energy exports to Europe constitutes a significant pillar of the Russian economy.

According to Agency (2023) in the years after Russia's invasion, the United States government set a goal of cutting Russia's oil and gas profits in half by the decade's end. Russian oil and gas exports might drop "by at least 40-50 per cent by 2030" according to the International Energy Agency's prediction, which assumes that Western sanctions on the country's energy sector would remain in place (Agency, 2023).

The implementation of European Union policies has demonstrably exerted a significant influence on the Russian economy. The Russian Federal State Statistics Service (Rosstat) reported that, based on data from the Russian Customs Service, Russian export revenues experienced a year-on-year decline of 28.3% in 2023. Conversely, import costs rose by 13.6% during the same period. The Russian Central Bank also indicated that Russia's current account balance witnessed a significant contraction in 2023, shrinking by nearly fivefold from a surplus of \$238 billion in 2022 to a mere \$50

billion in 2023. Data also revealed a substantial increase in cargo transportation costs, with December 2023 experiencing a 49.6% surge compared to December 2021 (Milov, 2024).

Although the Russian economy was significantly affected by policies put in place by the Europe to reduce the Russian energy imports, at the same time these policies worked as a double-edged sword and the European economy was not spared. The ongoing conflict between Russia and Ukraine has had a demonstrably significant impact on imported fuel prices to Europe. As a result, the Europe's economic conditions, manifesting in a complex interplay of factors including elevated inflation, rising unemployment, intensified energy poverty, and disrupted trade balances and other economic indicators.

Maurya et al (2023) believe that one of the key factors contributing to the surge in European inflation in European countries related to energy, is the emergence of limitations compared to demand, coupled with a significant increase in freight (Maurya et al., 2023:1825). Natural gas prices for household consumption were doubled as the natural gas prices excluding taxes for household consumers in the EU from € 0.040 in the first half of 2021 to about € 0.1 in the second half of 2022 (Eurostat, 2024). The increase of gas prices pushed the inflation rates as the rate of gas price inflation in the European Union has reached its highest point in August 2022 to more than %73 which increased about two third to compare with the same period of time in 2021 (Statista, 2024).

The ongoing conflict between Russia and Ukraine has resulted in a significant escalation of energy prices, which has subsequently exerted considerable pressure on various economic indicators across Europe. According to Hussein (2024), an economist from the Central Bank of Ireland observed a decline in job advertisements across all 21 European countries following the commencement of the Russo-Ukrainian war. The study found that countries heavily reliant on Russian imports and energy-intensive industries, such as transportation and manufacturing, experienced the most significant impact on their job markets as a result of sanctions imposed on Russia. He also predicts that European companies should anticipate a decline in employment due to these economic sanctions, which are anticipated to disrupt supply chains and resource flows, thereby contributing to inflation. Furthermore, if rising inflation continues to negatively impact consumer spending, the consequences could extend to other sectors of the economy.

The European Union (EU) experienced a shift in its monthly trade balance in late 2021, transitioning from a surplus to a deficit. In November 2021, the EU recorded a trade deficit, followed by a deficit of approximately \$31 billion in December 2021, prior to the commencement of hostilities in Ukraine. This trend of deterioration continued after the outbreak of war, with the EU's trade deficit reaching a level exceeding \$55 billion in August 2022. The substantial decline in the trade balance was primarily attributed to the surge in energy prices (Darvas and Martins, 2022).

Thus, the economic conditions of people in the Europe are affected. Isazade, & Altan (2023) indicate that costs such as transportation and customs duties, as well as the maintenance of prices above a certain level by exporting countries, make the energy produced from these fuels expensive. This is why households in European continent either pay large sums of money to meet their energy demand or are unable to meet their demand at all (Isazade, S., & Altan, 2023: 341). The escalating cost of energy has led to a rise in the number of households experiencing energy poverty. This phenomenon, often defined as "fuel poverty," refers to households that allocate an excessive portion of their income to energy expenditures. Traditionally, the threshold for fuel poverty has been set at 10% of household income being spent on energy to maintain an acceptable living standard (Bouzarovski & Petrova, 2015). According to Kashour & Jaber (2024) notwithstanding a temporary decrease from

7.5% in 2020 to 6.9% in 2021, the proportion of households experiencing inadequate home warmth surged to 9.3% in 2022 (Kashour & Jaber, 2024: 2).

The strategic measures undertaken by European nations to diminish their reliance on Russian natural gas have had demonstrable economic repercussions for both parties involved. The manner in which Europe navigates its economic landscape in the wake of these shifts will have a profound influence on the long-term consequences of these strategies for the European economy.

6. CONCLUSION

The European Union's historic reliance on Russian natural gas, previously supplying approximately 45% of the region's needs, has raised significant concerns regarding energy security and geopolitical leverage. The ongoing conflict in Ukraine has accelerated efforts to achieve energy independence, with the EU investing in alternative energy sources, enhancing infrastructure, and diversifying gas supply chains.

While the EU's ambition to eliminate Russian gas imports is commendable, it presents significant challenges. The complete cessation of Russian gas imports will inevitably lead to economic consequences, including higher energy prices, potential supply shortages, and disruptions across various sectors. These factors could negatively impact industrial competitiveness, consumer purchasing power, and overall economic growth.

The EU must carefully navigate the complex interplay between economic risks and the long-term benefits of energy security. A comprehensive and well-coordinated approach is crucial, balancing strategic investments in alternative energy sources with the need to ensure a just and sustainable transition.

Furthermore, the EU must be mindful of the impact on vulnerable populations and the wider geopolitical context. The potential increase in energy poverty necessitates targeted mitigation measures to protect vulnerable households and communities. A strategic approach, accounting for the potential risks and opportunities, is essential to achieve a secure, sustainable, and independent energy future.

REFERENCES

- Adolfson, J F; Kuik, F; Lis, E M; Schuler, T (2022). The impact of the war in Ukraine on euro area energy markets. European Central Bank. https://www.ecb.europa.eu/press/economic-bulletin/focus/2022/html/ecb.ebbox202204_01~68ef3c3dc6.en.html
- Afifi, S. N., Hassan, M. G., & Zobia, A. F. (2013). The Impacts of the Proposed Nabucco Gas Pipeline on EU Common Energy Policy. *Energy Sources, Part B: Economics, Planning, and Policy*, 8(1), 14–27.
- Agency, R. N., 2023. US aims to halve Russia's oil, gas revenues by 2030. [Online] Available at: https://tass.com/economy/1714605?utm_source=google.com&utm_medium=organic&utm_campaign=google.com&utm_referrer=google.com [Accessed 14 2 2024].
- Ahmed, S., Hasan, M. M., & Kamal, M. R. (2023). Russia–Ukraine crisis: The effects on the European stock market. *European Financial Management*, 29(4), 1078–1118.
- Baha, C (2024, June 20). EU implements first-ever sanctions on Russian gas. Baha Breaking News. <https://www.breakingthenews.net/news/details/62247907>

- BBC (2022, March 25). EU signs US gas deal to curb reliance on Russia. BBC. <https://www.bbc.com/news/business-60871601>
- Bilgin, M (2009). Geopolitics of European natural gas demand: Supplies from Russia, Caspian and the Middle East. *Energy policy*, 37 (11), 4482-4492.
- Bouzarovski, S., & Petrova, S. (2015). A global perspective on domestic energy deprivation: Overcoming the energy poverty–fuel poverty binary. *Energy Research & Social Science*, 10, 31–40.
- Darvas, Z. and C. Martins (2022) ‘The impact of the Ukraine crisis on international trade’, Working Paper 20/2022, Bruegel
- Diaz, Y. V., Guevara-Garcia, F. J., Leon-Muñoz, M., & Guzman Carrizosa, I. (2022). Towards the Comprehensive Bonus for Social Housing Services. In *Energy poverty alleviation: New approaches and contexts* (pp. 91-151). Cham: Springer International Publishing.
- Esen, V., & Oral, B. (2016). Natural gas reserve/production ratio in Russia, Iran, Qatar and Turkmenistan: A political and economic perspective. *Energy Policy*, 93, 101-109.
- European Commission (n.d). Energy Efficiency Directive. European Commission. https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficiency-targets-directive-and-rules/energy-efficiency-directive_en
- European Council (2024). Where does the EU’s gas come from?. [consilium.europa.eu/https://www.consilium.europa.eu/en/infographics/eu-gas-supply/](https://www.consilium.europa.eu/en/infographics/eu-gas-supply/)
- Eurostat (2022). Eurospa, “From where do we import energy?”. <https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html>
- Eurostat (2024). Natural gas price statistics. Eurostat. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Natural_gas_price_statistics
- Fedorov, Y. E. (2013). Continuity and change in Russia’s policy toward Central and Eastern Europe. *Communist and post-communist studies*, 46 (3), 315-326.
- Finon, D. (2011). The EU foreign gas policy of transit corridors: autopsy of the stillborn Nabucco project. *OPEC Energy Review*, 35(1), 47-69.
- Godzimirski, J. M. (2016). Russia-EU energy relations: From complementarity to distrust?. *EU leadership in energy and environmental governance: Global and local challenges and responses*, 89-112.
- Gürkan Abay, E (2016). Levant-Europe Gas Pipeline: Full Speed Ahead. Anadolu Agency. <https://www.aa.com.tr/en/energy/analyst/levant-europe-gas-pipeline-full-speed-ahead/14075>
- Henderson, J., 2016. Does Russia Have a Potent Gas Weapon?. In: *The Palgrave Handbook of the International Political Economy of Energy*. s.l.:Palgrave, pp. 461-486.
- Holland, E. J. (2022). The Euro-Russian Energy Divorce. *Naval War College Review*, 75(4), 79-90.
- Hussein, W. J. (2024). The economic and political consequences of the Russian-Ukrainian war. *The American Journal of Interdisciplinary Innovations and Research*, 6(05), 37-42.
- International Energy Agency (2022, March 3). A 10-Point Plan to Reduce the European Union’s Reliance on Russian Natural Gas. IEA. <https://iea.blob.core.windows.net/assets/1af70a5f-9059-47b4-a2dd-1b479918f3cb/A10-PointPlanToReducetheEuropeanUnionsRelianceonRussianNaturalGas.pdf>
- Isazade, S., & Altan, M. (2023). A Review of Literature on Measuring Energy Poverty. *Eskişehir Osmangazi Üniversitesi Sosyal Bilimler Dergisi*, 24(2), 336-361.
- Jan, H (2023, May 31). The European natural gas market during the energy crisis. CZECH National Bank. https://www.cnb.cz/en/about_cnb/cnblog/The-European-natural-gas-market-during-the-energy-crisis/
- Kashour, M., & Jaber, M. M. (2024). Revisiting energy poverty measurement for the European Union. *Energy Research & Social Science*, 109, 103420.
- Leal-Arcas, R., Ríos, J. A., & Grasso, C. (2015). The European Union and its energy security challenges. *The Journal of World Energy Law & Business*, 8(4), 291–336.

- Lee, J. S., & Connolly, D. (2016). Pipeline Politics between Europe and Russia: A Historical Review from the Cold War to the Post-Cold War: A Historical Review from the Cold War to the Post-Cold War. *The Korean Journal of International Studies*, 14(1), 105-129.
- Maurya, P. K., Bansal, R., & Mishra, A. K. (2023). Russia–Ukraine conflict and its impact on global inflation: an event study-based approach. *Journal of Economic Studies*, 50(8), 1824-1846.
- Milov, A. (2024). The Russian Economy: Where Is It Headed? (Working Paper No. 2024-04). Martens Centre. <https://www.martenscentre.eu/wp-content/uploads/2024/04/Milov-Russian-Economy-.pdf>
- Reuters (2023, March 30). EU reaches deal on higher renewable energy share by 2030. Reuters. <https://www.reuters.com/business/sustainable-business/eu-reaches-deal-more-ambitious-renewable-energy-targets-2030-2023-03-30/>
- Russian News Agency (2023). US aims to halve Russia's oil, gas revenues by 2030. Russian News Agency. https://tass.com/economy/1714605?utm_source=google.com&utm_medium=organic&utm_campaign=google.com&utm_referrer=google.com
- Schutte Jr, J. (1982). Pipeline policy. *SAIS Review*, Number 4, 137-147.
- Sönmez, G. (2017). Failed Nabucco project and its implications. *Avrasya Dünyası*, 1, 30-32.
- Statista (2024). Harmonized index of consumer prices (HICP) energy inflation rate in the European Union from January 2019 to May 2024, by commodity. Statista. <https://www.statista.com/statistics/1328128/eu-energy-inflation-rate-by-commodity/>
- Tagliapietra, S. (2014). The EU-Turkey Energy Relations after the 2014 Ukraine Crisis: Enhancing the Partnership in a Rapidly Changing Environment.
- Umbach, F (2014, May 09). Russian-Ukrainian-EU gas conflict: who stands to lose most?. *Nato Review*. <https://www.nato.int/docu/review/articles/2014/05/09/russian-ukrainian-eu-gas-conflict-who-stands-to-lose-most/index.html>
- Vicari, M S (2016, April 21). How Russian Pipelines Heat Up Tensions: From Reagan's Battle Over Yamal To The European Row On Nord Stream 2. *Vocal Europe*. <https://www.vocaleurope.eu/how-russian-pipelines-heat-up-tensions-from-reagans-battle-over-yamal-to-the-european-row-on-nord-stream-2/>
- Williams, B M; Sgaravatti, G; Tagliapietra, S; Zachmann, G (2024, February 22). The European Union-Russia energy divorce: state of play. *Bruegel*. <https://www.bruegel.org/analysis/european-union-russia-energy-divorce-state-play>