Chinese-Russian cooperation in the Arctic: geopolitics and economics

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Abstract. The article examines Chinese-Russian cooperation in projects for the Northern Sea Route (NSR) renovation. The authors compare priorities of the Chinese companies in the NSR modernization with the interests of the Russia in terms of the "development zones" concept. The materials of the Main Directorate of the Northern Sea, the open materials from the project activities of Russian and Chinese companies allowed to present the geography of projects with the Chinese participation, to define the Russian Arctic regions that are of greatest interest to Chinese investments, as well as companies' participation in the infrastructure projects. Based on statistical analysis, the study reveals the pattern of growth for China's direct investment in infrastructure projects in the Russian Arctic zone. Highlights a positive trend in the development of Russian-Chinese cooperation, increase the proportion of the Chinese presence in modernization projects of NSR, in the sphere of production of hydrocarbons. Changing motivations Chinese business participation in infrastructure projects - from the desire to make available NSR for the carriage of goods from Asia to Europe to establish a reference ports for sales of commodity products of China. Obvious differences in opinion in the prospects for further cooperation of the Russia and China.

1. Introduction
To date, we can note the increased interest of most countries to the development and management of the Arctic. China obviously heads the list of non-arctic countries showing increased interest in the region. In a very short time, China has become a full-fledged participant in the economic and political processes in the Arctic. This is due to several factors related to changes in the world political structure. Three of them are of central importance. First, the increased interest in the region is due to changes in the structure of global and regional leadership. Secondly, the international legal regime for the use of water areas and territories in the Arctic Ocean requires further development. Therefore, China has the potential to become a direct participant in the new Arctic management structure. Third, there is an emerging international institutional framework in the Arctic region. This is clearly seen in the country's active participation in infrastructure and logistics projects, investments in mining enterprises in the Russian Arctic. Russia is China’s principal partner in the region. This is stated in the White Paper on the Arctic policy, in the speeches of official representatives [17], and in analytical reports [1,2,6,4,19]. Russian practice of development and management of the Arctic territories is attractive to countries that have no experience in developing such territories but are most interested in receiving it. China is undoubtedly one of these countries.
The purpose of this article is to define and analyze China's geopolitical and economic interests (since China is actively involved in projects in the Russian Arctic), along with risks and opportunities for the Russian Federation in those projects. The authors chose to analyze joint projects related to the development of the region's infrastructure: the Northern Sea Route (NSR) renovation, and NSR-related projects in the mining sector. The study focused on the following objectives: collecting and analyzing information on joint Russian-Chinese projects in the Arctic and determining their geographical localization; comparing the Russian strategy for creating reference development zones in the Arctic with the geography of China's participation in joint projects to define shared interests of these two countries in the development of territories, as well as their differences; defining similarities and differences in the development of NSR-related projects; revealing fundamental divergences of views on further scenarios for further cooperation.

2. Methodology
The scope of the study is considered through a combination of such methods as comparative analysis, statistical analysis, and spatial analysis. Based on the results of comparative analysis, the authors compared the priorities of the Chinese companies' participation in the NSR renovation with the interests of the Russian Federation within the framework of the "development zones" concepts, specified in the new edition of the "Socio-economic development of the Russian Arctic for the period till 2020" extended to 2025 [16]. Using the method of spatial analysis, they compared the geographical location of the reference areas and the projects with the Chinese participation to determine the existing similarities and differences. The study highlighted the Russian Arctic regions that are of greatest interest to Chinese investment, examined the participation of the Chinese companies in the infrastructure projects. The statistical method showed the dynamics of the passage of Chinese ships through the NSR and allocated the financial share of Chinese participation in Russian.

3. Literature review
Several domestic and foreign studies focus on the topic of Russian-Chinese cooperation. Most of these works analyze the economic cooperation between the Russian Federation and China in the Arctic (Wang Juntao, Gao Tianmin, Lanteigne, et al.) [4,5,10,19], great attention is paid to assessing the external policies of the Russian Federation and China in the Arctic (Konychev V. N., V.S. Yagya, N.K. Kharlampeva, M.L. Lagutina [8,20]; analyze the Russian-Chinese infrastructure projects in the Arctic (S. Malle, N. Miheeva) [11,12]. The topic of China's geopolitical interests in the Arctic sector of the Russian Federation is mainly developed by Russian-language authors (K. Voronov, N. I. Didenko, V. I. Cherenkov, R. Kalfaoglu, Sun Sjuvjen) [2,6,8,18]. Whereas, priority is given to the analysis of common geopolitical concepts. The purpose of this study, based on the analysis of the geography of China's participation in projects in the Russian Arctic, is to highlight geopolitical interests and identify possible areas of conflict between the interests of the Russian Federation and China.

4. Results
The Russian Federation (RF) owns 31% of all Arctic territories with a population of up to 2 million people. Approximately the same number of people lives in the Arctic zones of Canada, USA, Denmark (Greenland), Norway, Sweden, and Finland, taken together. Over 13% of Russia's GDP accounts for the Arctic region. Only Russia has large industrial centers inside the Arctic Circle, such as Murmansk (307,664 inhabitants), Norilsk (205,000 inhabitants), Vorkuta (70,500 inhabitants), and Tiksi (2,040 inhabitants). The Norwegian city of Tromsø (62,000 inhabitants) is only the fourth in terms of the population number. Extreme climatic conditions, low sustainability of the region's ecological systems, focal nature of industrial and economic development of the territories, remoteness from major industrial centers, high resource intensity, dependence of economic activity and livelihood of the population on fuel, food and essential goods from other regions of Russia, are only part of traditional issues related to the management of the Russian Arctic. All of them create significant...
difficulties for the socio-economic development of the region. No other country has invested so much effort and money in the research, exploration and development of severe northern territories. For Russia, the Arctic is a traditional set of measures to address the problems of national economic development and strengthen the international status of the country. One can say that today Russia is returning to this region since, over the two preceding decades, due attention was not paid to the development of these strategically important territories at the State level. The Russian government has declared the concept of allocating territories, constituting complex projects for the socio-economic development of the Arctic territories – development zones (new edition of the "Socio-economic development of the Russian Arctic for the period till 2020", extended to 2025 [16]). This document allocates eight development zones – Murmansk, Arkhangelsk, Nenets, Vorkuta, Yamal-Nenets, Taimyr-Turukhansk, North-Yakutsk, and Chukotka. The NSR is a key element that binds together these eight development zones under development. Five ports in the Russian Federation are considered the reference points in joint projects – Murmansk, Sabetta, Arkhangelsk, Tiksi and Uelen. A total of 145 projects are expected to be implemented in such areas as mining and processing of mineral resources (39% of the total number of projects), transport (18%), diamond mining and processing (15%), geological exploration (7%), energy (5%), fishing and agriculture (4%), environmental protection (2%), and tourism (1%). As in other regions of the world, China is actively engaged in several major infrastructure projects in the Russian Arctic. Therefore, it is essential to assess the possibilities and potential risks for the Russian Federation in the development of bilateral cooperation. Russian researchers maintain diametrically opposed views on China’s cooperation with the Russian Federation in the Arctic: from the complete rejection of the Arctic geopolitical significance for China [18] to the overly positive assessment of such cooperation [6,8]. The authors attempted to compare the geographic reference areas that are strategically important for the development of the Russian Arctic with the geography of projects with the Chinese business participation and the Chinese investment. According to the materials of the Northern Sea Directorate, the Ministry of Economic Development, and the open materials from the project activities of Russian and Chinese companies, Arkhangelsk and Yamalo-Nenets are the most attractive development zones to Chinese investments in the Russian Arctic. The Belkomur project has been launched in the Arkhangelsk zone; discussions are being held to modernize the largest timber processing facilities in Russia in the Arkhangelsk region; arrangements are being made to create mining enterprises in the southern part of the Novaya Zemlya archipelago. The Yamal-LNG project is being implemented in the Yamal-Nenets support zone with Chinese participation; joint projects are being implemented for the construction of the Obskaya-Bovanenkovo railway and the Yamal-Ukhta-Europe gas pipeline. The North Chukotka development zone can be attributed to the second stage of the projects with the Chinese participation, as most of the projects announced are of suspended implementation. These are primarily projects in the energy sector: projects of floating units of low-power nuclear reactors, construction and reconstruction of power lines and substations in the most promising areas for resource development. In general, one can note an increase in the share of projects implemented in the field of management and a high share of R&D. Based on statistical analysis, the study reveals the pattern of growth for China’s direct investment in infrastructure projects in the Russian Arctic zone – 3.8% per annum for the last eight years, with the largest investment in Yamalo-Nenets autonomous district (17% of all investments in 2015-17). The geography of projects under implementation has changed (there is an obvious shift to the European part of the Russian Arctic). The construction of a railway line connecting Arkhangelsk-Syktyvkar-Perm (Solikamsk) is one of the strategically important projects. The new highway will connect the Urals and the Komi Republic directly with the ice-free ports of Arkhangelsk, Murmansk and Northern Europe. In the future, the new railway will provide the shortest route to Northern Europe and the regions of Siberia, Kazakhstan and Central Asia, creating favorable conditions for the transit of goods through Russia, and will allow using several types of transport in the organization of domestic and international transport. This
project involves modernization of the deep-water port in Arkhangelsk [4,5]. The Chinese company Poly International is ready to invest up to 5.5 billion dollars in the project.

One can note a discrepancy between the interests of the Russian Federation and China in the development of several territories in the Arctic regions of the Russian Federation. In particular, the Chukotka development zone is currently of no interest to Chinese business. Chinese business shows the greatest interest in the Yamal-Nenets development zone. A general trend is an increasing number of projects with Chinese participation in regions with a developed infrastructure, and the lack of interest in the Far Eastern reference areas – Chukotka and North-Yakutsk. There are obvious differences in the views of the Russian and Chinese sides on the prospects for further cooperation in the process of forming a multilateral cooperation system in the Arctic region, which may further provoke conflict situations in bilateral relations.

The results analysis shows a positive trend in the development of Russian-Chinese cooperation, an increase in the share of the Chinese participation in projects for the NSR renovation and in hydrocarbon production (the Yamal LNG project).

Cooperation in the Northern Sea Route (NSR). Russian law defines NSR as "historically established national transport communication in the Arctic." Among the numerous tasks facing the Russian Federation on the NSR development, the authors allocated three most crucial issues related to the topic of this study. Those include the international legal status of a special economic zone in the Arctic Ocean and possible scenarios for the development of cooperation with other countries; problems of modernization and development of the NSR; creating effective mechanisms for the commercial use of the NSR.

For China, the modernization of the infrastructure and mechanisms for the commercial use of the NSR have become the areas of developing cooperation with the Russian Federation. In the future, those are considered as a platform for the business relationship in servicing the NSR [2,3,8]. As part of the "blue economy" development strategy and the "Ice Silk Road", a great emphasis is placed on the economic effect from the use of the NSR (reduced transportation time from 8 to 19 days). Researchers estimate that by 2020, private carriers would send 50 million tons of cargo by the Northern Sea Route. Chinese analysts believe that by this time from 5 to 15% of China’s foreign trade freight traffic will pass through this route (125-375 thousand tons), mainly in the form of containerized cargo [9,19]. China has high expectations for the development of its regions, which will be involved in the system of transport and logistics cooperation of maritime transport using the NSR. First, this refers to the old industrial bases in north-east China, in particular, the transport system of the Tumen River, which will receive impetus to new development. Experts believe that Hunchun city, located in the valley of this river, would become equal to Singapore in status and even become a new center of international shipping [6].

Russia and the problems of the NSR renovation. First, this issue refers to the international legal basis of specific economic zone of the Russian Federation, including the Mendeleev and Lomonosov ridges under the terms of the 1982 United Nations Convention on the Law of the Sea. The last RF application was filed in 2015, and experts do not believe in a quick settlement of this issue. Several domestic and foreign authors focus on this topic [11]. This particular study does not address this issue. However, it is worth noticing that the fate of the future management of the Northern Sea Route depends on how international law determines the water area of the Russian free economic zone in the Arctic Ocean. Under certain conditions, part of the NSR can be placed under international administration, which does not correspond to the national interests of the Russian Federation – this scenario will result in numerous problems in supplying the Far Eastern territories, and military security. China will receive an opportunity to participate in the international governance regime as an important strategic sea route; the economic advantages of this are obvious.

Secondly, modernization and development of the NSR infrastructure are important for the Russian Federation. The solution to this problem is currently a good platform for the development of international cooperation, in which China is an active participant. The problem is that the Russian Federation considers foreign participation as a purely "business participation" (considering the NSR as
an exclusively national strategically important highway), while foreign colleagues are ready to look beyond business. In particular, China considers participation in the NSR renovation as the development of joint infrastructure management practices. In 2009, commercial development of the Northern Sea Route by foreign ships began. In 2010, for the first time in the history of maritime navigation along the NSR, an export trip was made along the route Murmansk-Dudinka-Busan (South Korea)-Shanghai (China) without icebreaking services. In August 2013, China’s only icebreaker, Xuelong (Snow Dragon), completed its passage through the NSR. In the autumn of 2013, two container vessels owned by the Chinese company COSCO passed the NSR on the route Dalian-Rotterdam. At the same time, the company received permission for three flights, giving the right to navigate independently the route in light ice conditions, as well as to sail ahead of the icebreaker. Based on the materials of the Main Directorate of the Northern Sea, in 2013, 7 Chinese passed the NSR, in 2014 – 1, in 2015 – 3, in 2016 – 6, in 2017 – 9, and in 2018 – 7 (from May to October) [13,14]. It is obvious that China is actively using the NSR, accumulating pilotage experience in difficult conditions.

The third important problem facing the Russian Federation is the formation of effective mechanisms for the commercial use of the NSR by foreign states. Creation of the Main Directorate of the Northern Sea in 2013 was the first step in this direction. At the same time, both China and other foreign colleagues have certain claims for overpriced shipments and the lack of joint consultation mechanisms. For Russia, the NSR is the national transport route, while its use by the foreign ships is considered as an opportunity for the Main Directorate of the Northern Sea to earn on commercial traffic. Several experts note a large number of problems related to shipping rates. Global standards of pricing for services, the so-called "just in time delivery", are difficult to apply to the NSR; there are problems with the navigation of vessels with non-standard cargo. The possibility of escorting ships under the control of foreign pilots requires further discussion. The current regime does not meet the interests of the Russian Federation neither commercially nor in the field of security.

After considering only three of the issues related to the NSR, one can conclude that Russia and China have fundamentally different views on the prospects of the NSR. China stands for the freedom of navigation in polar waters and disputes the right of navigation in the 200-mile exclusive economic zone, established by Russia and Canada. If the repeated application of the Russian Federation to the UN, filed in August 2015 for the expansion of the continental shelf, will be satisfied, China would be at a disadvantage in the development of the Arctic region. China’s hopes to gain access to the creation of international governance mechanisms over the NSR will not be fulfilled. This will obviously cause complications in relations between the Russian Federation and China. Russia already has negative experiences with similar situations. Against the background of deteriorating relations with the North European members of the Arctic Council in recent years (Sweden, Finland, Norway), a significant part of joint projects in the Russian Arctic zone has been suspended.

5. Conclusions

To date, the Russian-Chinese economic cooperation successfully develops. Priority areas are transport systems, primarily the NSR, and mining projects. China is increasing its investment in infrastructure development of regions associated with the NSR. Based on statistical analysis, the study reveals the pattern of growth for China’s direct investment in infrastructure projects in the Russian Arctic zone – 3.8% per annum over the past eight years. Moreover, the authors highlight changes in the geography of projects under implementation – with an obvious shift in the Far Eastern regions of the Russian Federation. The study also reveals an increase in the share of projects implemented in management and with a high proportion of R&D. China mainly focuses on projects implemented in the Arkhangelsk and Yamal-Nenets reference areas, as the most developed in terms of infrastructure, with flexible investment policy and participation of Western companies. China has little interest in the development of the Asian part of the NSR. The study shows that the motivation of Chinese business participation in infrastructure projects has changed – from the desire to make the NSR available for transportation from Asia to Europe to the creation of supporting ports for marketing commercial products (Sabetta) and to participate in the NSR co-management. The interests of the Russian
Federation do not coincide in the development of several territories in the Arctic regions. To date, Chinese companies are actively involved in projects in the Arkhangelsk Region and the Yamal-Nenets Autonomous District. The expectations of the Russian side related to participation of the Chinese business in the development of the eastern part of the Arctic have not been justified: the North Yakut and Chukotka development zones are currently of no interest to the Chinese business.

It is worth noticing that China's active participation in the development of the region's infrastructure involves certain risks for the Russian Federation related to the dual use of infrastructure facilities (civilian and military). This could potentially create security risks in the area of regular supply (components) and dependence of the development of Russian Arctic territories on Chinese investments. If relations with China deteriorate, large shares of investment in the Russian Arctic zones can lead to a sharp stagnation of economic development, freezing projects depending on the Chinese investments. A similar situation has developed in relations with the EU countries, as part of the Northern Dimension policy. It can be noted that the motivation of Chinese business participation in infrastructure projects has changed – from the desire to make the NSR available for transportation from Asia to Europe to the creation of supporting ports for marketing commercial products (Sabetta) and to participate in the NSR co-management.

China actively uses the NSR as a transport artery, which contributes to the development of the Chinese Arctic fleet. China and Russia have fundamental differences in approaches to controlling the NSR, which in certain situations may lead to conflict. Russia needs an integrated program for the development of the Arctic region, based on a common strategic, territorial and budgetary planning. Stable development of economic, social and territorial processes in the national Arctic sector can provide Russia with leading positions in international legal issues, and taking the leading places in the international institutional system of the Arctic Region. In the future, obvious differences in the views of the Russian and Chinese sides on the prospects for further cooperation may lead to conflict situations in bilateral relations. Russian-Chinese contradictions in the region may create challenges in the formation of a multilateral cooperation system in the Arctic.

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