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Kazakhstan in the People's Republic of China's Energy Security Policy

ABSTRACT

Nowadays, energy security is a growing concern in the state foreign policy. The interdependency in the energy field is a very important dimension of the contemporary relations between states and transnational corporations. The Central Asia region is not only the undiscovered reservoir of oil and gas, but also the strategic "chessboard" with many internal and external players, where the new great game started after the Cold War. Kazakhstan, because of the geopolitical position in the center of Eurasia, and as one of the biggest producer of energy resources, is becoming significant in the international energy market. After the collapse of the Soviet Union, it became open to foreign investments. The growing energy needs have given the People's Republic of China (PRC) a strong interest in developing ties with energy-producing states in the Central Asia region to build necessary pipeline infrastructure [Kandiyoti 2008]. Kazakhstan is getting increasing importance in this context. Kazakhstan and all Central Asia region seems the most likely to play an important role in the Chinese strategy to reduce its dependence on energy supplies from the Middle East.

Key words: Kazakhstan, China's energy policy, energy security, pipelines

INTRODUCTION

The collapse of the Soviet Union and the end of the Cold War led to a significant change in the configuration of Eurasian geopolitics [McCarthy 2000]. Such a reality created the Central Asia region as an area of influence by neighboring states and distant players [Iseri 2009]. Thus, some analysts describe the rivalry in the region as a great game among the main actors: the United States, the European Union, China and Russia. Zbigniew Brzeziński [1998] defines Central Asia region as the "Eurasian Balkans", including the following nine countries: Kazakhstan, Kyrgyzstan, Tadzhi-

kistan, Turkmenistan, Uzbekistan, Azerbaijan, Armenia, Georgia and Afghanistan. According to him, this space is a "power vacuum", in which the external political interference is decisive [Penerliev 2012: 4]. Surrounded by Russia, China, and South Asian states, the Central Asian countries are the "geopolitical highlight of Eurasia, making them both a buffer and a passageway between East and West" (see: Map 1) [Rywkin 2005]. Central Asia is a significant energy and natural resources producer, with the capacity to reduce the world's heavy dependence on Middle Eastern hydrocarbons [Mantel 2016: 139–150]. The region's political and economic development has been a model of an effective transformation after the Soviet system [Ghafouri 2008: 81]. This would provide Kazakhstan with increased energy security in the "complex interdependencies and geopolitics of the Central Asian Energy Game" [Garrison, Abdurahmanov 2011: 381–405].

Map 1. The Central Asia region

Source: Penerliev [2012: 176].

The article discusses the issue of the cooperation between China and Kazakhstan in energy field. In this paper, it is important to verify some hypothesis. First of all, the energy security is vital to economic development both for the People's Republic of China and Kazakhstan. Second of all, China, as a rapidly expanding economy,

and the largest energy consumer in the world, has given the Kazakhstan increasing economical importance. China's interests in Kazakhstan, as a Caspian littoral state, are part of its overall Silk Road strategy to diversify energy dependence on the unstable Gulf region and build overland routes to hedge against maritime supply disruptions from the Gulf. To prove the above-mentioned hypothesis, we will analyze the Chinese and Kazakh energy security strategy and the energy potential data of Kazakhstan as the main Caspian energy producer. We will also analyze the main field of cooperation between both states: the pipeline infrastructure.

In this research, it is useful to take into consideration the Copenhagen school of international relations (Copenhagen Peace Research Institute, COPRI). We should spill security issues over into other sectors, which are fundamentally different from military ones [Buzan, Wæver, de Wilde 1998: 195]. Security is an idea which needs a dialog between and within states, civilizations and other actors on the international scene. Security, being a dynamic process, became a complex, multidimensional phenomenon. Its multidimensionality means that it is regarding many areas of the international relations with the access to the energy and its consumption as well [Pietraś 2017: 23–40]. Since the energy security became one of dimensions of security sectors, its specificity is becoming a research problem [Pietraś 2017: 23–40].

In the structure of this paper, we included the energy security strategy of the PRC and Kazakhstan and the pipeline infrastructure which connects both states. As far as the research strategy, in our analyses, we use the case study method, and concentrated on the two states: Kazakhstan and China. These are important economic partners: Kazakhstan is the energy producer, and China is the energy importer. The research field of this paper is not very popular in Polish literature, so we can safely assume that it could fill the gap in this context.

ENERGY SECURITY POLICY OF THE PEOPLE'S REPUBLIC OF CHINA[1]

China's rise as a global power is likely to be the most significant event in international relations in the 21st century. China is rapidly emerging as a major force in both world energy markets and global energy geopolitics. Especially in the past several years, when its economy has developed rapidly and it needs much more energy than ever before [Xiaoqin 2012: 33]. China recorded the largest increase in consumption of oil and gas worldwide. In 2010, it surpassed the United States as the world's largest energy consumer [Fredholm 2011]. Thus, with continued growth in consumption, China is looking for new energy sources and routes of transportation of hydrocarbons [Georgescu, Munteanu, Garayev 2013: 295]. It has a great and growing need for additional energy imports.

[1] See more in: Misiągiewicz [2013: 151–166].

The 21st century is deemed a "period of strategic opportunities in peaceful development of China" [Xiaoqin 2012: 34]. It was a time of industrialization and urbanization. Since then, the priority strategy of China was creating energy cooperation with neighboring countries in order to establish a stable and reliable energy supply infrastructure. China has developed comprehensive bilateral and multilateral cooperation with Central Asia states. It appears to have three main goals in Central Asia: to provide security to the region, to gain access to natural resources, and to become a regional power.

China enjoyed adequate domestic reserves to satisfy energy needs prior to the 1990s [Demir 2010: 522]. It exported oil and coal until the early 1990s, when the booming economy inspired by Deng Xiaoping's reforms transformed this country into an energy importer [Howell 2009: 191] (see: Table 1, 2). There are two key reasons for its increased energy consumption: the rise in living standards and increased industrialization (see: Diagram 1). However, the real energy security problem is providing adequate amounts of crude oil and natural gas [Demir 2010: 522]. Current oil import dependency at over 50%, causes alarm in China [Howell 2009: 191]. The PRC also continues to increase its natural gas power generation capacity. It started a program in the 1990s to ship gas across the country and to build natural gas terminals to import it from overseas. Like other consuming states, China is concerned about maintaining "the reliable and affordable supply of energy on a continuing, uninterrupted basis" [Klare 2008: 485].

Another important energy security strategy issue is to concentrate on maximizing the development of domestic sources and creating strategic reserves. As a result, Chinese policymakers have to create an investment climate in order to get maximum profit from existing domestic resources and establish reliable oil and gas trading channels [Demir 2010: 523].

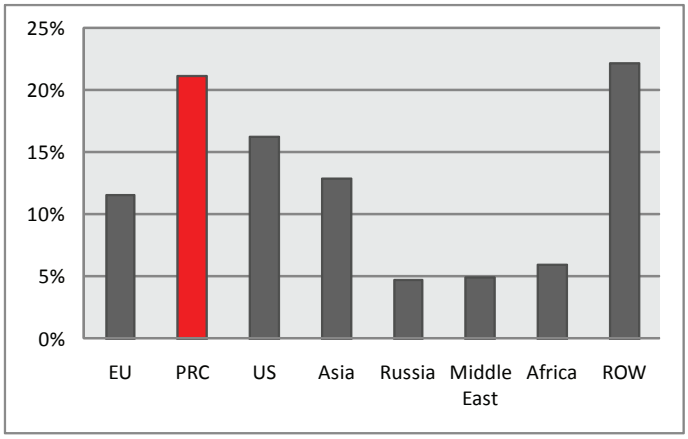


Diagram 1. World's energy consumption

Source: Author's own study based on https://ec.europa.eu/energy/sites/ener/files/documents/pocketbook_energy-2016_web-final_final.pdf (access: 12.04.2017).

Nowadays, China is regarded as one of the major players shaping the global economy. Energy consumption in China grew by 1.3% in 2016. Growth during 2015 and 2016 was the lowest over a two-year period since 1997–1998. Despite this, China remained the world's largest growth market for energy (see: Diagram 2, 3, 4, 5). The PRC has experienced oil and gas demand growth that has accounted for nearly one third of the world's total oil demand growth during the past decade. Thus, the security of energy supplies is a principal issue for Chinese policymakers.

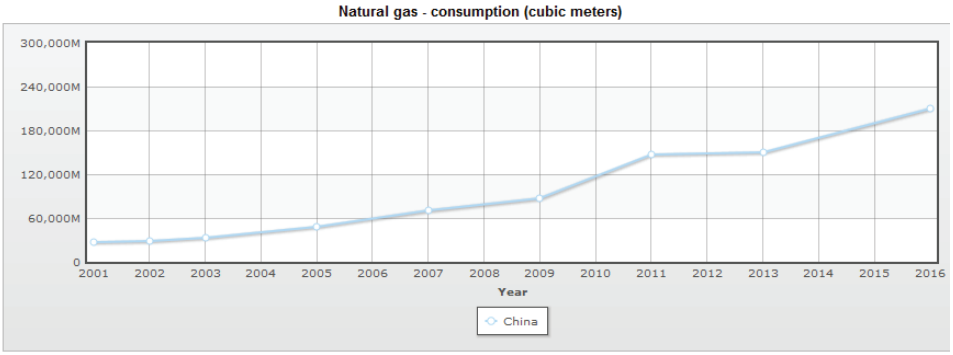


Diagram 2. China – natural gas consumption

Source: https://www.indexmundi.com/g/g.aspx?v=136&c=aj&l=en (access: 11.01.19).

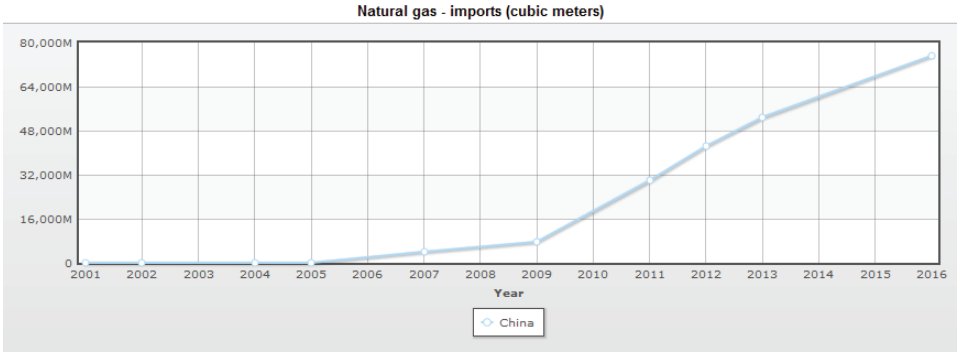
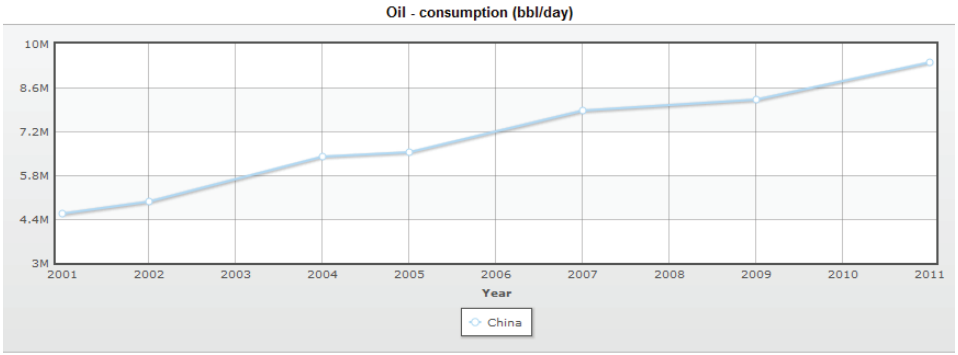


Diagram 3. China – natural gas imports

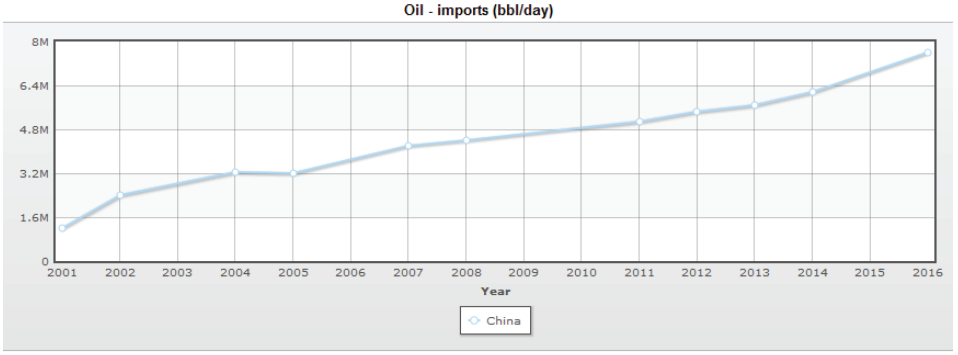
Source: https://www.indexmundi.com/g/g.aspx?v=136&c=aj&l=en (access: 11.01.19).



Country	2001	2002	2004	2005	2007	2009	2011
China	4,570,000	4,956,000	6,391,000	6,534,000	7,880,000	8,200,000	9,400,000

Diagram 4. China – oil consumption

Source: https://www.indexmundi.com/g/g.aspx?v=136&c=aj&l=en (access: 11.01.19).



Country	2001	2002	2004	2005	2007	2008	2011	2012	2013	2014	2016
China	1,207,000	2,414,000	3,226,000	3,181,000	4,210,000	4,393,000	5,080,000	5,422,000	5,664,000	6,167,000	7,599,000

Diagram 5. China – oil imports

Source: https://www.indexmundi.com/g/g.aspx?v=136&c=aj&l=en (access: 11.01.19).

Table 1. China's crude oil imports by source (end of 2014)

Kazakhstan	Saudi Arabia	Angola	Russia	Oman	Iraq	Iran	Venezuela	UAE	Kuwait	Columbia
2%	16%	13%	11%	10%	9%	9%	4%	4%	3%	3%

Source: https://oilprice.com/Energy/Crude-Oil/The-Battle-For-Chinas-Oil-Market.html (access: 12.04.2017).

Table 2. Chinese natural gas import main sources (end of 2014)

Turkmenistan	Uzbekistan	Qatar	Australia	Indonesia	Malaysia	**Kazakhstan**
47.1%	5.6%	17.1%	9.3%	6.4%	7%	**0.1%**

Source: https://www.researchgate.net/figure/Chinese-natural-gas-import-sources-Source-BP-Statistical-Review-of-World-Energy-2014_fig4_321259965?_sg=HSIjS24r-3Tg6ENRiuHFvTcaaz7ghuSpoTYsheImhdAfJsaZNvv-o98niQkiil1fj-rO_vkjGVfhcq8v8N6G8X-m-OPm-jgtrdq1xPypvMw (access: 12.04.2017).

According to Sabrina Howell, there are some vulnerabilities of Chinese energy policy:

– China is located far from its petroleum suppliers;

– it suffers from a poor geologic endowment;

– demand is increasing faster than supply;

– the Chinese Communist Party is committed to continued improvements in the Chinese standard of living, which is necessary to the regime's survival [Howell 2009: 192].

China's energy strategy evolved along with continuous reform of the state institutions responsible for its formulation and implementation. China is one of the few countries in the world without a government-level body in charge of all energy sectors and coordination of state's energy development [Nechaeva, Li 2017: 185–200]. Due to the growing energy deficit, a specialized energy bureau affiliated to the National Development and Reform Commission was created in 2003 and supposedly acted as an integrating organ responsible for strategy of energy development of the PRC [Nechaeva, Li 2017: 185–200].

The first Chinese energy policy document using the term "energy security" was *Twenty-First Century Oil Strategy*, published in 2003 [Howell 2009: 193]. It was a part of the 2004 State Council report *National Energy Strategy and Policy* and the Tenth Five-Year Plan (2001–2005) [Howell 2009: 193]. Several elements of the Tenth Five-Year Plan underlined the importance of China's energy strategy for its overall economic development:

– diversification of energy supplies;

– to enhance overseas energy investments by state oil companies;

– to increase investments in energy infrastructure;

– established state-controlled strategic petroleum reserves;

– to reduce dependence on oil by using coal and nuclear power;

– to establish a regional energy-security system [Hall, Grant 2009: 125].

The Eleventh Five-Year Plan (2006–2010) called for reducing the energy intensity of GDP by 20% [*The 11th Five-Year Plan*]. The Twelfth Five-Year Plan (2011–2015) adopted in March 2011 devoted considerable attention to energy and climate change. The implementation of the Plan will require considerable reduction of the share of coal in the China's economy. The share of natural gas would double and the new sources of energy would also increase their share [*Energy will be the basis of the 12th five-year plan of China* 2010].

Given the current needs of the country, China's leaders set the following tasks for energy policy: 1) increase volumes of imported energy, 2) access foreign markets and oil deposits through investments in exploration, exploitation and processing of foreign energy resources ("going out" strategy), 3) diversify supply routes, 4) diversify supply sources, 5) participate in multilateral energy forums in order to stabilize global oil prices at the level which is acceptable to China [Jun 2010].

Analyzing the Chinese energy policy, we have to mention about the idea of the "One Belt, One Road" (OBOR). It can be called a comprehensive domestic and foreign policy concept. The economic belt would serve this purpose for China's western and inland central Asian states. It is also the political framework for the economic and energy cooperation between China and its western neighbors [Wacker 2014].

Oil and gas sector has been dominated by three major state-run companies: they are China National Petroleum Corporation (CNPC), China National Offshore Oil Corporation (CNOOC) and China Petroleum and Chemical Corporation (Sinopec). Chinese government directed its oil companies to acquire interests abroad [Hall, Grant 2009: 124]. Chinese oil companies, especially the China National Petroleum Company, have been involved in energy projects in more than 20 countries [Demir 2010: 524].

ENERGY SECURITY POLICY OF KAZAKHSTAN

Kazakhstan is rich in hydrocarbon resources and is one of the largest energy producers in Central Asia (see: Table 3). It has the largest hydrocarbon, uranium, chromium, lead, zinc, manganese and copper reserves in the Caspian basin and Central Asia, and ranks in the top ten for coal, iron, and gold reserves in the world [Assanbayev 2016: 127–138]. Of these resources, oil and gas constitute the backbone of the national economy. The country is ranked 8th highest in the world with regard to crude oil resources and 12th highest with regard to crude oil reserves. Natural gas reserves are 18th highest in the world.

Table 3. Oil and gas potential of Kazakhstan (BP Statistical Review of World Energy as of 2016)

	Oil proved reserves (billion barrels)	Oil proved reserves share of total	Oil production (thousand b/d)	Oil production share of total	Gas proved reserves (trillion cubic meters)	Gas proved reserves share of total	Gas production (billion cubic meters)	Gas production share of total
Kazakhstan	30.0	1.8%	1,672	1.8%	1.1	0.6%	27.1	0.7%

Source: BP Statistical Review of World Energy 2018, https://www.bp.com (access: 12.12.2018).

Kazakhstan exported about 1.69 million barrels of oil per day in 2014 [Badykov 2015]. In 2015, it exported 60.9 million tons of oil, which comprised 76.7% of the total amount produced in the country [Mantel 2016: 139–150]. Oil revenues make up the biggest share of state's budget. Until 2015, oil revenues accounted for 60% of Kazakhstan's budget, and 33% of GDP [Vidyanova 2016]. Energy production is crucial for the state's economic development, which relies heavily on the growing energy exports. In this regard, it is important to "identify the main strategy for energy security and sustainable energy development in the long term, in order to reduce the country's dependence on non-renewable energy resources and, consequently, improve economic sustainability and environmental conditions" [Mantel 2016: 139–150].

Kazakhstan has three refineries, at Pavlodar, Atyrau, and Shymkent, but still must import oil products (diesel fuel) for its own needs from Russia [Babak 2006: 50–51]. In contrast to the upstream sector, the refining sector remained largely in the possession of the state [Babak 2006: 50–51]. State regulatory policy means domestic pricing system and existing export duties on oil products. Domestic prices for refined products remained low, "offering little incentive to produce refined products for the domestic market" [Babak 2006: 50–51]. The total capacity of all three oil refineries in Kazakhstan remains limited, because foreign oil companies prefer to export crude oil rather than to sell the oil within the state at low domestic prices. Besides, the refineries are old and need more investments (Atyrau refinery, for instance, was built at the end of the Second World War) [Babak 2006: 50–51].

Kazakhstan comprised the strategic petroleum reservoir of the Soviet Union economy [Mantel 2016: 139–150]. Although discovered in the 1970s and 1980s, the large hydrocarbon deposits of the Caspian region remained practically unexplored until the mid-1990s. The giant Tengiz oil field was the exception, because the exploration there began in the late 1980s [Mantel 2016: 139–150]. It remains one of the five leading Kazakhstan's offshore fields – Karachaganak [Assanbayev 2016], Mangistau, Uzen and Aktau – with estimated reserves of 750 million to 1.1 billion tons of recoverable oil [*Kazakhstan to Continue*... 2015] (see: Table 4).

Table 4. Main Kazakhstan oil fields potentials

Field	Recoverable resources (billion barrels)
Tengiz Field	6–9
Karachaganak Field	2.5
Kashagan Field	13
Kurmangazy Field	6–7
Uzen Field	7
Kumkol Field	0.1
Zhanazhol Field	3

Source: Hall and Grant [2009: 66].

With regard to the crucial role of the energy sector in Kazakhstan's economic development, the state is determined to develop this potential by improving cooperation with Western partners. This process began following the disintegration of the Soviet Union [Mantel 2016: 139–150]. Together with other Central Asian countries, Kazakhstan has managed to overcome a difficult transition, from part of the Soviet system to an "independent state with a rapidly developing market economy open to cooperation and global partnerships" [Mantel 2016: 139–150]. At present, Kazakhstan's geo-economic profile mainly focuses on the development of its energy resources.

There is an important role of the transnational companies in developing the Kazakhstan energy fields. The American Chevron Texaco company together with ExxonMobil, agreed to develop the Tengiz oil field [Newman 2008: 96]. The European oil giants, such as Agip/Eni, Shell Development B.V., British Petroleum, and Total Fina Elf, are collaborating on prospective projects such as the development of the Karachaganak and Kashagan fields [Cohen 2008: 13]. Kazakhstan's limited access to sea ports increases its dependence on pipelines, which are necessary to transport its hydrocarbons to the global energy markets. The state also serves as a transit corridor for pipeline exports from Turkmenistan and Uzbekistan. Nowadays, the pipeline infrastructure explains the fact that Kazakhstan's neighbors – China and Russia – are key economic partners, providing sources of demand and financing [Mantel 2016: 139–150].

Although Kazakhstan's growth as an important player in the global energy market helps drive its economic and political development, the process also entails problematic consequences and challenges [Mantel 2016: 139–150]. One of those is "pollution and the challenge of transforming its energy sector into an environmentally-friendly and sustainable one. The country's energy-related carbon emissions have been considerable in the last years" [Mantel 2016: 139–150]. Another problem that Kazakhstan will face in the coming decades is the "gradual drain of resources and degradation of equipment" [Mantel 2016: 139–150]. It can lead to the energy imbalance and an energy crisis which, in turn, could limit oil and gas exports revenues. This issue is associated with the "deficiency of capacity, lack of energy independence, and declining financial resources" [Mantel 2016: 139–150].

The Republic of Kazakhstan is rich in hydrocarbon resources, as well as in renewable sources (RES). An increase of the electricity expenditure, the growing need to overcome urgent environmental problems and to enhance energy security, have contributed to concerns and interest in expanding alternative energy use.

The leaders of Kazakhstan, realizing the strategic importance of the country's oil and gas abundance for the world economy, are taking advantage of the energy factor in pursuing foreign policy to strengthen the position of Kazakhstan in the world. Energy security is one of the political and economic priorities of Kazakhstan [Baizakova 2010: 103–109]. One of the most important documents of Kazakhstan's energy policy is the 2050 Development Strategy ("2050 Strategy"), announced on

December 15, 2012 by President Nursultan Nazarbayev [Mantel 2016: 139–150]. Kazakhstan's energy strategy is based on the principle of cost effectiveness and the energy industry's development with a minimum impact on the environment. The strategy calls for "far-reaching economic, social and political reforms, necessary to advance the country into the 30 most developed global economies by 2050. In this regard, energy security is one of the most important sectors" [Mantel 2016: 139–150]. The RES are described as highly efficient in the Kazakhstan 2050 Development Strategy. "Energy security requires urgent action, as the region's consumption of resources is disproportionate to production" [Mantel 2016: 139–150]. These policies, adopted with governmental support, will "help reduce dependence on fossil resources, increase the RES use and further development, and, consequently, raise the country's energy security to a completely new and more efficient level" [Mantel 2016: 139–150]. Kazakhstan has all the necessary conditions for renewable energy. It has the wind potential of more than 1 trillion kWh per year – one of the best in the world, strong hydropower potential, sunny climate and favorable wind conditions for a wide use of non fossil energy [Mantel 2016: 139–150]. There are rich RES in the southeast of Kazakhstan, which are located far from hydrocarbon energy sources, such as coal, oil and gas. Potentially, environmentally-friendly energy sources of southern Kazakhstan "could not only sustain the domestic market, but also be exported to neighboring countries, such as China, which is experiencing growing demand for electrical energy" [*Kazakhstan 2050 Renewable…* 2016].

Europe and China are the main consumers of Kazakhstan's crude oil. That is why, transport diversification issues are particularly sensitive for Kazakhstan. Kazakhstan's energy policy aims to "promote the construction and distribution of new oil and gas pipelines directly to European and Chinese markets, either through Russia or bypassing it" [Assanbayev 2016: 127–138]. In terms of transportation infrastructure system, Kazakhstan is concentrated on ensuring reliable energy supplies to Europe, Turkey and China in cooperation with other energy producing and transit states. However, Kazakhstan's geographical isolation from world energy markets and the emerging divide between the United States and Russia in regard to transportation communications and geopolitics began at the end of 1990s, has been the main obstacle to the realization of its energy strategy [Assanbayev 2016: 127–138]. Russian policy in Kazakhstan has been led by four major energy companies: Gazprom, Lukoil, Transneft, and Rosneft, which allow Moscow to increase influence over the energy sector of Kazakhstan, and prevent the PRC and other powers from dominating Kazakhstan's energy.

A key element in Kazakhstan's energy policy in terms of oil exports is the development of its onshore Tengiz and Karachaganak oil fields and the operation of the Kashagan offshore field in the Caspian Sea. But while Tengiz and Karachaganak are already operating, Kashagan has become the most expensive and complicated oil field development project. On October 14, 2016, the oil production in Kashagan was finally launched. This was promising news in terms of increasing energy revenues

"amid the decline in oil prices" [Assanbayev 2016: 127–138]. However, emerging barriers to the effective development of the Kashagan field have given rise of skepticism. But, both the Kazakhstan's government and Western companies are full of hope regarding development of Kashagan [Assanbayev 2016: 127–138]. The offshore oil field was discovered in 2000 and is located 4,200 meters below the shallow waters of the northern part of the Caspian Sea in the Kazakh sector. Its reserves are estimated at 4.8 billion tons of oil. There are also large recoverable reserves of natural gas in Kashagan – more than 1 trillion cubic meters [Assanbayev 2016: 127–138]. "Low salinity, due to the in-flow of fresh water from the Volga River, combined with shallow waters and winter temperatures below minus 30 degrees mean that the northern part of the Caspian Sea freezes for nearly five months of the year. Ice drifts and ice scouring place heavy constraints on construction activities" [Assanbayev 2016: 127–138]. This project is implemented by a consortium of Western oil giants: Italian Eni, US ExxonMobil Corp., Anglo-Dutch Royal Dutch Shell PLC, French Total, and Japan's Inpex [Assanbayev 2016: 127–138]. Since 2013, it has involved Chinese CNPC, which entered into a consortium replacing ConocoPhillips. In 2000, the initial plans of Nurlan Balgimbayev, the then director of the government-owned company "Kazakh Oil" (predecessor of KazMunaiGas), stated that "commercial oil production was supposed to start in 2005" [Assanbayev 2016: 127–138]. It was assumed that during the first stage (2013–2017), production would reach 50 million tons per year. During the second phase (2018–2019), production was projected at 75 million tons. The realization of these projects would put Kazakhstan among the top five oil exporters in the world, but the start of Kashagan oil production has been repeatedly postponed [Assanbayev 2016: 127–138]. On October 14, 2016, Kazakhstan's Ministry of Energy announced that the Kashagan project had finally succeeded in shipping its first crude oil. According to the North Caspian Operating Company, Kashagan oil delivery will be transported in a primarily northern direction, first to the Russian city of Samara, and then onto Novorossiysk on the Black Sea, from where it will be exported. The possible southwest export route is through the Baku–Tbilisi–Ceyhan (BTC) pipeline or be exported to international markets via other routes [Sorbello 2016]. It is also expected that oil from Kashagan will be exported to China. In 2013, CNPC bought an 8.3% stake in the Kashagan project, seeking for an increase in oil supplies from Kazakhstan to China. However, this is currently limited by the existing pipeline capacity to deliver the Kashagan oil to China [Assanbayev 2016: 127–138].

Despite its promising perspectives, the realization of the Kashagan project will constitute potentially large technological and environmental risks and challenges. The combination of ice, shallow waters, and sea level fluctuations creates considerable operational and technical problems [Assanbayev 2016: 127–138]. At the same time, we have to consider a number of important challenges in regard to oil production in Kashagan. At the end of 2013, oil prices on the world market fluctuated between an average of USD 100–110 per barrel, and in 2015 to USD 57.17 per barrel [Chervin-

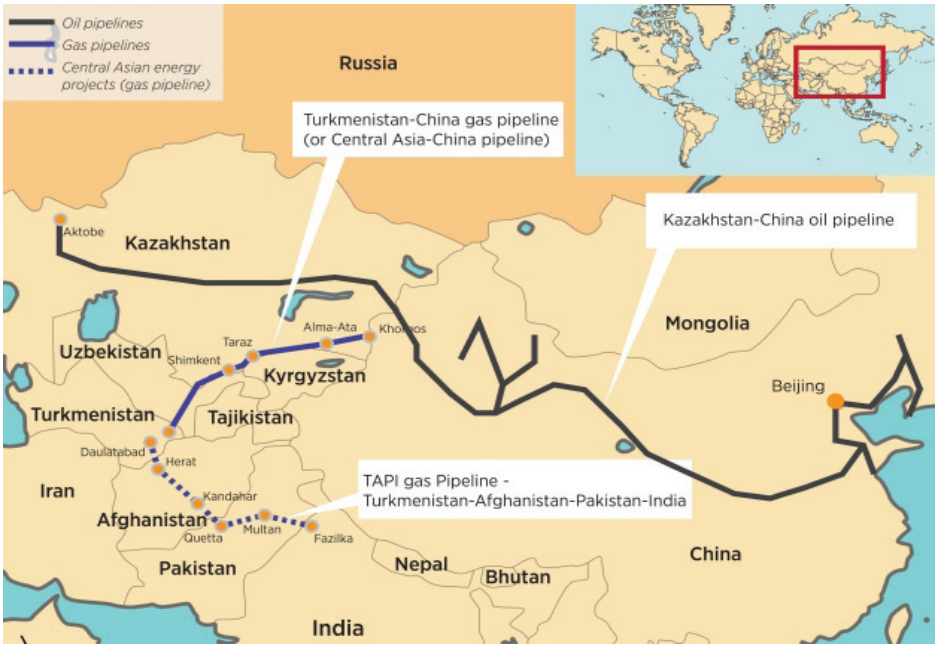
skyi 2015]. That is why, this project is quite risky from the economic point of view [Assanbayev 2016: 127–138].

Revenues from oil exports make up more than half of Kazakhstan's budget, and its economy is heavily reliant on exporting crude oil. The geopolitics of transportation in Central Asia and the Caspian region is the primary concerns for Kazakhstan's energy policy [Assanbayev 2016: 127–138]. Kazakhstan will work to achieve the diversification of hydrocarbon transportation routes to world markets and for maximizing the efficiency of the pipeline systems [Baizakova 2010: 103–109]. As the energy sector is still the backbone of the economy, Kazakhstan intends to increase its oil production and therefore the Kashagan oil field is a key priority in this context.

PIPELINE INFRASTRUCTURE

China's energy geopolitics assumes significant increases in its role in implementing new energy and infrastructure projects in Central Asia. The role of China in the region increased during the last 10–15 years, considering the huge "energy shortage" for its rapidly developing economy [Penerliev 2012: 4]. A number of decisions of the Chinese politicians lead the state to closer relations with Central Asia [Penerliev 2012: 4]. The Shanghai Cooperation Organization (SCO), for example, is an economic and political alliance between China, Russia and the central Asian post-Soviet republics: Kazakhstan, Kirgizstan, Tadzhikistan and Uzbekistan. The organization plays also a key geopolitical role for the energy and transport infrastructure [Penerliev 2012: 4] (see: Map 2). The Central Asian states have been negotiating gas exports with China since 2006 [Fredholm 2011: 3]. Among them, Kazakhstan has the capacity to produce more oil and gas than it needs for domestic consumption [Fredholm 2011: 3]. The realization of this cooperation started on December 14, 2009 with the longest functioning gas pipeline in the world, delivering gas from Turkmenistan through Kazakhstan and Uzbekistan to China [Penerliev 2012: 4]. Its length is 1,833 km and it ends in Sindzan, in the Uigur region in China [Penerliev 2012: 4].

The region of Central Asia with its rich energy resources became one of the main directions for China to diversify its oil and natural gas supplies. Over the recent decades, China pursues more active policy in its relations with the countries of the region. This approach includes initiating new export routes [Nechaeva, Li 2017]. Geography is one of China's crucial advantages in strengthening its influence over the region. China is going to be "the next door neighbor" of the Caspian states [Demir 2010: 527].



Map 2. Pipelines connecting Kazakhstan with China

Source: http://www.russia-direct.org/analysis/china-russia-and-new-great-game-central-asia (access: 12.04.2017).

China pursued the "Pan-Asia Continental Oil Bridge" project in 1996. It was a network of oil and natural gas stretching from the Middle East, Central Asia, Russia and China [Cole 2003: 28]. China's strategy towards Central Asia outlines a "Silk Road Economic Belt" that would open up the transportation channel from the Pacific to the Baltic Sea.

Sino-Kazakh relations can be regarded as a success in terms of energy policy of both states. "China's intensive focus on expanding transport routes to its western border should be considered within the framework of China's energy geopolitical tactics in Central Asia" [Assanbayev 2016: 127–138]. Kazakhstan and all Central Asia region seems the most likely to play an important role in the Chinese strategy to reduce its dependence on energy supplies from the Middle East [Assanbayev 2016: 127–138].

The 2009 China–Central Asia oil and gas pipeline system is the best example of a recently completed infrastructure project [Assanbayev 2016: 127–138]. Given that Beijing hopes to ensure energy supplies to the Chinese market [Assanbayev 2016: 127–138]. China's "One Belt, One Road" strategy signifies the importance of Kazakhstan and Central Asian partners in the development of the Chinese economy. "Geographical proximity and the availability of rich energy deposits in Central Asia provide China with cheap sources of energy" [Assan-

bayev 2016: 127–138]. At the same time, China's energy geopolitics should be considered within the context of security issues and economic development of its Western regions. That is why, there is a significant role for cooperation between China, Kazakhstan, and other Central Asian states in the fight against extremism and ethnic separatism in the Xinjiang Uygur Autonomous Region [Assanbayev 2016: 127–138].

China has already invested some USD 30 billion in the energy sector of Kazakhstan. Over the past few years, China has poured investments into Kazakhstan with the Kazakhstan–China oil pipeline [Lin 2010: 9].

a) oil infrastructure

Kazakhstan, with its large hydrocarbon reserves is one of most important trade partners for China. Both states signed an agreement in 1997 that started Chinese investments in the Kazakh petroleum sector [Misiągiewicz, Ziętek 2008: 118]. China National Petroleum Corporation (CNPC) became the owner of 60% shares of Aktubinskmunaigaz, which controls the main oil fields in northwestern Kazakhstan: Zhanazhol and Kenkiyak [Misiągiewicz, Ziętek 2008: 118]. Moreover, CNPC purchased shares in Uzen oil fields. China first proposed a pipeline infrastructure through Kazakhstan in 1996 [Howell 2009: 195]. Both Russia and the United States opposed the pipeline. Russia wanted to be the only transit area for the Kazakh crude oil, and the US supported the trans-Caspian pipeline project to supply the European market [Misiągiewicz 2012: 203–222]. Nowadays, China is able to import a volume of 10 to 20 million tons of crude oil from Kazakhstan each year. The Kazakhstan–China pipeline was built by a joint venture between CNPC and KazMunaiGas. The Atasu–Alashankou part of the project was initiated in 1997. In May 2002, CNPC and KazMunaiGas started to build the first 449 km part of the pipeline from Kenkiyak (central Kazakhstan) to Atyrau (at the Caspian Sea shore). In December 2005, cross-border 962 km portion of the pipeline was completed [Demir 2010: 528]. In May 2006, Kazakh oil was sent to China. Then, the pipeline carried about 200,000 barrels per day to China's Dushanzi refinery [Howell 2009: 195].

b) natural gas infrastructure

In June 2010, CNPC signed an agreement with KazMunaiGas to build the second phase of the Kazakhstan–China Gas Pipeline in a bid to tap Kazakh gas reserves [Lin 2010: 9]. This transit route is part of a larger project to build pipelines connecting China with Central Asia's natural gas reserves. It stretches from Turkmenistan, through Uzbekistan and Kazakhstan, and enters China's northwestern Xinjiang region. Commercial gas volumes were sent across the Kazakh-Chinese border in October 2017, CNPC said on Reuters [*China's CNPC imports*... 2017]. It is a part of a deal under which Kazakhstan has agreed to send 5 billion cubic meters of gas to China over one year. This project is a part of China's attempts to secure more energy sources worldwide. This is also an element of China's overall Silk Road

strategy (OBOR) to diversify energy dependence on the unstable Gulf region and build overland routes to hedge against maritime supply disruptions.[2]

CONCLUSIONS

The aim of this paper was to verify two main hypothesis. The first one: "The energy security is vital to economic development both for the People's Republic of China and Kazakhstan". The second one, was: "China, as a rapidly expanding economy, and the largest energy consumer in the world, has given Kazakhstan increasing economic importance. China's interests in Kazakhstan as a Caspian littoral state are part of its overall Silk Road strategy to diversify energy dependence on the unstable Gulf region and build overland routes to hedge against maritime supply disruptions from the Gulf".

China's economic rise has caught the world by surprise, partly because of its scale and speed [Misiągiewicz, Misiągiewicz 2016: 33–42]. Its extraordinary economic growth caused the increase in energy consumption. That is why, energy security, and the availability of oil and natural gas in particular, has become an increasingly important concern for this state. Thereby, China has assigned geopolitical attention to Kazakhstan, looking for ways to build pipeline infrastructure to export hydrocarbon reserves eastwards [Labban 2009: 42]. The idea of the "One Belt, One Road" is an important concept in this process. It will promote the China as a soft power and attractive player in the global market (also the energy market). Silk Road Economic Belt connects China and Europe via Kazakhstan and Russia. It would serve this purpose for China's western and inland central Asian states [Wacker 2014]. As regards Kazakhstan, energy production is crucial for the state's economic development, which relies heavily on the growing energy exports. With regard to the crucial role of the energy sector in Kazakhstan's economic development, the state is determined to develop this potential by improving cooperation with the main energy importers in the region. That is why, transport diversification issues are particularly sensitive for Kazakhstan. In such circumstances, the energy security interests of China and Kazakhstan are comprehensive, and the cooperation between them is the natural phenomenon in the contemporary international energy market.

[2] An estimated 85% of China's imports and between 70–85% of its energy supplies, mainly from the Middle East, are sea-borne and pass through several maritime chokepoints such as the Strait of Malacca in the South China Sea which continue to be secured by the USA.

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