

SINO-RUSSIAN ENERGY COOPERATION IN THE POST-COLD WAR (2000-2021)¹



COOPERAÇÃO ENERGÉTICA SINO-RUSSA NO PÓS GUERRA FRIA (2000-2021)

COOPERACIÓN ENERGÉTICA SINO-RUSA EN LA POS GUERRA FRÍA (2000-2021)

Fernanda Albuquerque ²
Alexandre César Cunha Leite ³
Cristina Carvalho Pacheco ⁴

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ABSTRACT

This article aims to analyze Sino-Russian energy cooperation. Energy cooperation is the cornerstone in the relations between Russia and China. The Russian interest in this cooperation is to assure demand for the country's energy exports, to acquire investment capital, and to benefit from Chinese labour. On the Chinese side, the aim has been to obtain access to Russian natural resources and to invest surplus capital. Despite the overlap in supply and demand, as well as the geographical proximity, the Russian energy market is directed towards Europe, while Chinese energy demand primarily is covered by the Middle East and Central Asia. The need for energy diversification has changed this situation and spurred Sino-Russian cooperation. The article is structured in three parts: it first presents Sino-Russian energy trade, secondly, it treats the agreements signed between both countries, and finally, it analyses energy cooperation. We concluded that this cooperation tends to endure due to the energy-related ties formed as part of the long-term agreements and construction of infrastructure. Also, that this cooperation is of a strategic nature for both countries, as it offers an alternative to other energy relations and provides the necessary room of maneuver to defend central political and security-related interests.

Keywords: Energy cooperation; Russia; China.

RESUMO

A cooperação energética é o principal elo no relacionamento entre Rússia e China. O interesse russo nessa cooperação é, sobretudo, assegurar demanda para suas exportações energéticas, adquirir capital para investimento e aproveitar a mão de obra chinesa. E o interesse chinês é ter acesso aos recursos naturais russos e investir seu capital excedente. Apesar da coincidência de oferta e demanda e da proximidade geográfica, o mercado energético russo é voltado majorita-

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2. Internationalist, Master in International Relations and PhD student in International Relations at San Tiago Dantas Postgraduate Program (UNESP, UNICAMP, PUC-SP). Professor at Centro Universitário Tabosa de Almeida (Asces-Unita). Contact: fernandaalbuquerque0@hotmail.com

3. Economist, Master in Political Economy, and PhD in Social Sciences. Permanent faculty member at the State University of Paraíba, coordinator of the Study and Research Group on Asia-Pacific (GEPAP/UEPB/CNPq) and the SACIAR LAB – Political Economy of Hunger Laboratory (SACIAR LAB/UEPB/CNPq). Founder of the SACIAR Solidarity Kitchen. Contact: alexccleite@gmail.com

4. Political Scientist, Master in Political Science and PhD in Social Sciences. Permanent faculty member at the State University of Paraíba, Dean of the Graduate Program in International Relations at the same institution. CAPES Fulbright Scholar at American University (2013). Researcher at the NISUS (National Institute for the Study of the United States). Contact: criscpacheco@gmail.com

riamente para Europa e o fornecimento energético chinês obtido sobretudo do Oriente Médio e da Ásia Central. É a necessidade de diversificação energética que inicia a mudança desse cenário e impulsiona a cooperação sino-russa. O objetivo do artigo consiste em analisar a cooperação energética sino-russa. Para tanto, o artigo está estruturado em três partes: primeiro, apresenta o comércio energético sino-russo, em seguida aborda os acordos firmados entre os dois países; e por fim, analisa a cooperação energética. Conclui-se que essa cooperação tende a ser duradoura em razão dos vínculos energéticos criados com os acordos de fornecimento a longo prazo e a construção de infraestruturas. Ademais, constata-se que a cooperação é estratégica para ambos países, pois oferece alternativa às demais relações energéticas proporcionando a liberdade de ação necessária para defender seus interesses em questões político-securitárias.

Palavras-chave: Cooperação energética; Rússia; China.

RESUMEN

La cooperación energética es el eslabón principal en la relación entre Rusia y China. El interés de Rusia en esta cooperación es, sobre todo, asegurar la demanda de sus exportaciones energéticas, adquirir capital para invertir y aprovechar la mano de obra china. Y el interés chino es tener acceso a los recursos naturales rusos e invertir su excedente de capital. A pesar de la coincidencia de oferta y demanda y la proximidad geográfica, el mercado energético ruso se concentra principalmente en Europa y la oferta energética china se obtiene principalmente de Oriente Medio y Asia Central. Es la necesidad de diversificación energética lo que inicia el cambio en este escenario e impulsa la cooperación chino-rusa. El objetivo del artículo es analizar la cooperación energética chino-rusa. Para ello, el artículo se estructura en tres partes: primero, presenta el comercio energético chino-ruso, luego aborda los acuerdos firmados entre los dos países; y finalmente, analiza la cooperación energética. Se concluye que esta cooperación tiende a ser duradera debido a los lazos energéticos creados con acuerdos de suministro a largo plazo y la construcción de infraestructuras. Además, parece que la cooperación es estratégica para ambos países, ya que ofrece una alternativa a otras relaciones energéticas, brindándoles la libertad de acción necesaria para defender sus intereses en temas político-de seguridad.

Palabras clave: Cooperación energética; Rusia; China.

INITIAL CONSIDERATIONS

In December 2019, the pipeline Power of Siberia, was inaugurated, a result of the “silent agreement” (BBC, 2019) between China and Russia. The agreement, which was reached in May 2014, encompassed a contract worth some US\$ 400 billion according to which Gazprom committed to supplying China with 38 billion of m³ of gas annually, during a period of 30 years, through an oriental route: the Power of Siberia pipeline (Gazprom; Pallardy, 2020). At the inauguration of Power of Siberia, Xi Jinping (in power since 2013) declared: “The Eastern route of the Russian-Chinese gas pipeline is a landmark project of bilateral energy cooperation. It is an example of deep integration and mutually advantageous cooperation of our countries” (Tass, 2019).

According to Salin (2011, p. 72) the essence of the bilateral relations between Russia and China can be resumed by the following sentence “Russian natural resources in exchange for access to Chinese financial resources, including conditional loans”. Salin argues that the objective of the

Chinese policy of partnership with Russia is to gain access to Russian natural and energy resources, and also to establish long-term economic ties to guarantee the continued growth of the Chinese economy; on the Russian side, the objective is to ensure exports of natural resources and to obtain Chinese capital and labour (because of the Russian demographic decline).

This article's goal is to analyze the Sino-Russian energy cooperation in the period from 2000 to 2021. For this purpose, answers are sought for the following two questions: how do China and Russia cooperate within the field of energy? Which role does this cooperation play within both countries? Two hypotheses were established in relation to these questions: hypothesis 1 sustains that China concedes loans and financing for Russia in exchange for long-term energy supplies; hypothesis 2 affirms that this cooperation is strategic for both countries, as it diversifies energy demand and supply (guaranteeing energy security and economic development) and consequently, provides a wider room of manoeuvre regarding political and security-related matters – such as the Ukraine crisis (2014)⁵ and the South China Sea Conflicts⁶. Since its initial economic opening in the 1970s, Chinese energy demand has increased markedly. The elevation of industrial, civil, and military consumption has repositioned China as the world's largest energy importer (Yilmaz; Daksueva, 2017, p. 2). According to BP (2022, p. 8), China is the largest global primary energy consumer⁷ (26,5%).

Russia, on the other hand, is the largest global exporter of oil (12,3%) and natural gas through pipelines⁸ (28,6%) and occupies the place as the second-largest global producer of oil (with 12,2%, the same amount as Saudi Arabia, behind only the United States (18,5%)) and natural gas (with 17,4%) and the sixth-largest global producer of coal (with 5,5%) (BP, 2022, p. 15, 27, 29, 37, 38)). The background for this position of energy dominance vary from an abundance of natural reserves⁹, a highly developed energy sector during the Cold War, to the investments made by Moscow within this sector in recent decades (Hill, 2004, p. 47).

Despite significant investments within the sector, Russia still needs to modernize its energy infrastructure (Putin, 1999, p. 51), as it suffers from: 1) a high degree of depreciation of capital goods within the Fuel and Energy Complex (FEC) (nearly 60% within the gas industry and electrical energy and 80% within the oil refinement industry) apart from a minimum replacement of these goods – between 2005-2015, the replacement rate was approximately 2%, – with an exception for oil extraction, which was 4%; 2) technological backwardness in relation to the average level of technology within energy industries (Kuznetsova, N.; Kuznetsova, E., 2015, p. 164-165); 3) aging infrastructure; and 4) the need for increased energy efficiency (Bushev 2014 *apud* Kuznetsova, N.; Kuznetsova, E., 2015, p. 166). Moreover, oil and gas represent half (58,7%) of goods exports (World Bank Group, 2018, p. V), which along with service exports represent more than ¼ (30,7% in 2018) of Russian GDP (World Bank, no data).

It is hereby evident that Russia needs investment in order to develop and modernize its energy infrastructure. Conversely, China requires energy resources to maintain its economic growth rates, while it possesses capital to construct the necessary infrastructure for its energy supply (Bolt, 2014, p. 50-52).

5. The crisis was marked by a series of protests, supposedly incited by the United States and the European Union, against former Ukrainian President, Victor Yanukovich, not to sign a trade agreement with the European Union. The onset of the crisis resulted in the destitution of Yanukovich from the presidency and the annexation of Crimea by Russia.

6. The divergences in this region regard a dispute about maritime resources spread over four island groups (amongst which are the islands of Spratly and Paracel) and the delimitation of territorial waters claimed by China, Taiwan, Vietnam, the Philippines, Indonesia, Malaysia, and Brunei. The situation is made worse by the participation of external actors, such as the US, Japan, India, and Australia who are attracted by the strategic importance of these waters (Yilmaz; Daksueva, 2017, p. 20).

7. This estimate includes petroleum, natural gas, coal, nuclear energy, hydroelectricity and renewables (BP, 2022, p. 9).

9. Russia retains the largest natural gas reserves in the world (19,8%), the second largest coal reserves (15,2%) and the sixth-largest oil reserves (6,1%) (BP, 2019, p. 14, 30, 42).

8. The largest global exporter of Liquefied Natural Gas (LNG) is Australia, which represents 20,9% of global exports (BP, 2022, p. 36).

Traditionally, in Russia, this sector has been mainly aimed at Europe, while the Chinese energy supplies have primarily been obtained from the Middle East (oil) and Central Asia (gas). According to Yilmaz and Daksueva (2017, p. 8-9), the aspiration to change this situation and the consequent evolution of the Sino-Russia energy relations takes place as a response to two different types of challenges: 1) geopolitical – more precisely the Conflicts in the South Chinese Sea and the Ukrainian Crisis (2014) – which resulted in the annexation of Crimea by Russia and in the subsequent sanctions; and 2) geoeconomic, as both aim to deepen their energy relations, given that Russian exports are mainly directed towards the European market (See Graph 1 and 4), and as the Chinese oil imports mainly originate from West Africa and the Middle East (nearly 60% – See Graph 2).

Russia becomes relevant for China as an energy exporter (Salin, 2011, p. 60; Gabuev, 2015, p. 2), due to the Chinese concern related to the country's oil imports from West Africa and the Middle East, which are transported by sea routes and pass through the Malacca Strait, a point which could become blocked in the case of an escalation of conflict in the South China Sea. Moreover, the political instability in the Middle East is another factor of Chinese preoccupation concerning its energy supply (Yilmaz; Daksueva, 2017, p. 7-25). In Salin's analysis (2011, p. 61), Russia is the only supplier which can guarantee a stable flow in the case of military conflict between Beijing and Washington or if the situation in the South China Sea simply becomes too unstable.

Russia, on the other hand, has become increasingly focused on its Turn to the East, since the 2000s, due to the Asian economic growth (Lukin, 2019, p. 1-2). In its official foreign policy documents Moscow affirms that the Western ability to dominate the global economy and politics is decreasing, while global power and development potential is shifting towards the Asia-Pacific (Mid, 2013, 2016). Trenin (2015, p. 33-34) views this shift in the politico-economic pole towards the Asia-Pacific as the main motivation for the Russian reorientation towards the East.

Two events have contributed to accelerate the Russian reorientation towards the East: the global financial crisis, which took place in 2008, and the Ukrainian crisis six years later. The financial crisis affected the Russian economy, which was in need of rebalancing, but the country could not seek assistance from the West, which itself was in the course of reviving its economy (Trenin, 2015, p. 33). The effect of the financial crisis of 2008 which was felt most by the Russians was, according to Sussex (2014, p. 215), the lack of liquidity and the increasingly expensive credit which its energy companies faced. This was the case with Gazprom. As a consequence of this, China conceded loans to Russia for the construction of energy infrastructure in 2009 (energy for loans) (Sussex, 2014, p. 215). The second episode regards the political and economic crisis faced by Ukraine towards the end of 2013 and early 2014 that resulted in Russian annexation of Crimea and Western sanctions imposed on Russia.

According to Kaczmarek (2015, p. 12-13), the financial crisis of 2008 led to 1) the end of the "Russian economic renaissance of the 2000s" – as the Russian economy was incapable of resuming the pace of growth that

had marked the period before the crisis and eventually stagnated; 2) the recession of the European and American economies which resorted to austerity policies; and 3) the acceleration of the Chinese ascension (that had its beginning from the 1990s) – which despite having suffered from an increase in unemployment and a reduction of economic growth still was much more modestly impacted than the Western powers.

By redirecting its trade and investment strategies towards Asia, Russia concentrated on China (Lukin, 2019, p. 1-2). The focus on China can be explained by the fact that this is the second-largest global economy, which held significant capital stocks (Bolt, 2014, p. 50-52) and furthermore also was one of the main energy consumers and importers. The combination of these factors made China the ideal partner for Russia which needed to guarantee its energy demand and financial resources to develop its economy (Salin, 2011, p. 72).

In sum, the two states deepened their energy cooperation as a strategy for export and import diversification which has proved to be compatible and complementary and as a response to geopolitical challenges (Yilmaz; Daksueva, 2017, p. 7-9). With this in mind, seeking to analyze the Sino-Russian energy cooperation between 2000 and 2021, this article is structured in three parts: the first presents the Sino-Russian energy trade, the second engages with the agreements signed between the two countries, and the third analyses energy cooperation.

SINO-RUSSIAN ENERGY TRADE

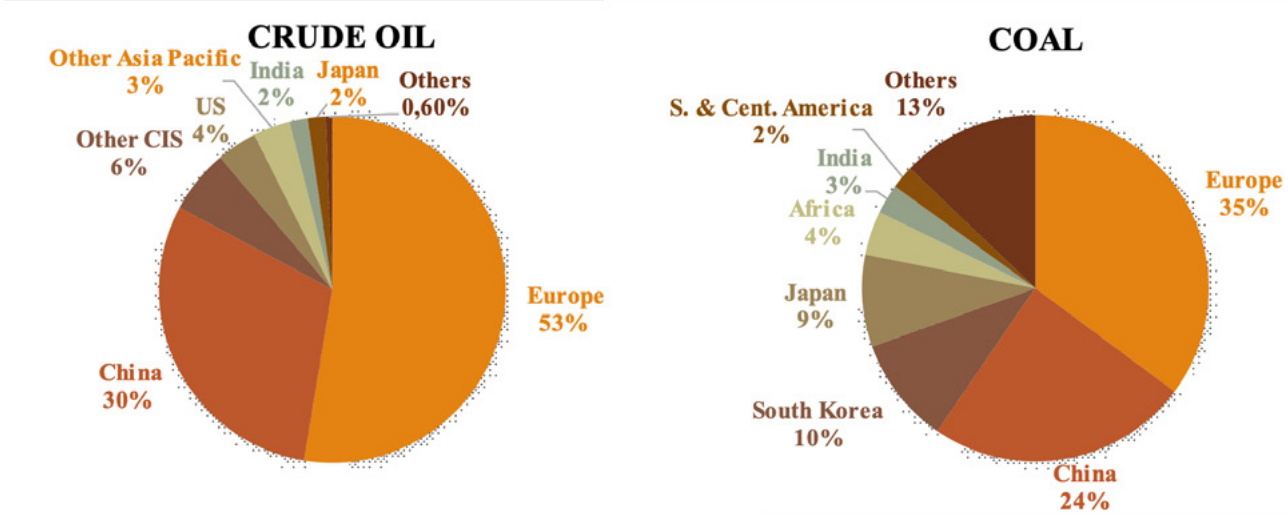
In 1996, Beijing and Moscow established the Russian-Chinese Energy Cooperation Committee which strengthened the bilateral cooperation. However, in this period, as Xu and Reisinger (2018, p. 3) highlight, the Chinese demand for Russian energy resources was still suppressed. The relation between Beijing and Moscow became closer when the two countries in 2001 signed the Treaty of Good Neighborliness and Friendly Cooperation (Yilmaz; Daksueva, 2017, p. 2). However, it was only from 2008, when another mechanism was established, the Russia-China Energy Dialogue (RCED), that the Sino-Russian energy cooperation entered a trajectory of rapid development. According to Xu and Reisinger (2018, p. 3-12), this occurred because practically all bilateral cooperation initiatives within the energy sector from 2008 were discussed and effectuated within the RCED. For example, it was from this year that Russia ceased selling gas to China at the same price at which it sold to the European market. The RCED permitted a more pragmatic price determination and cooperation was intensified (Xu; Reisinger, 2018, p. 12).

Guided by the deterioration of relations with the West and by economic interests, after the Ukraine Crisis (2014), which resulted in the annexation of Crimea by Russia and the imposition of North-American and European sanctions on the country, Moscow became increasingly oriented towards Beijing. Due to the increase in energy consumption, China became the natural destination for Russia to offset the losses it had incurred because of the sanctions and the decreasing oil prices (Yilmaz; Daksueva, 2017, p. 9). The Chinese financial power also paved the way for

large energy agreements which involved extensive investments in logistics, construction, and maintenance works (Yilmaz; Daksueva, 2017, p. 9).

Currently, China is the main destination for Russian oil exports (accounting for 30% of foreign demand) and coal exports (24%) – see Graph 1.

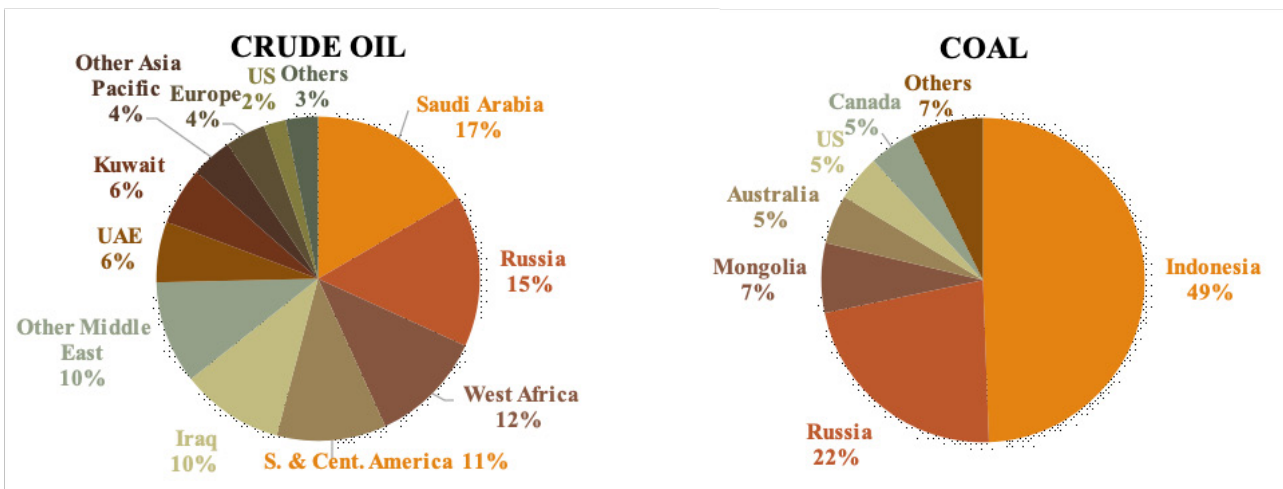
Graph 1- Destination of Russian oil and coal exports in 2021



Author's elaboration based on data from BP (2022, p. 27, 40).

While Russia is the second crude oil (15%) and coal (22%) supplier to China – see Graph 2. The main crude oil supplier to China is Saudi Arabia (17%), which since 2001 had been at the top of the list (DOWNS, 2018) in most of the years. Regarding coal, Indonesia (49%) is the main supplier of commodities to China – see Graph 2.

Graph 2 – Origin of the Chinese crude oil and coal imports in 2021



Author's elaboration based on data from BP (2022, p. 27,40).

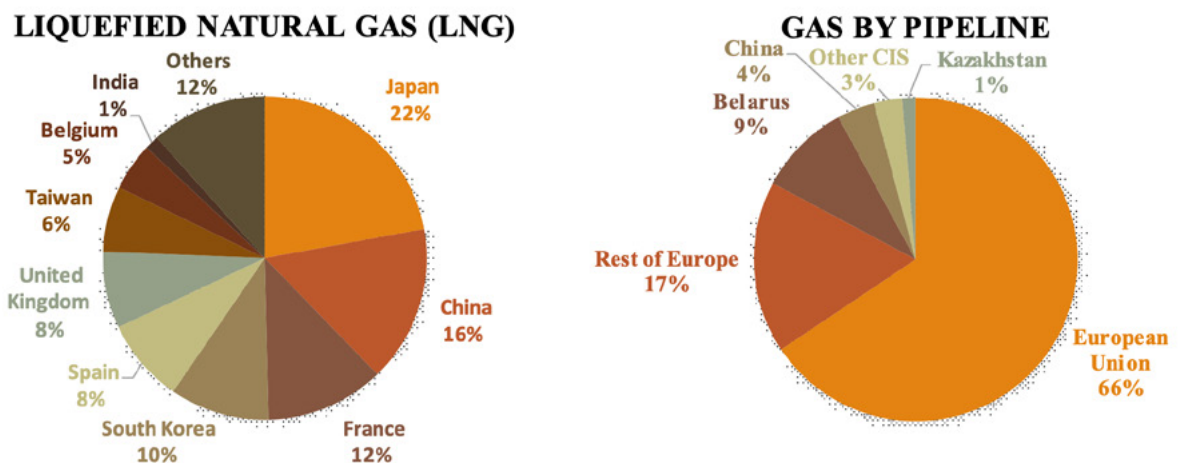
The oil trade between Russia and China grew under favorable geographical and economic conditions. In geographical terms, Russia possesses large oil and natural gas fields in Eastern Siberia, a border region to the industrialized Northeastern China. In economic terms, the Russian economy is blessed with resources that complement the Chinese industrial base (Yilmaz; Daksueva, 2017, p. 3-4).

The energy trade has created such a strong link between the Russian and Chinese economies that the decline in the Chinese GDP growth – which can be observed since 2014 (Spellman; Leite, 2020) – worries Kremlin because a decrease in Chinese growth (which also would affect the country’s energy consumption) could seriously compromise the Russian economy (Xu; Reisinger, 2018, p. 15).

Russia supplies oil to China through two pipelines: the Eastern Siberia-Pacific Ocean (ESPO), the Eastern supply route (the *Taishet-Skovorodino* route (ESPO 1, concluded in 2009) *Skovorodino-Kozmino* (ESPO 2, concluded in 2012) *Skovorodino-Daqing* (China Spur, concluded in 2010)); and the *Omsk-Pavlodar-Atasu* Pipeline, in operation since 1980, which supplies China through a Western route which leaves Omsk in Russia and passes through Kazakhstan until reaching China (EIA 2017, 13-14).

In relation to Liquefied Natural Gas (LNG), China (16%) is the second destination of Russian exports, while in Russian natural gas exports by pipeline, China stand at a much lower position, responsible for only 4% of the foreign demand – see Graph 3.

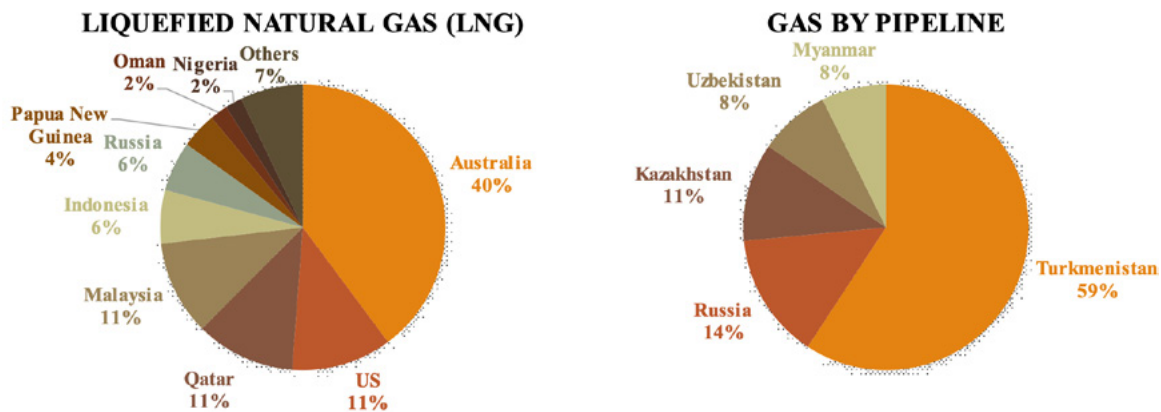
Graph 3 – Destination of Russian natural gas exports in 2021



Own elaboration based on data from BP (2022, p. 36-37).

The Chinese imports of natural gas can be divided into two categories: imports via pipeline, coming mainly from Central Asia (See Graph 4); and imports via ship, in this case of LNG coming mainly from Australia (40%, see Graph 4). China imports more LNG (109,5 bcm) than natural gas via pipeline (53,2 bcm) (BP, 2022, p. 35-37). Despite the low presence of Russian natural gas within the Chinese economy, which only represents 6% of the country’s LNG imports – see Graph 4, – the agreements signed in recent years – the theme of the next section – point to a change in this situation.

Graph 4 – Origin of Chinese Natural Gas imports in 2021



Own elaboration based on data from BP (2022, p. 36-37).

The low level of the Chinese imports of natural gas from Russia is understandable when considering that China only began to import natural gas from 2007 (EIA, 2015, p. 16), and, even so, still produces 55% of its consumption (BP, 2022, p. 29-31). Moreover, when China began importing natural gas, the small amounts did not attract Gazprom's interest, which directed Chinese buyers towards Central Asia, and especially Turkmenistan (Gabuev, 2015, p. 3).

In Gabuev's perspective (2015, p. 3), the Chinese orientation towards natural gas from Turkmenistan (which accounts for 59% of Chinese natural gas imports – see Graph 4) can be explained by Moscow's preoccupation with its position on the European market and Gazprom's lack of interest in the Chinese market (which derives from the depressed demand, low prices, and Chinese state regulation). In cooperation with Central Asia, China hereby constructed the Central Asia-China pipeline (between 2007 and 2009), which has its point of departure in Turkmenistan and passes through Uzbekistan and Kazakhstan before arriving in the Chinese Xinjiang region (Estadão, 2009). Apart from alleviating the immediate Chinese demand for Russian natural gas, it also became an important bargaining chip for China during the energy negotiations with Moscow in 2010 and in the agreement of 2014 with Gazprom. Later, the Chinese energy imports from Turkmenistan awoke Gazprom's interest in the Chinese market (Xu; Reisinger, 2018, p. 8-10).

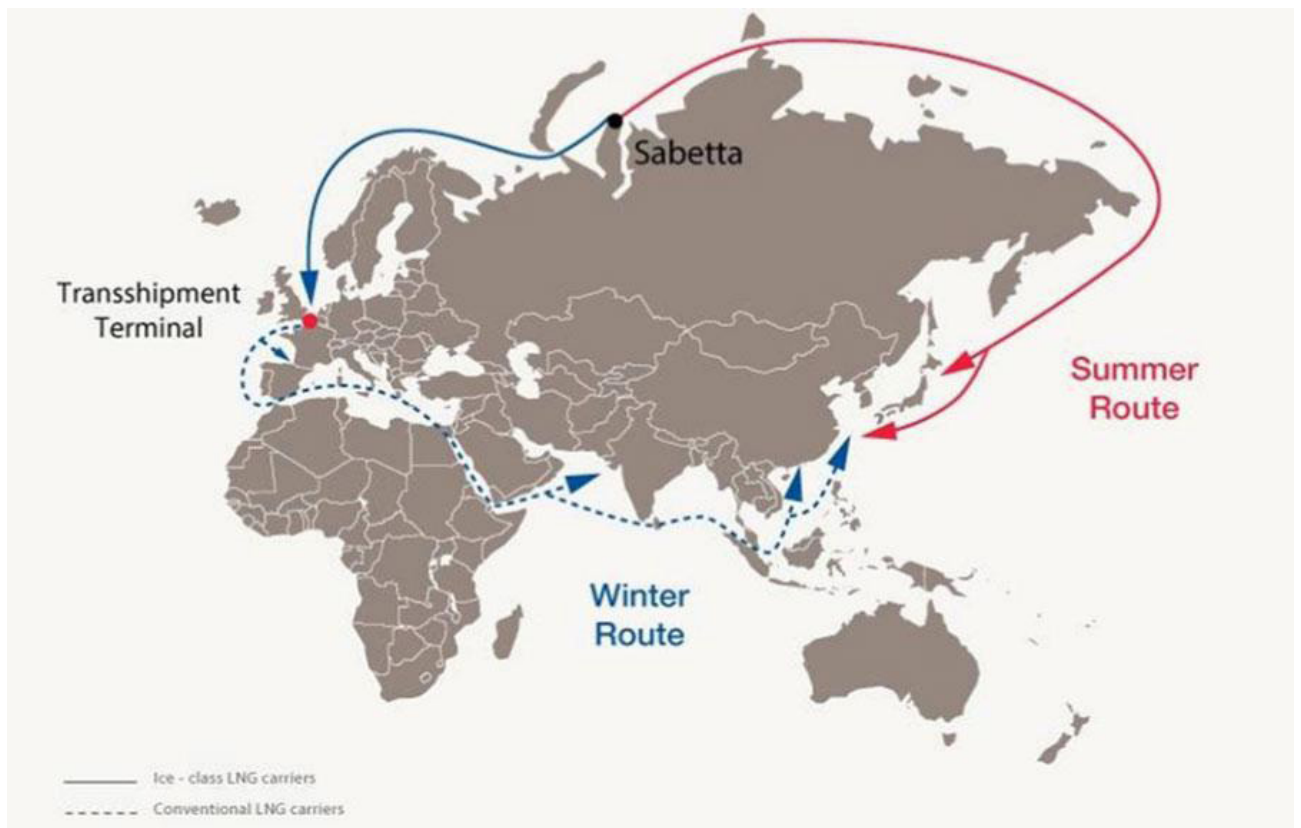
China and Russia have conflicting energy interests in Central Asia – a region that holds large natural gas reserves as well as a strategic position between the two countries and the Middle East. With economic gains in mind, Russia controls the energy infrastructure – because it obtains energy cheaply and resells to Europe – and views the region as part of its sphere of influence, meaning that it does not permit the intrusion of other states. China, on the other hand, is interested in investing, in intensifying economic relations, and in increasing energy imports from Central Asia through energy contracts and infrastructure development, which converges with the Russian objectives in the region¹⁰ (Bolt, 2014, p.

10. On the other hand, the two countries share political and security interests in Central Asia. Both seek to diminish the North American influence and to maintain regional stability. For this purpose, they seek to eradicate the "three evils" – "terrorism, separatism, and religious extremism", and to limit military North American military bases in Central Asia and avoid the eruption of new Colored Revolutions (ZIEGLER, 2010, p. 233-237). One instrument of cooperation between the two countries in Central Asia is the Shanghai Cooperation Organization (SCO), a bloc of Asian regional integration led by China and Russia.

60-61). Bolt (2014, p. 60) highlights that beyond China and Russia, many countries – such as the United States, India, Pakistan, Iran, and Turkey – also seek influence in Central Asia.

The Russian gas supply to China is shipped through two channels. The LNG from the Yamal peninsula is transported by cargo ships through the Northern Sea Route (equivalent to the “Summer Route” on Map 1) or by the Western Route via the Suez Canal (equivalent to the “Winter Route” on Map 1) – varying according to the time of the year (Reuters, 2018; Lng World News, 2018).

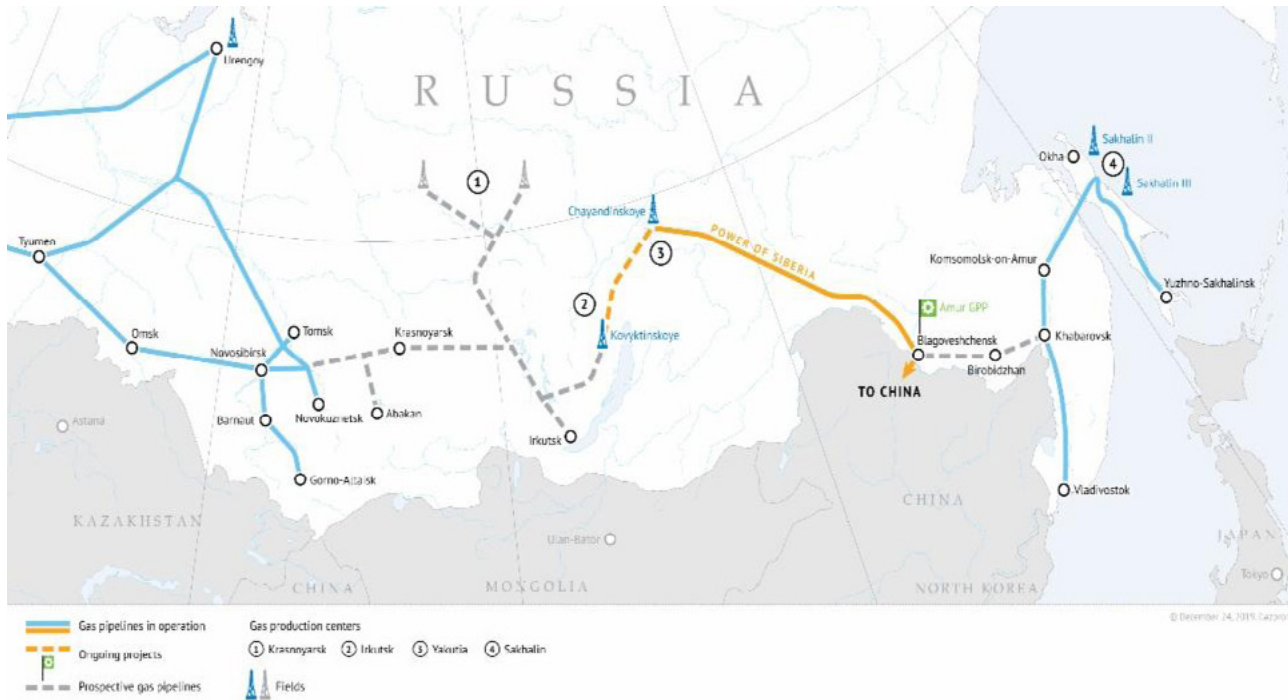
Map 1 – Supply Routes of the Yamal LNG Project



Source: Bianco (2018)

And the natural gas is shipped by the pipeline Power of Siberia (see Map 2), with supply beginning in December 2019 (GAZPROM).

Map 2 – The Power of Siberia pipeline



Source: Gazprom

The main destinations of Russian energy exports are China and Europe (EIA, 2017, p. 11, 21, 28). Although Europe as a whole holds an important position as a consumer of Russian energy resources (see Graph 1 and Graph 3), examining the countries individually, China becomes distinguished and surpasses the European countries as the largest destination of Russian oil and coal exports (as it holds the first place in terms of oil (30%) and coal exports (24% – see Graph 1), and only becomes less relevant regarding natural gas by pipeline (4% – see Graph 3).

The next section presents the agreements signed between China and Russia since 2000, highlighting the continuity and maybe even an increase in the energy trade between China and Russia.

ENERGY AGREEMENTS BETWEEN RUSSIA AND CHINA

The Sino-Russian energy cooperation already encompasses trade in energy resources, investments within the energy sector, equity participation, infrastructure development, technological exchanges, nuclear energy projects and even explorations in the Arctic (Yilmaz; Daksueva, 2017, p. 2-10).

Energy cooperation is a vital instrument for the obtainment of Russian objectives, including strategic interactions with China (Yilmaz; Daksueva, 2017). The Russian interest in energy cooperation with China is, above all, to guarantee demand for its natural resources, to acquire investment capital within the energy sector, and to benefit from Chinese labour (Salin, 2011, p. 73). The Chinese interest in energy cooperation with Russia consists in: 1) guaranteeing energy security through diversification

of its sources of energy supply (Yilmaz; Daksueva, 2017; Salin, 2011, p. 60); 2) invest its surplus capital; and 3) intensify its trade interactions (Bolt, 2014, p. 50-57).

In Xu and Reisinger's analysis (2018, p. 2), the literature points to various factors which spur Sino-Russian energy trade, such as 1) the overlap in supply and demand – the Chinese energy needs and abundance of Russian energy reserves; 2) the deterioration of Russian relations with the West – this has incentivized Moscow to go beyond pragmatic and short-term energy agreements with China and to move towards strategic cooperation; 3) the Russian aspiration to use energy cooperation with China to promote its economic status in Northeast Asia and the Asia Pacific; and finally 4) Moscow's interest in promoting economic development in the Far East and in Eastern Siberia.

Throughout the 21st Century, various energy agreements were signed between the two countries. According to Meidan (2016, p. 11), in 2005 China conceded the first oil-backed loan to Russia, in line with which the China National Petroleum Corporation – CNPC lend US\$ 6 billion to Rosneft as a payment in advance for the supply of 48,8 million tons of oil until 2010 (Trevisan, p. 2005).

In 2009, the Russian companies Rosneft and Transneft obtained a loan of US\$ 25 billion with the China Development Bank (CDB). As part of this transaction, it was agreed that Transneft would receive US\$ 10 billion (the necessary amount in order to conclude the construction of the ESPO pipeline without delay), while Rosneft would receive another US\$ 15 billion, and in exchange, the company committed to supplying 15 million tons of oil annually during 20 years (the equivalent of 300 million tons in total, as a value of approximately US\$ 90 billion) (Paxton; Soldatkin, 2009). As a result of this agreement, in January 2001, Russia began shipping oil to China through the ESPO pipeline (BOLT, 2014, p. 54).

In June 2013, Rosneft made an agreement worth US\$ 270 billion with the CNPC, as part of which it committed to supplying 300 thousand barrels of oil per day to China during 25 years from 2015; a total of 256 million tons of oil (BBC, 2013; Clover, 2013; Exame, 2013). In October the same year, Rosneft signed a contract of US\$ 85 billion with Sinopec, a Chinese oil refining company, as part of which it committed to supplying the company with some 100 million tons of crude oil for a ten years period (Rosneft, 2013; RT, 2013; Petronotícias, 2013). In this round of negotiations in October 2013, Novatek (a Russian Natural gas company) committed to supplying three million tons of LNG annually to CNPC for 15 years (Rosneft, 2013; RT, 2013; Estadão, 2013; Petronotícias, 2013).

In May 2014, Gazprom and the Chinese State-Owned Company, CNPC, signed a contract at the value of US\$ 400 billion, which determined that Gazprom during 30 years would supply 38 billion m³ of natural gas annually to China through the Power of Siberia pipeline, which was inaugurated in December 2019 (Gazprom; Pallardy, 2020). It is important to highlight that this agreement has been under negotiation for ten years and the price of gas, which always has been a cause of disagreement between Russia and China, – and even blocked negotiations, – was kept secret, including after the signature of the contract (Wan; Hauslohner, 2014).

In 2015, Gazprom and the CNPC signed a preliminary agreement according to which Russia would ship some 30 billion m³ of gas annually to China through the Eastern Route – the pipeline Power of Siberia-2 (Gazprom, 2015; Tass, 2017). Although the project still is on the drawing board, relevant questions such as the price of gas have still not been settled. Gazprom plans to launch Power of Siberia-2 in 2030 (Pallardy, 2020).

Chinese companies also invest – through equity acquisition – in the Russian gas and oil exploration. Amongst the agreements, one was concluded between Rosneft and CNPC to jointly develop the oil and gas fields in Eastern Siberia, while another regards the contract between Rosneft and Sinopec to jointly develop of fields of *Russkoye* and *Yurubcheno-Tokhoms koye* (Yilmaz; Daksueva, 2017, p. 5).

In 2016, the Export-Import Bank of China (Exim) and the China Development Bank (CDB) committed to supplying US\$ 12 billion, throughout a 15 years period, to finance the Yamal LNG Project, led by Novatek (Bermingham, 2016; Africa Reuters, 2016). Situated on the Yamal Peninsula (a region rich in natural gas of the Arctic Siberia), the project encompasses production, liquification and transport of natural gas (Sputnik, 2018; Sahuquillo, 2018). Sahuquillo (2018) highlights that this is the energy project with the largest Chinese participation in Russia – approximately 30% divided between CNPC (20%) and the Silk Road Fund (9,9%), the rest of the stocks are held by Novatek (50,1%) and the French Total (20%) (Africa Reuters, 2016; Efe, 2017; Sputnik, 2018; Sahuquillo, 2018) – without Chinese investment, this project would not have been possible.

The main destination of the LNG produced in Yamal are Asia (54%) and Europe (46%) (Exame, 2017) with the main focus on the East, although the Russian icebreakers can travel all year departing from Sabetta (see Map 1) heading West and only six months in the direction Eastwards, given that the ice obstructs and sometimes hinders sailing (Sahuquillo, 2018; Escarda, 2017).

In July 2018, Novatek delivered the first shipment of LNG to Yamal to China via the Northern Sea Route – equivalent to the Summer Route on Map 1 (Arctic Bulk; Reuters, 2018; Novatek, 2018). The deliveries of LNG from the port in Sabetta to China via the Northern Sea Route are significant because they diminish the time and costs of transportation when compared with the first LNG shipment from Yamal to China, which took place through the Western Route – equivalent to the Winter Route on Map 1 – in April that year (Reuters, 2018; Lng World News, 2018; Novatek, 2018; Sun, 2018).

Table 1 resumes the energy agreements presented in this study, albeit it does not necessarily comprise all the contracts signed between the two countries. It nonetheless provides an overview of the intense Sino-Russian energy cooperation.

Table 1 – Energy agreements between Russia and China (2000-2021)

YEAR	RUSSIAN CIA	CHINESE CIA	ENERGY ACTIVITY	VALUE (in billions)	DURATION (years)
2005	Rosneft	CNPC	Oil Supply	US\$ 6	5
2009	Rosneft	CDB	Oil Supply	US\$ 15	20
2009	Transneft	CDB	Construction of the ESPO Pipeline	US\$ 10	X
2013	Rosneft	CNPC	Oil Supply	US\$ 270	25
2013	Rosneft	Sinopec	Oil Supply	US\$ 85	10
2013	Novatek	CNPC	LNG Supply	X	15
2014	Gazprom	CNPC	Natural Gas Supply	US\$ 400	30
2015	Gazprom	CNPC	Natural Gas Supply	X	X
2016	Novatek	CDB e Exim	Yamal LNG Project Financing	US\$ 12	15

X: Information not available.-

Author's elaboration¹¹

Downs (2018) argues that the trend is that Russia will remain as the main source of oil for China due to political and infrastructure-related reasons, and because of the long-term contracts – as presented in Table 1.

The commitments described in Table 1 do not only maintain – for decades – the Chinese demand for Russian energy resources, as the increase in consumption at the cost of other suppliers would suggest. The long-term supply contracts sealed the Russian and Chinese energy partnerships for at least 29 years. After this period, the trend is that the Sino-Russian energy trade will extend for many more decades to compensate for the significant investment in the construction of energy infrastructure – the ESPO and Power of Siberia – in order to connect their countries. Moreover, the Chinese imports of Russian energy resources tend to increase due to the growing capacity and ease of transportation with the construction of the ESPO and Power of Siberia pipelines, and because of the problems in the South China Sea which could make the country redirect parts of its imports from the Middle East and West Africa to Russia.

It is also important to highlight how these agreements impact the current situation of low Chinese imports from Russian gas and lead China, in the near future, to the group of the main Russian gas consumers. The main agreement signed concerning natural gas (between Gazprom and CNPC at a value of US\$ 400 billion) and the energy project with the largest Chinese participation in Russia is the Yamal LNG Project (Sahuquillo, 2018) which already has entered operation. Apart from this, the Chinese natural gas imports tend to increase because of an ongoing change in the Chinese energy matrix in the direction of resources that emit fewer gasses with a polluting effect on the atmosphere and which tend to burn more efficiently (Yilmaz And Daksueva, 2017, p. 6).

It can thus be concluded, that the Sino-Russian energy trade is persistent and that the two countries tend to become increasingly important for each other within the energy sector. The next section analyses the Sino-Russian energy cooperation and its effects.

11. Based on data from Meidan (2016, 11); Trevisan (2005); Paxton, Soldatkin (2009); Bbc (2013); Clover (2013); Exame (2013); Rosneft (2013); Rt (2013); Estadão (2013); Petronotícias (2013); Gazprom; Pallardy (2020); Gazprom (2015); Tass (2017); Bermingham (2016); Africa Reuters (2016).

ANALYSIS OF THE SINO-RUSSIAN ENERGY COOPERATION

In the RCED negotiations, Xu and Reisinger (2018, p. 12) conclude that the Chinese ability to shape the agenda is superior to that of Russia, given that nearly all the proposals initiated by China have been concluded and the changes in the themes of the RCED mainly reflect Chinese interests (Russia has been relatively passive in terms of defining the agenda from 2008 until 2015). It also became evident that Russia makes use of price manipulation of energy resources as its principal method to influence the bargaining process (Xu; Reisinger, 2018, p. 12).

The Russian inability to define the agenda could be associated with the economic disparities between China and Russia. Moscow needs to strengthen its economic capacity to obtain an advantageous position in the process of energy bargaining with Beijing (Xu; Reisinger, 2018, p. 16).

There is also a disparity in terms of commercial relevance, in which China is much more important to Russia than that country is to China; while China holds the first place on the ranking of the origin of imports (with 20%) and destination of Russian exports (with 11%) (OEC), Russia is only the 11th most important source of imports (with 2,5%) and the 10th most important destination of Chinese exports (with 1,8%, at a similar level to the Netherlands and Singapore) (OECa). Moreover, the very structure of trade relations of the two countries – in which Moscow mainly exports raw materials (53% crude oil, (OEC)) and imports industrialized products (10% transmission equipment's, 5,7% automatic data processing machines and magnetic readers, amongst others (OECa)) – represents a disadvantage for the Russian Federation (Kaczmarek, 2015, p. 21).

Independently of the abovementioned circumstances, it is a fact that the Sino-Russian energy cooperation has proved itself to be essential and benevolent to both countries, as it spurs energy diversification and consequently, a higher degree of freedom of action in relation to political and security-related crises, such as the Ukraine Crisis (2014) and the Conflicts in the South China Sea.

The Ukraine Crisis (2014) resulted in the annexation of Crimea by Russia and in subsequent western sanctions on Moscow. The Sino-Russian energy cooperation has eased the effects of the sanctions (Yilmaz; Daksueva, 2017, p. 3) in relation to energy demand, capital and technology – given that, 1) energy trade has intensified, as Russia has become the main oil supplier to China from 2016 (Downs, 2018) and China has incorporated Russian natural gas within its economy with the US\$ 400 billion agreement between Gazprom and CNPC¹² – see Table 1; 2) the Chinese investments in Russia increased from 2014 – see Figure 1; 3) China and Russia have engaged in technological exchanges, at least in the construction of the Power of Siberia pipeline (Yilmaz; Daksueva, 2017, p. 9-10).

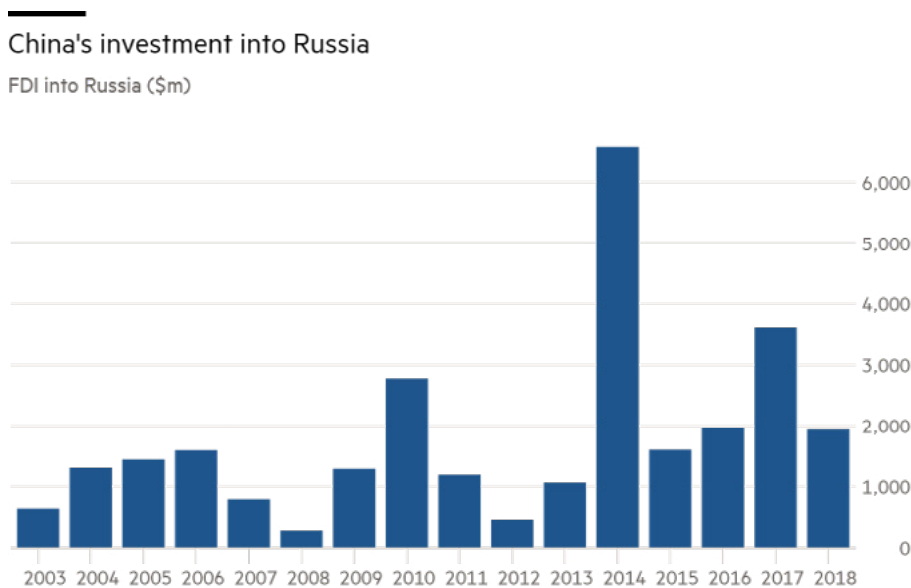
The Western sanctions imposed on Moscow limit the access of certain Russian financial institutions to Western capital markets, isolating them from the financial centers of London and New York. Therefore, the Russian authorities sought to substitute Western credit, with credit from Chinese financial institutions, successfully securing the following investments: 1) Chinese financing for the Yamal LNG project (see Table 1); 2) loans for the

12. Established in May 2014, this agreement has been under negotiation for 20 years and was announced shortly after the US Secretary of the Treasury asked China to refrain from steps which could limit the impact of Western sanctions on China (YILMAZ; DAKSUEVA, 2017, p. 18-19).

Vnesheconombank (VEB) and the VTB, state-owned Russian financial institutions; and 3) the creation of a joint investment between the China Investment Corporation and the Russian Direct Investment Fund (Gabuev, 2015, p. 3-5).

Figure 1 illustrates that in 2014 – the year of the Ukraine Crisis and the subsequent Western sanctions imposed on Moscow – China invested heavily in Russia, and in the following years, although the level of investments did diminish, they still remained higher than before the Ukraine Crisis (with exception only of 2010). Hence, Figure 1 suggests a trend of Chinese support for Russia and boycott of the sanctions imposed by the US and the European Union.

Figure 1 – Chinese investment in Russia (2003-2018)



Source: FDI Markets
© FT

Source: Spivak and Foy (2019)

Xu and Reisinger (2018, p. 4-5) stress how personalism is a strong characteristic in the Russian political structure, which has been even more evident in the energy diplomacy towards China, in which Putin personally impacts negotiations. Vladimir Putin has proved to be positively minded to opening the energy sector to Chinese companies, to interfere in order to conclude energy agreements, and to participate in multilateral cooperation led by China, thus, demonstrating a Sino-Russian unity in relation to international issues. In exchange, Xi Jinping is also more inclined to provide economic financing to Russia, especially within the field of energy (Xu; Reisinger, 2018, p. 5-13).

Even with the intensification of the Russia-China cooperation after 2014, it is still evident that China does not possess the necessary conditions to completely substitute the West as an energy market, and as a source of capital and technology (Gabuev, 2015, p. 1-8), however, the Sino-Russian relations have eased the effects of the sanctions through an increase in the energy imports and Chinese investments in Russia (Yilmaz; Daksueva, 2017, p. 3).

The increase of the Chinese investments in Russia and the rise in imports of Russian energy resources by China provides Moscow with an alternative to the Western financial institutions and the European energy demand, which results in a larger room of maneuver for Russia regarding questions concerning which the country diverges from the West, such as the expansion of the North Atlantic Treaty Organization (NATO), of the European Union, and the Ukraine Crisis (2014).

The Russian energy supply to China has also played an important role in relation to political and security-related matters of this Asian country, especially regarding the Conflicts in the South China Sea, as it represents an alternative to the energy resources of the Middle East and West Africa, which is transported through maritime routes that pass through the Malacca Strait, – a place which could become blocked in case that the South China Sea Conflicts deteriorate. Hence, the Russian energy shipments serve to reassure China with regards to its energy supply and provides a higher degree of freedom to act more assertively within the region, without worrying about how a US naval blockade could cut off vital energy supplies (Yilmaz; Daksueva, 2017, p. 8-23). The recent Chinese signals – such as the development of islands, the implementation of a system of defense on recently constructed islands, and the increasing activity of the Chinese Navy and Coast Guard in the South China Sea – constitute examples of the increased Chinese room of maneuver in the region provided by the energy cooperation with Russia. Thus, this cooperation bestows energy security for China, and, consequently, the freedom of action which the country needs to defend its interests within the region (Yilmaz; Daksueva, 2017, p. 23).

Hence, the Ukrainian Crisis (2014) and the Conflicts in the South China Sea shed light on the importance of the Sino-Russian energy cooperation for both countries, not only in economic terms but also with regards to political and security issues.

FINAL CONSIDERATIONS

Energy cooperation is the main link in the Sino-Russian relationship. China is one of the largest consumers of energy in the world and Russia is one of the main global energy exporters and producers. Because of the aging infrastructure and the inferiority and technological backwardness of the FEC, Russia needs investments to develop and modernize its energy infrastructure, while China needs energy resources to maintain its economic growth, while the country possesses capital to invest and construct the necessary infrastructure to support its energy supply. Despite the overlap in supply and demand, as well as the geographical proximity, the Russian energy market is mainly aimed towards Europe, while Chinese energy supply primarily is met by the Middle East (oil) and Central Asia (gas).

The ambitions to change this situation and the subsequent evolution of the Sino-Russian energy relations has taken place as a response to two challenges: 1) geopolitical – more precisely the South China Sea conflicts and the Ukraine Crisis (2014) – and 2) geoeconomic – the need to diversify energy relations.

The Crisis of 2008 and the western sanctions imposed as a consequence of the Ukrainian Crisis (2014) highlighted Kremlin's dependency on the European energy and financial markets, accentuating the Russian need for energy diversification and a new source of capital, both available within the Chinese market.

Russia, therefore, redirected its trade and investment strategies towards China. China, on the other hand, resorted to increasing imports of Russian energy resources to guarantee the necessary energy supply to secure the growth of its economy, given that more than half of Chinese oil imports originate from the Middle East and West Africa, and are transported through a space vulnerable to blockades (the Malacca Strait). Moreover, the political instability in the Middle East also worries the Chinese leaders as this could threaten Chinese energy security.

Therefore, the two states have undertaken energy cooperation as an export and import diversification strategy which has proven to be compatible and complementary. The Russian interest in energy cooperation with China is, above all, to ensure demand for its energy exports, to acquire investment capital within the energy sector, and to apply Chinese labour. Another Chinese interest is to gain access to Russian natural resources to guarantee its energy security and invest surplus capital.

The energy cooperation between Russia and China encompasses trade in energy resources, investment within the energy sector, infrastructure development, technological exchange, and even exploration of the Arctic. More specifically, the energy cooperation involves: 1) the establishment of agreements according to which Chinese companies – such as CNPC, CDB, and Sinopec – concede loans to Russian energy companies – such as Rosneft, Transneft, Novatek, and Gazprom – in exchange for long-term energy supply; 2) construction of pipelines which connect the two countries – ESPO and Power of Siberia; and 3) Chinese investment in energy projects – such as the Yamal LNG Project and the development of Russian gas and oil exploration fields in Eastern Siberia, by *Russkoye* and *Yurubcheno-Tokhomskeye*. All these agreements reflect the intensity of the Sino-Russian energy cooperation and its tendency of continuity at the cost of other partners. This is because Beijing and Moscow have tied energy supplies to their economies' demand for years (even decades) into the future with long-term supply contracts, and also sought to maintain – and even increase – their energy relations when investing in joint energy projects, such as the construction of the ESPO and Power of Siberia, given that these pipelines harness the capacity, and facilitate and cheapen the transport of commodities and represent a significant investment, compensated only with intense trade in the coming decades. Moreover, the problems in the South China Sea could make Beijing redirect part of its imports from the Middle East and West Africa to Russia.

These agreements also suggest a change in the current situation of low Chinese imports of Russian natural gas, and tend to push China towards the group of main consumers of Russian gas, as the largest energy agreement signed was related exactly to natural gas (between Gazprom and CNPC at a value of US\$ 400 billion) and the energy project with the largest Chinese participation in Russia is the Yamal LNG Project. Apart

from this, the Chinese imports of Russian natural gas tend to increase due to the construction of the Power of Siberia pipeline, and to the ongoing change in the Chinese energy matrix towards resources that emit less polluting gases in the atmosphere and that burn more efficiently.

By increasing imports of Russian energy resources and investments in Russia, China reduces the effects of the Western sanctions imposed on that country and provides Moscow with an alternative to the Western financial institutions and to the European energy market, which gives a higher degree of freedom to Russia in relation to issues around which the country diverges from the West. On the other hand, the Russian energy supply reduces the Chinese dependency on hydrocarbon resources from the Middle East and West Africa (the transport of which is susceptible to Western blockades) representing an alternative for China, which assists the country with regards to its energy supply and provides a higher degree of freedom to act more assertively in the Conflicts in the South China Sea without worrying about having its energy suppliers cut off by a naval blockade. Thus, this cooperation provides energy security for China, and, consequently, the room of manoeuvre which the country needs in order to defend its interests in the region.

We can thereby conclude that the Sino-Russian energy cooperation is essential for both countries, given that beyond contributing to both economies – guaranteeing energy security for China and capital and energy demand for Russia – it also provides a larger margin of manoeuvre regarding their political and security questions.

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