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RUSSIA-TURKEY ENERGY RELATIONS AFTER 2002: THE ASYMMETRY OF INTERDEPENDENCE

Abstract

This research aims to investigate Turkey and Russia's primary energy sources and the importance of its relations in the energy sector. Turkey and Russia's balance of power rely on its energy needs. Turkey's geopolitical location and Russia's rich sources make both countries essential trade partners. They both depend on each other in terms of energy. Despite the political problems, the major pipeline projects, in a growing number of fields, including nuclear power, the Turkish government and operators are developing an energy partnership with Russia, affecting both countries economically.

Keywords: Turkey, Russia, Interdependency, Bilateral Relations, Ankara, Moscow.

JEL Codes: N4

Introduction

Before the dissolution of the Soviet Union, the deepening relationship between Russia and Turkey emerged in the first agreement designed to improve their economic relations. The agreement was signed between them on March 15, 1977, which mainly co-operated in promoting industrial development and energy

issues. In the meantime, the parties also inked a scientific and technical cooperation agreement. Therefore, since that time, energy has been a major issue in the process of negotiations between Russia and Turkey. Although the relationships between them have often been strained with regard to the various geopolitical issues. The two parties, however, have always seen each other more than an economic partner (Hajiyeva 2018).

Turkey has become increasingly dependent on Russian gas since the 1980s, to the point that Russia accounted for 58% of its gas imports in 2011. Russia, for its part, has identified Turkey as a key player in its efforts to bypass Ukraine and rival some of the Southern Continent's European energy diversification projects, collectively known as the "Southern Corridor". Besides the energy transit issues, Russia has additionally become more involved in Turkey's energy sector, as evidenced by Rosatom's proposal to build and finance a nuclear power station on the coast of the Turkish Mediterranean Sea.

Considering their respective histories of particularly severe economic and monetary crises before achieving some degree of stability in the last decade, finding sources of growth is more crucial for Turkey and Russia. Their imbalanced economies, born of incomplete industrialization, encourage them to secure long-term revenue sources to support their respective power strategies. Consequently, Turkey and Russia have established a complicated and asymmetrical relationship, although one involving certain common interests, especially with regard to the European Union. Both countries are committed to a strategy of geographical diversification with a view of reducing the impact of the European crisis on their foreign trade but are committed to maintain a long-term European focus and therefore, to reach an agreement on the revenue from energy exports to the West.

The growing economic dynamic, primarily the energy dynamic between Russia and Turkey sheds significant light on the two countries' political relationship. The Russian-Turkish Energy Alliance's impact is highlighted by the Arab Spring in particular. The two countries responded differently to the Middle East unrest and are diametrically opposed to the regime of Bashar al-Assad in Syria in their respective positions. However, they have tried to avoid public disagreements, preferring instead to emphasize the importance of their common economic projects (Bourgeot 2013).

1. Turkey's Energy Resources

Energy is one of Turkey's most significant development priorities with its energy demand growing at a rate of 8% per year (Erdirin & Ozkaya 2019, p. 21). Turkey is privileged in terms of its energy resources. These sources are hydropower and lignite reserves, which are clean and renewable. On the other hand, looking at in terms of crude oil and natural gas, Turkey's producible oil reserves are approximately 1 billion barrels since its beginning. 70% of this reserve belongs to the national organization Turkish Petroleum Corporation (TPAO). Turkey's oil consumption in December 2017 was reported at 1,006,622 barrels per day (www1).

Turkey produces a small amount of oil and poor-quality coal, marginal amounts of natural gas, and by 2030, plans to install three nuclear power plants (Dyck 2018). Turkey also produces a substantial amount of hydroelectricity and has the potential to increase hydroelectric production. Besides, Turkey produces a small number of renewable energy resources being in a state to increase the production of wind, geothermal, and solar power production. Turkey's total primary energy supply (TPES) in 2014, is consisted of: oil 27%; natural gas 33%; coal 30%; biofuels and wastes four percent. The remainder comes from hydroelectric power, geothermal, solar and wind energy (OECD 2016).

1.1. Natural Gas and Oil

The most important fuel in Turkey's energy sources is natural gas. Its quota of total energy demand is around thirty-five percent. Natural gas is one of the most significant strategic industrial section due to its impact on economic growth, development, and imports. Turkey has substantial oil refining capacity, and exports refined oil products. Turkey's gas demand increases every year, in which refining capacity will need to expand in order to meet demand. Turkey sells one-third of its refined oil products to Middle Eastern countries and other one third to OECD (Organization for Economic Cooperation and Development) states.

Turkey has made significant progress in switching from coal-fired power plants to natural gas plants. Switching from oil and coal to natural gas has been simplified by Turkey's improved transmission and distribution infrastructure in a diversity of sectors (International Energy Agency 2019). Currently, Turkey imports oil from Russia, Iran, and Iraq, natural gas from Azerbaijan, Russia, and Iran by pipeline, and LNG from Algeria and Nigeria. Turkey as a transit

state for natural gas and oil supplies growth and investment opportunity for undeveloped regions, like Turkey's eastern provinces. The Baku-Tbilisi-Erzurum Natural Gas Pipeline (690 km) which became operational in 2007, have provided development resources to Turkey's eastern provinces and the Erzurum area. Turkey's investments in oil production projects are increasing significantly (Avustik et al., 2016).

Domestic production; 28,937,115 tons of petroleum products were produced in Turkey in 2017 according to the Petroleum Market Annual Sector Report for 2017 (Petroleum Sector Report). Turkey has yet to explore and exploit unconventional/ shale oil. Oil imports and exports market; 42,653,421 tons of petroleum products were imported in 2017 (Petroleum Sector Report). Turkey mainly imports petroleum products from Iran (16.94%), Russia (18.87%), Iraq (16.55%), and India (8.23%). Crude oil and diesel oil form more than 90% of Turkey's petroleum product imports. Turkey exported 10,081,991 tons of petroleum products in 2017. Most of Turkey's exports were to the United Arab Emirates (13.55%), Malta (8.10%), Egypt (7.87%), and Singapore (7.10%). More than 89% of Turkey's exports are aviation fuels, maritime fuels, and gasoline (www2).

2. Russia Energy Resources

Russia is one of the richest hydrocarbon resources country. It is one of the world's largest producer of nuclear energy. The energy sector is important part of Russia's economy. Russia owns one third of the world natural gas reserves, one tenth of the oil reserves, one fifth of the coal reserves and 15% of the uranium reserves (Sel 2018). Russia in 2014, had a daily income of 550 million dollars a day from natural gas and oil, continues to exhibit a giant view in the field of energy as a state with nearly 300 billion dollars of foreign exchange reserves. The Russian economy is highly dependent on hydrocarbon resources. More than 50% of its federal budget revenues are derived from oil and gas. The great potential of its resources makes Russia a significant strategic power. Russia ranks first among the countries with the richest coal reserves in the world and gives less importance to coal production than other hydrocarbon sources.

2.1. Russia's Natural Gas Industry

Russia holds the world's natural gas reserves, with 35 trillion cubic meters (tcm), more than Iran the second largest following with 33.2 tcm. Qatar giant

with liquid natural gas ranked the third with 24.9 tcm. According to the British Petroleum's (BP) Statistical Review of World Energy 2018 report, Russia holds around 18.1 percent of total proven natural gas reserves in the world. The majority of the natural gas reserves are located in Siberia, with the Yamburg, Urengoy, and Medvezh'ye fields accounting for more than 40% of Russia's total reserves, while the other important deposits are located in northern Russia.

Due to its rich natural gas reserves, Russia's natural gas industry is one of the most rapidly developing economic branch in the country. Europe, including Turkey, receives most of Russia's crude oil and products, in addition virtually all exports of natural gas. Asia (mostly China), receives substantial volumes of crude oil and some liquefied natural gas (LNG) from Russia. In 2014, Russia signed a 30-year, \$400 billion gas deal to supply China with natural gas from Eastern Siberian fields, to increase Russian export revenues. North America imports some Russian petroleum products, especially unfinished oils used in refineries (www3).

Russia nearly produces 635 billion cubic meters of gas a year. Although having less natural gas reserves than Russia, the U.S. has been a world leader in natural gas output since 2009 when it surpassed Russia in oil and natural gas production. The U.S. is also a world leader in gas consumption since 1985. In 1990, Russia produced 30,04% of world's natural gas, and in 2016 it almost halved to 16,31%. At the same time in 2016, the U.S. was producing 21,1%. The U.S. holds 4,7% of the world's natural gas reserves, while Russia has 17,3%. Despite Russia's huge reserves and strong-arm energy politics, it is not very competitive in its market share (www4).

3. Turkish-Russian Energy Projects

Turkey and its important trade partner Russia have increased their trade relations in 1991 after the dissolution of the Soviet Union. Turkish lineage and ethnicity in Russia, and geographical proximity have a significant impact on the development of Russia-Turkey's trade and economic ties. Today, 60% of Turkey's natural gas needs are met by the Russian Federation. Russia's biggest gas customer in Europe is Turkey after Germany.

The Russian Federation is significant for Turkey since it supplies most of its natural gas and other energy needs. Russia needs Turkey due to its geopolitical importance, a transmission corridor that transports energy sources to the international markets (Bulut 2018, pp. 70–71). Energy trade and perspectives

play an essential role in the international political relations of both countries. Energy trade has always been important for both countries, Russia and Turkey. The importance for Turkey is the import of energy and the geopolitical location of the country that creates great perspectives in oil and gas trade as a transit country which is also crucial for Russia.

3.1. TurkStream

TurkStream is one of the most critical natural gas projects between Russia and Turkey in the last decade. Russia which sells its natural gas to Europe through Ukraine wanted to carry its natural gas in an alternative way after the problems it experienced with the country. Therefore, the Turkish Stream project came up. Natural gas pipeline, Russian gas was planned to pass through the territory of Turkey under the Black Sea to Europe over Greece.

The *Turk Stream* pipeline which will surface on the shore of the European part of Turkey near Kıyıköy with a gas delivery point for Turkish customers at Lüleburgaz and a border crossing between Turkey and Greece Ipsala will serve as a point of delivery for European customers. The project follows all safety standards for the environment. The subsea pipeline construction and operating technologies foresee a minimal impact on the environment (www5). The first draft of the project was signed when Russian President Vladimir Putin visited Ankara on December 1, 2014, Gazprom and the Turkish company Botaş Petroleum Pipeline Corporation signed a Memorandum of Understanding on the construction of the natural gas pipeline. On January 27, 2015, Chairman of the Gazprom Management Committee Alexey Miller, and the Turkish Republic's Minister of Energy and Natural Resources, discussed the initial results of the new pipeline's feasibility study and decided on its route.

On February 7, 2015, key reference points for the pipeline, and technical solutions for the Turkish soil were defined. Russia's Energy Minister Alexander Novak and Greece's Minister of Productive Reconstruction, Environment and Energy Panagiotis Lafzanis signed an agreement of Memorandum of Cooperation, on the construction and operation of the *TurkStream* pipeline on Greece's territory on June 18, 2015. On June 22, 2015, Turkey issued an engineering survey permit for *TurkStream's* offshore section. In September 2016, Gazprom received permits for the project from the authorities of Turkey including the first construction permit for the offshore section and the survey permit for the two strings of the offshore gas pipeline in Turkey's territorial

waters and exclusive economic zone. On October 10, 2016, the Government of the Russian Federation and the Government of the Turkish republic signed the agreement on the *TurkStream* project in Istanbul. The document ensured the construction of two strings of the gas pipeline from Russia to Turkey across the Black Sea, and an onshore string for gas transit to Turkey's border with neighboring countries. On December 6, 2016, Turkish President Recep Tayyip Erdogan, signed the law on the approval of the agreement on *TurkStream* gas pipeline project between the Russian Federation and Turkey. On December 8, 2016, South Stream Transport B.V. a subsidiary of Gazprom and Switzerland's Allseas Group S.A. company signed an agreement to construct the first phase of the *TurkStream* gas pipeline project. Russian President Vladimir Putin signed the law of ratification of the agreement on the *TurkStream* project on February 7, 2017. On February 20, 2017, South Stream Transport B.V. and Allseas Group signed an agreement to build the second string in *TurkStream* gas pipeline project. Gazprom started the construction of the *TurkStream* gas pipeline on May 7, 2017, in the Black Sea. On June 23, 2017, the placement of the shallow and deep-water parts of the *TurkStream* gas pipeline was made, and the deep-water section laying started. *TurkStream's* first line in the offshore section was completed on April 30, 2018. On November 19, 2018, both two lines of the offshore section were completed, the President of Russia Vladimir Putin and the President of Turkey Recep Tayyip Erdogan took part in the ceremonial completion of *TurkStream* gas pipeline's offshore section (www6).

The *TurkStream* project ensures the reliability of Turkey and Europe's energy supplies and contributes to the economic development of Turkey through the resources it uses to build the project. Furthermore, it supports Kıyıköy area development through local social investments. The *TurkStream* project advances the industry's technical boundaries: It is the first 81-centimeter diameter system to be laid at depths of more than 2 kilometers. The two offshore pipelines consist of thousands of 12-meter-long individual pipe joints. It starts on the Russian coast near Anapa town and runs over 930 kilometers through the Black Sea to the Turkish Thracian region.

TurkStream directly connects Russia's massive gas reserves to the Turkish gas transportation network to Turkey, South and South-East Europe with reliable energy supplies. The system's offshore component consists of two parallel Black Sea pipelines. The pipelines enter the water near Anapa on the Russian coast and arrive at the town of Kıyıköy on the Turkish coast. One of the two underground pipelines will connect to the existing Turkish gas network in Lüleburgaz from the receiving terminal in Kıyıköy. *TurkStream's* total capacity

of both lines is 31.5 billion cubic meters. The first line will transport 15.75 billion cubic meters of gas to Turkey and the second line will transfer gas through Turkey to Europe (www7).

Turkey relies strongly on imported gas from Russia, Azerbaijan, and Iran as domestic production only meets 2% of its needs. Currently, most of Turkey's gas is carried from Russia by the Blue Stream pipeline, and another aging pipeline brings the rest through Ukraine and Eastern Europe. Imported gas helps meet nearly half of Turkey's demand for electricity generation and almost a third of its total primary energy consumption. Turkey is the only country in Europe which has seen a steady increase in demand for gas since the end of the 2008–2009 financial crisis. According to the Turkish energy watchdog, last year its annual consumption of natural gas reached a historic record high of 53.5 BCM, a 20% increase over the previous year. Gazprom will be able to meet Turkey's increased demand for gas. Over a million new Turkish customers signed up for gas use in 2017. *TurkStream* will additionally help Turkey achieve its goal of becoming a major East-West gas 'bridge'. Turkey will be able to offer gas to the rest of south-eastern Europe as a critical regional energy center, earning billions of euros in the process.

3.1.1. Controversial on TurkStream

Countries of the European Union remain severely dependent on Russian gas, mainly which ran through Ukraine until recently along pipelines. Russia has cut winter gas supplies to Ukraine in the 2000s, and for that reason must be in a row over unpaid debts from the rest of Europe. Russia's annexation of Crimea's Ukrainian region, and Moscow's support for separatists in eastern Ukraine, also brought the two neighbors' relations to a new low. Together with Nord Stream, another Russian pipeline running under the Baltic Sea to Germany, *TurkStream* will enable Russia to transport more of its gas to Europe without passing through Ukraine. The Kiev government losing billions of euros in transit fees is expected, as a result (Martin 2018).

3.2. Blue Stream

The gas pipeline Blue Stream is designed to deliver Russia's natural gas across the Black Sea to Turkey bypassing third countries. The Blue Stream integrates the gas transmission corridor through Ukraine, Moldova, Romania, and Bulgaria running from Russia to Turkey. It has significantly increased Turkey's

gas supply reliability and contributes to the deepening of the gas market and infrastructure (www8). The Russian Federation and Turkey signed an inter-governmental agreement on December 15, 1997. Under the agreement between Gazprom and Turkish Botas, the contract stipulated that over 25 years, 365 billion cubic meters of gas should be delivered to Turkey via Blue Stream. Gazprom and Italian Eni signed a Memorandum of Understanding to implement the Blue Stream project collectively in February 1999.

A particular intention Russian-Italian joint undertaking, Blue Stream Pipeline Company B.V., was established on November 16, 1999. Gazprom and Eni were set up on a par in the Netherlands. The joint undertaking currently owns the section of the offshore gas pipeline, including the compressor station in Beregovaya. Gazprom is the onshore section's owner and operator.

In September 2001, the construction of the Blue Stream's 396-kilometer onshore section began and was completed in May 2002. The gas pipeline was commissioned on December 30th, 2002. Wholesale gas supplies began in February 2003 through the gas pipeline. Gazprom and Botas signed the Memorandum on December 6, 2004, to advance their gas industry cooperation. The document provided for the possibility of delivering Russian gas directly to Turkey or through subsidiaries, reaching end users and participating in projects aimed at building gas supply infrastructure, distributing gas and developing underground gas storage and gas generations.

Gazprom Export signed contracts for importing gas to Turkey with four private companies in 2007. That was in line with the Turkish Natural Gas Market Law aimed at liberalizing the gas market in Turkey and gradually putting an end to the monopoly rights of Botas on gas imports. In March 2014, over 100 billion cubic meters of total gas supplies to Turkey through the Blue Stream gas pipeline. The pipeline will cost \$3.4 billion and carry 16 billion cubic meters of natural gas from Russia to Turkey at full capacity. The pipeline is made up of three main parts. The route includes a 222-mile section in Russia from Izobilnoye to Dzhugba on the Black Sea coast (the Russian onshore section), a 235-mile section on the bottom of the Black Sea that connects Dzhugba to Samsun on the Turkish coast (submarine section), and an additional 300-mile connection from Samsun to Ankara (Turkish onshore).

3.2.1. Blue Stream 2 pipeline

Blue Stream 2 was announced in 2002 for the first time. Blue Stream 2 was officially proposed by Vladimir Putin and Recep Tayyip Erdogan in August 2005, announcing the decision to extend Blue Stream 1 to South East Europe.

By carrying an additional 16 billion cubic meters of gas from Russia to Turkey, Blue Stream 2 was expected to become a direct competitor of the Nabucco pipeline. Vladimir Putin launched a new route for Blue Stream 2 in 2009. Instead of running east-west as scheduled earlier, the proposed pipeline runs parallel to the Black Sea Blue Stream 1, extends overland in Turkey, and trends north-south across Anatolia to the Mediterranean coast (www9). The current agenda is to build TurkStream, the new Russian-Turkish transit-free gas pipeline. TurkStream will significantly improve the reliability of gas supplies to both Turkey and Southern and Southeastern Europe.

3.3. Nuclear Power Plant

In May 2010, Russia and Turkey signed a Cooperation Agreement on the Facility and Operation of a Nuclear Power Plant in Akkuyu Site, and the international legal basis for the establishment of a nuclear power plant has been established in the town of Büyükçeli, Mersin. Akkuyu NGS A.Ş., a subsidiary of Rosatom has taken over the operation of the plant and has been registered in the name of the Republic of Turkey at the end of 2010. Within the Akkuyu nuclear power plant, four VVER-1200/491 model reactors with 1200-megawatt power are planned to be constructed. Within the scope of the project, the construction of the first reactor was planned to start in early 2016 and the construction process of four nuclear units in 2023 will be completed. The project is an important factor when fully implemented will meet Turkey's portion of 5–10% of the total energy needs and could reduce the foreign dependency on Turkey's already high rate of energy (Kavas 2013). The project's total cost is estimated at 20 billion dollars.

According to the unique Build-Own-Operate scheme, the management and operation of the Akkuyu Nuclear Power Plant project are carried out. The Akkuyu Nuclear Power Plant is the first nuclear power plant in the world to be implemented on this co-investment model, maintaining that the Akkuyu Nuclear JSC project company is responsible for operation of the nuclear power plant, safety during the construction and, and the economic efficiency of the future station as its owner and operating organization is also invested first-hand. According to the Intergovernmental Cooperation Agreement, the first power unit should be commissioned no later than seven years after the Republic of Turkey has issued all construction permits. The Russian side is currently funding the NPP project. According to the agreement, Russian companies

should own at least 51% of the shares in the completed project and up to 49% of the shares can be available for sale to outside investors. Negotiations continue with potential investors.

Russian President Vladimir Putin and Turkish President Recep Tayyip Erdogan attended a ceremony in April 2018 to mark the release of the unit's first safety-related concrete. Russian-owned JSC Akkuyu Nuklear manages the project. Its CEO, Anastasia Zoteeva, said the concreting work met the International Atomic Energy Agency's requirements and safety standards. The milestone was completed on March 8, Rosatom said, it involved the casting of self-compacting concrete of 17,000 cubic meters. The construction will be the next stage of the reactor building's exterior and interior walls, while the construction of concrete bases for the auxiliary reactor building and the emergency room building, and the emergency room building will be underway simultaneously, it added.

In November 2018, JSC Akkuyu Nuklear obtained a limited work permit for Unit 2 of the Akkuyu plant, according to which engineering studies for the phase of working documentation are already underway. This will allow for work on all the facilities of the unit except those related to the nuclear island's safety. The company expects to receive this year's main construction license for unit 2 when it can continue to pour concrete for its basement. To date, 70% of the site is ready for construction work to begin, with the remaining 30% prepared by the end of the year.

The package of documents for Turkish regulator TAEK 'Turkish Atomic Energy Authority' is being prepared for the company's application for a construction license for unit 3 in parallel with activities on the construction site. The 4-unit, 4800 MWe plant is part of Erdogan's '2023 Vision' that marks 100 years since modern Turkey was founded and is intended to reduce the country's dependence on energy imports. The first unit is scheduled to commence operations that year, followed by the other three units by 2025. About 10% of the electricity needs of Turkey is being expected to meet by the plant.

The European Parliament has proclaimed that it wants to suspend EU accession negotiations with Turkey since they are severely concerned about Turkey's track record in upholding human rights, the rule of law, media freedom and the fight against corruption," also for its all-powerful presidential system." Members of the European Parliament (MEPs) adopted the resolution on 13 March 2019, by 370 votes in favor, 109 against, and 143 abstentions.

Considering the above, MEPs recommend redefining EU-Turkey relations as an effective partnership. However, EU funds still need to be available to

support Turkish civil society, defenders of human rights and students. The European Parliament also notes the importance of maintaining close dialog and cooperation on foreign policy and security issues for both the EU and its Member States and Turkey and recognizes Turkey's important role in addressing the migration crisis.

Although the European Parliament did not mention the Akkuyu project in its statement on the resolution, various media informed that MEPs had called on Turkey to stop building a nuclear power plant. A Turkish news channel TRT World, reported that, a report had been prepared by the Committee on Foreign Affairs of the European Parliament before discussing the nuclear reactor, in which Turkey was charged with acting in transboundary context against the Convention on Environmental Impact Assessment.

4. Problems in Russian-Turkish Energy Relations

4.1. Asymmetric Interdependence in Russian-Turkish Energy Relations

In bilateral trade between Russia and Turkey, the most important source of asymmetry is the difference in the economic structures, resulting in comparative advantages. In the post-Cold War era, bilateral trade expanded substantially, making Russia Turkey's top trade partner in 2008. Russia has an advantage in energy production and exports as a resource-rich country. Nearly 70% of Russian exports consisted of oil, crude oil, and natural gas in 2016. In contrary, in meeting its domestic consumption and power production needs, Turkey is dependent on imported energy. According to Mitat Çelikpala, the energy links between Turkey and Russia should be examined from an energy security perspective in which Turkey should seek to reduce its dependence on imported natural gas from Russia (Çelikpala 2017, p. 222). Turkey while importing 26.78 billion cubic meters of natural gas from Russia, produced 0.38 bcm of natural gas in 2015. Turkey's total natural gas imports were 48.43 bcm in the same year (Winrow 2017, p. 18).

Russia's place in Turkey's energy imports has gradually grown since Turkey and the Soviet Union signed a treaty in 1984. The Blue Stream pipeline running across the Black Sea in the post-Cold War era has solidified Russia's importance for Turkey's energy imports. The Blue Stream, has been criticized

for increasing Turkey's energy dependence on Russia and preventing Turkey from concentrating on the East-West corridor backed by the U.S. and the EU at the time. Turkey, however, saw the rival pipeline projects as a means of increasing its geopolitical oppression (Ediger 2017, p. 139). Nevertheless, the increasing domestic energy consumption by Turkey has led to a parallel increase in the importance of Russian gas to Turkey. Turkey's energy consumption rose from 45 million tons of oil equivalent in 2005 to 131 million tons in 2015 as reported by Likhachev (2016, p. 11).

The European Union has been promoting the Nabucco pipeline project since 2001, which was planned to bring natural gas from Azerbaijan and Turkmenistan through Turkey to Europe (Grigas 2016, pp. 160–161).

In 2007, Russia developed the South Stream pipeline project as an alternative to the Nabucco project with the aim of delivering natural gas from Novorossiysk's Russian port to Bulgaria. Therefore, the project sought to contribute both to the energy security of Europe and to the goal of Russia to bypass Ukraine. Pronouncing the death of the South Stream during his visit to Ankara in December 2014, Russian President Vladimir Putin promoted a new project to deliver Russian natural gas via Turkey to European markets. The TurkStream project, should be understood in relation to the geopolitical goal of Russia to end the transit country status in Ukraine. When this remains a long-standing goal, since 2014 it has intensified. The deadline for Moscow is 2019, when the current gas transit contract between Russia and Ukraine expires. This explains Russia's desire to increase the amount of gas delivered through Nord Stream to Europe and build a new Black Sea pipeline to Turkey, the Turkish Stream.

According to Köstem, in the asymmetric interdependence game Turkey is the most vulnerable player, it still remains an important energy partner for Russia. Several reasons help to explain the importance of Turkey for exports of Russian natural gas. First, Turkey is Russia's reliable trading partner. Turkey remained a reliable source of revenue for the Russian economy despite several ongoing gas pricing problems between the two countries. Since 2017, with its consumption of 29.03 bcm of natural gas, Turkey is Gazprom's second largest customer, which in the same year purchased 53.44 bcm of natural gas from Russia. Russia's annual revenue from its exports of energy to Turkey amounts to US\$ 15 billion, higher than Russia's annual sales of weapon. Second, the fact that Russia conceived the Turkish Stream after the South Stream was cancelled demonstrates the ongoing geopolitical significance of Turkey for Russia. The desire of Moscow to bypass Ukraine and thus reduce its dependence on

Ukrainian territory to export natural gas to Europe has strengthened the position of Turkey in the energy relationship.

More than 40% of Russian gas exported to Europe and Turkey currently passes through the Ukrainian gas transmission system. The Nord Stream-2 and TurkStream pipelines therefore serve a common purpose for Russia: to enable Gazprom to continue selling natural gas to Europe while economically isolating Ukraine. In addition, Russia's oil and petroleum exports to global markets are shipped across the Turkish Straits, adding to the geopolitical importance of Turkey to Russia; around 150 million tons of Russian crude oil pass through the Bosphorus and Dardanelles each year.

4.2. Russian Push for Influence over Black Sea and Caspian Sea

After the collapse of the Soviet Union, there has been an increase in the number of the Caspian states. Before the dissolution, only the legal regime of the Caspian was determined with bilateral agreements and practices based on the treaties between the Soviet Union and Iran. The desire to use sovereign powers over the Caspian, as well as Azerbaijan, Kazakhstan and Turkmenistan, along with the Russian Federation, has raised the debate on legal status. Following the Soviet Union's disintegration process, the basic concepts and institutions of international law, such as the right of self-determination and state succession, were re-adopted by adapting them to existing new situations. The problems related to the Caspian are also directly related to the post-Soviet period, especially the status issue.

In this period, the Caspian, which has a rich geographical and environmental value, as well as rich oil and natural gas resources, has become the focus of attention of the whole world, particularly in the context of energy policies. The legal problems that arise in the Caspian are closely related to the regional and global policies as well as the legal disputes caused by these problems. The economic, geopolitical, and strategic importance of the Caspian influences the views to put forward in the framework of international law; littoral states propose theses that will increase the boundaries of their sovereign powers and enable them to benefit more from natural resources.

Although Caspian is considered to be the largest lake in the world in geographical terms; it is generally called as "sea" because of its size and the salty water. It is a landlocked body of water between Europe and Asia. It is bordered by five countries- Russia, Kazakhstan, Turkmenistan, Iran, and Azerbaijan.

The Caspian, has the largest saline body in the world, covered by land on four sides and shows geophysical, hydrological and biological features. In addition to its strategic importance and environmental values, the Caspian Basin is particularly rich in petroleum and natural gas resources. The existence of oil resources has been known since ancient times. Today, according to some sources, the Caspian Basin has 200 million barrels of oil and 17.6 billion cubic meters of natural gas reserves. Moreover, fishing in the Caspian is an important source of income and is the source of 90% of world caviar production.

With regard to energy security issues in the Black Sea-Caspian region, the position and role of Putin's Russia is clearly of crucial importance. According to Windrow, Moscow seems eager to maintain influence in the region. Russian policymakers, are determined to maintain control over different energy transport routes. Natural gas produced in other Caspian states that used to be Soviet republics is delivered as cheap energy to the Russian market. This allows Moscow to export and sell its own domestic natural gas at a higher price to Europe's hard currency markets. A similar version has appeared with reference to crude oil produced in Russia and former Soviet republics, although Moscow has allowed regulated quantities of Kazakh crude to reach outside markets through the Tengiz – Novorossiysk pipeline of the Caspian Pipeline Consortium.

In practice, by lobbying in January 2002 for the formation of Eurasian Alliance of Gas Producers, Putin first attempted to exercise greater control over energy transport routes. This would have tied natural gas producers from Kazakh, Turkmen and Uzbek with the Russian market more closely (Hill & Fee 2002, p. 16). Brussels strongly opposed the establishment of such a gas cartel, with its interest in liberalized gas markets beyond, as well as within EU Member States. Putin's initiative also violated the Energy Charter Treaty provisions. Moscow with its accompanying Transit Protocol, which would provide legal safeguards for energy transit, has refused to ratify this Treaty. Moscow and Brussels have ongoing disputes over transit tariffs and transit rights through third countries. Ratification of the Energy Charter Treaty and its Transit Protocol would give Caspian natural gas producers interested in exporting their energy to Europe access to Gazprom-controlled Russian pipeline network. In view of their interest in joining the World Trade Organization, Russian officials will face increasing international pressure to ratify the agreements. In addition, Moscow will need to secure investments from EU member states and utilize the expertise of Western energy companies in order to further develop its increasingly inaccessible energy fields. Hence, Russia is quite likely to ratify the Energy Charter Treaty and its Transit Protocol in the foreseeable future.

Instead of abandoning the proposed gas cartel under Brussels pressure, Gazprom has concluded separate bilateral agreements with natural gas producers in Kazakhstan, Turkmenistan, and Uzbekistan, thus tying them closer to the Russian economy. Due to their connection to the Russian pipeline system through the CentralAsia-Center gas producing states had little alternative. With current annual capacity of 45–50 bcm, this network is in a ruined condition and badly needs upgrading. At present, only Turkmenistan has access to other external markets to avoid Russia through a 12 bcm/y natural gas pipeline connecting with Iran, built in 1997.

In these circumstances, Kazakhstan, Turkmenistan, and Uzbekistan have no immediate prospect of delivering substantial quantities of natural gas to Europe through pipelines bypassing Russia. However, the Kazakhs are interested in the possibility of building a new gas pipeline to China eastward. A 25-year agreement to export substantial amounts of natural gas to Russia was concluded by the Turkmen in April 2003. By 2009 Turkmenistan could supply the Russian market with up to 90 bcm/y. This could lead to further Turkmen gas deliveries to Ukraine via the Central Asia-Center pipeline and Russia in Moscow in the future. Through this pipeline, the Turkmen are currently exporting 36 bcm/y to Ukraine. Turkmen President Saparmurat Niyazov is also interested in building a pipeline of 30 bcm/y connecting Turkmenistan to Pakistan and India through a pipeline that extends through Afghanistan. But Turkmenistan may not have enough gas to fill the Trans-Afghan pipeline, given its commitments to Moscow, and may also continue to export gas to Ukraine. Likewise, the highly ambitious and hugely expensive Russian bypass pipeline, planned to connect Turkmenistan with Europe via a route across Iran, the Caucasus, the Black Sea and Ukraine, would most likely also not be guaranteed.

Previously, plans were being made to build a Caspian Sea natural gas pipeline to deliver 16 bcm/y of Turkmen natural gas to Turkey and possibly another 14 bcm/y to Europe. Disputes over ownership oilfields in the Caspian Sea and Niyazov's demands for a \$1 billion down payment from the international consortium interested in the Trans-Caspian Gas Pipeline Project resulted in the scheme collapsing. Instead, another consortium was set up to develop the Caspian Sea gas field of Azerbaijan's Shah Deniz. From this field, natural gas will be transported to Turkey along the Baku-Erzurum pipeline starting in 2007. Up to 6.6 bcm/y will eventually be delivered to Turkey and lower amounts will be delivered to Greece. This pipeline will allow Azerbaijanis to supply gas to Turkey and Europe along a route that will not pass through the territory of Russia.

With regard to crude oil transportation, the Baku-Tbilisi-Ceyhan pipeline will have a capacity of 50 million tons per year mt/y. By means of this pipeline, Kazakhstan is interested in exporting 20 mt/y of its crude oil to Europe, breaking the current stranglehold of Russia on Kazakh oil exports. Moscow prevented the Kazakhs from making full use of the 67 mt/y Caspian Pipeline Consortium pipeline linking Kazakhstan's Tengiz oilfield to Novorossiysk. Only 22 meters of crude oil was transported along this pipeline to the Russian Black Sea port in 2004, which also included some Russian oil. In October 2005, in accordance with Russian demands, the consortium companies agreed to allow Moscow to have more say in appointing officials to manage the project. The oil through the pipeline will be doubled in return. Moscow had insisted on higher tariffs for Kazakh crude movement across the territory of Russia. In addition to looking to the Baku-Tbilisi-Ceyhan pipeline to carry Kazakh crude west from the newly discovered Kashagan oilfield, Kazakh energy officials are also hoping to bypass Russian territory by exporting oil to China and south (via Turkmenistan) in the future.

Russia has reinforced its influence on oil and gas exports from the Caspian region following a summit with the other four inland sea bordering nations; Azerbaijan, Kazakhstan, Iran, and Turkmenistan, that produced an outline agreement on key principles for regulating maritime borders in the basin. Moscow is closer to establishing that most of the Caspian remains outside the boundaries of any of the five coastal states, which is likely to mean that Russian agreement will be needed for most other countries to produce and distribute oil and gas. This would help Russia's attempts to limit exports of oil and gas from its Caspian neighbors to Western Europe- the largest market for its own exports, and a major part of its economy. "It is very important to provide that the greater part of the marine area of the Caspian Sea remains in the common use of our countries" Putin said in 2014 (www10).

4.3. Challenges for the Nuclear Cooperation

Akkuyu Project in Turkey has the distinction of being one of the first examples of Rosatom "build-own-operate" contract. The project started land preparation and is in the construction phase. In 2012, former Russian Atomic Energy Minister Bulat Nigmatulin published an analysis related to the vulnerability of the project on the Rosatom side, this analysis was in an unusual stiff language. The analysis stated that while the Turkish side has no financial obligation,

Rosatom is obliged to provide finance which could only be realized through Russian federation funds. The analysis stated that Rosatom would train Turkish workers without receiving money; it also stated that it agreed to sell energy to a fixed yacht, regardless of the variation in fuel costs, budget overruns that may occur during construction or changes in exchange rates. According to the analysis, even if the power plant does not work, Rosatom has to provide energy. Moreover, the analysis stated that due to the location of the power plant (which is close to the Antalya coasts), it will be exposed to public protests; which underlies the possibility of delays due to the opposition.

The Environmental Impact Assessment Report, which meets the Turkish regulatory standards has returned from the Ministry of Environment twice; the third report was prepared and submitted once more. The Akkuyu project also had trouble finding a qualified company to carry out the security inspections of the VVER-1200 designs. The Russian shareholder companies, which are subsidiaries of Rosatom, currently have 100% share of Akkuyu NPP. Russia and Turkey signed bilateral agreements that Rosatom's shares would not be less than 51%. In 2016, Akkuyu NGS announced that it had decided to sell some of its shares. Cengiz Construction Inc., which received the tender for the construction of the sea structures of the Akkuyu NGS project, announced that it would like to purchase shares. Cengiz Construction is known as a controversial company accused of illegal practices in coal power plant and mining investments. As of March 1, 2017, Cengiz Construction has not purchased any shares, 100% share of Akkuyu Nuclear still belongs to Rosatom and its subsidiaries.

Conclusion

Russia and Turkey have been actively involved in economic relations since World War II. As the trust between the two countries developed, the degree of cooperation has evolved. An important dimension of the political-economic relations between Russia and Turkey constitutes energy projects. One of the most important reasons for the increase in annual foreign trade of the two countries is due to Turkey's import of Russian natural gas. Historically, the energy relations of the two countries can be described efficient yet problematic. Huge dependence on Russia, is changing in favor for Russia in Russia-Turkey trade balance. Turkish-Russian relations, in the field of energy is developing positively within the scope of current and planned projects for the future. The

ongoing efforts to implement the TurkStream Project and the construction of the Akkuyu Nuclear Power Plant in the recent period can be interpreted as a concrete indicator that the cooperation between the two countries should continue in the long term. Despite the occasional political tensions between Moscow and Ankara, energy-focused economic relations contribute positively to tensions in a short time. On November 24, 2015 Turkey shooting the Russian aircraft has demonstrated huge political tensions. However, even in the period of political crisis, Turkey continued to meet its energy needs from Russia. Although Russia has implemented measures for some commercial areas other than energy exchange, it has not largely disrupted the economic interest of the two countries.

Turkey's geographical importance and its growing need of energy, contributes positively to the economic relations between the two countries. Turkey is a bridge in natural gas transmission to Europe. Additionally, Russia's strategic requirements that Turkey's location contributes to the maintenance of positive relationships. Turkey's increasing energy demand and not having alternative energy sources leads to the continuation of its energy trade with Russia. TurkStream project and the Akkuyu Nuclear Power Plant projects will grow the countries further and lead to an increase in its economy. When Turkish-Russian relations are evaluated in the context of mutual dependence, advantages and disadvantages are found. Due to the fact that Turkey is an energy importer, it seems to be in a more disadvantaged position against Russia: using its advantages in terms of its geographical importance and being an important customer of Russia in the field of energy, to be effective on Russia. Russia also does not want to lose Turkey because of its important position in terms of energy routes, and since it has an economically developing market.

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STOSUNKI ENERGETYCZNE ROSJA-TURCJA PO 2002 ROKU: ASYMETRIA WSPÓLZALEŻNOŚCI

Streszczenie

Artykuł ma na celu przedstawienie głównych źródeł zasobów energii Turcji i Rosji oraz omówienie znaczenia bilateralnych relacji tych państw w sektorze energetycznym. Równowaga sił Turcji i Rosji zależy od potrzeb energetycznych tych państw. Położenie geopolityczne Turcji i bogate zasoby surowcowe Rosji sprawiają, że oba kraje są dla siebie ważnymi partnerami handlowymi. Są od siebie również zależne energetycznie, dlatego mimo problemów politycznych, realizowane są projekty rurociągów w ramach projektów partnerstwa energetycznego Turcji i Rosji.

Słowa kluczowe: Turcja, Rosja, współzależność, relacje bilateralne, Ankara, Moskwa.

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