Significance of the China-Mongolia-Russia economic corridor for the Irkutsk Region and Mongolia

A N Fartyshev¹ and S Davaanyam²

¹ Sochava Institute of Geography SB RAS, Irkutsk, Russia
² Ministry of Construction and Urban Development of Mongolia, Ulaanbaatar, Mongolia

E-mail: fartyshev.an@gmail.com

Abstract. The paper considers the issue of implementing the Silk Road Economic Belt and especially the China-Mongolia-Russia transport corridor and its influence on the development of the Irkutsk Region and Mongolia as intracontinental peripheries. According to customs statistics, the Irkutsk Region mostly exports aluminum to the well-developed countries of the West and mineral fuel, timber, and cellulose to the East (China, Japan, and South Korea), and after increasing the throughput of railways, it will strengthen its export-resource dependence subject to the current trends. Mongolia has the same problems because the Mongolian economy has limited diversification and is strongly dependent on the extracting industry. Routes of the China-Mongolia-Russia economic belt fit the objects of the promising project “New Angarstroy” that makes the Irkutsk Region a full-fledged member of this concept. The convergence of the commodity markets of Siberia and Mongolia resulted from the shortened economic distance makes it possible to develop efficient end-use production facilities up to the creation of cross-border Russian-Mongolian territorial production complexes. On the other hand, distances are not so critical circumstances for building an innovative economy. However, the main problems of regional development within the framework of the initiative lie in the institutional and political field, i.e. the mechanisms of financing suggested in the concept of the Silk Road Economic Belt are not efficiently used in the territories of Siberia and Mongolia.

1. Introduction
The issue of the export of raw materials from Siberia and transit cargo between China and Europe through Russian territory has been well studied in Russian scientific literature. This issue became especially relevant after Xi Jinping in 2013 announced “The Belt and Road” initiative and the concept of the Silk Road Economic Belt (meaning the same things), on which China’s politics in Eurasian space is based nowadays. Now, seven years later, we can see real results of the realization of this policy and analyze specific changes in geo-economic relations. For the Irkutsk Region, it is especially relevant because it is one of the main subjects of this policy and the key region of the Silk Road Economic Belt. In fact, the Irkutsk Region is currently not a full-fledged economic and political actor in international relations because it occupies a dependent position concerning the general power of the Russian Federation; nevertheless, the region has the authority to pursue the foreign economic policy. In addition to this, there are such indirect factors as changes in the geo-economic position of Siberian regions, including both the beneficial shortening of economic distances due to the development of
intracontinental infrastructure and the rising competition for central Asia and inner Russian sales markets from Chinese products.

This paper aims to reveal the advantages and disadvantages of implementing the China-Mongolia-Russia economic corridor for the Irkutsk Region and Mongolia as resource-oriented peripheries and intercontinental zones of the world using the economic-geographical approach.

2. Methods
The research is based on theoretical and methodological approaches to economic and political geography. Economic and geographical methods include the analysis of the export-import flows and trading structure by types of products and their routes as well as analysis of investment cooperation. The political and geographical approach is a theory of continental-oceanic dichotomy that studies problems of intracontinental and marine regions [2]. New political and geographical vision and the current discourse about forming “Greater Eurasia” in the Eurasian space [3] also analyze the transport factors of this implementation [4].

Special methods include an analysis of institutional conditions of the development of a region, which allows identifying three types of institutions affecting regional development, such as organizing, distributive, and transformational ones [5]. The authors consider the financial organizations provided for in the program documents of the Silk Road Economic Belt as possible engines for its implementation and analyze its possible impact on the regional development of the Irkutsk Region and Mongolia.

3. Results and discussion
Three main routes of the Silk Road presented in the basic documents of The Belt and Road initiative bypass the Irkutsk Region, going to the south of Siberia. On the one side, the emergence of concussions of the Trans-Siberian Railway can negatively affect the geo-economic position of regions along it; on the other side, freight traffic is too big, and there is no need to oppose the Silk Road and the Trans-Siberian Railway. In 2019, the throughput of the Trans-Siberian Railway was 132 million tons, and it is proposed that in 2025 it will be brought to 215 million tons. To put that into perspective, the freight traffic of one of the biggest cargo ports, Ningbo, is 557 million tons, and the whole freight traffic through the Southern Sea Route is estimated at 17 billion tons. In 2018, Kazakhstan transited only 40 million tons, and Mongolia – less than 3 million tons. Prospectively, 3.5% of marine transit can be reoriented to inland transport corridors; therefore, optimal interaction schemes of all inland transport corridors should be developed. The Irkutsk Region can perform three functions within the framework of the Silk Road Economic Belt:

- developing transport relations between Siberian regions and the Heilongjiang Province;
- creating the high-speed Eurasian Beijing-Moscow transport corridor;
- creating the China-Mongolia-Russia economic corridor.

In the context of this research, the third point, which announces the China-Mongolia-Russia economic corridor, is especially interesting. The program for its creation was developed and signed in 2016 by Xi Jinping, Vladimir Putin, and Tsakhiagiin Elbegdorj. This concept suggests building not only one route but also a net of railways and highways in the Mongolian territory. There are no specific terms of work; therefore, the program is mostly declarative, but, at the same time, it implies specific decisions and agreements that have a general aim to increase meridional throughput between Siberia and China. It can be noted that the issue of Chinese-Europe transit is not at the forefront. All that means that the resource-oriented Irkutsk Region (and Mongolia) and over-producing China will be closer in economic terms. This tendency can be seen in figure 1.

According to customs statistics, the Irkutsk Region exports aluminum to the well-developed countries of the West, and mineral fuel, timber, and cellulose – to the East (China, Japan, and South Korea). An increase in the export of mineral fuel in the 2010s was conditioned by extracting raw oil and its transportation by pipeline, and an increase in the throughput of the Trans-Siberian Railway and reconstruction and building of new inland roads within the framework of the concept “China-
Mongolia-Russia” will strengthen the region’s export-resource dependence subject to the current trends, and result in an increase in production of timber, coal, and raw ore. Taking into account that the payback period of companies exporting timber to China is 2-6 months, whereas, for manufacturing companies, it is 10-15 years, an increase in GDP will take place due to the development of the extractive industry.

![Figure 1. The biggest import-export flows of the Irkutsk Region (thousand USD) in 2014-2019.](image)

This problem is not unique; in Mongolia, which is more dependent on the extraction industry, the concept of the “China-Mongolia-Russia” economic belt also finds criticism. Ogtosuren mentions that the trend of exchanging “raw materials in return of final products” between China and Mongolia will develop as a result of the realization of this initiative because the export structure of Mongolia is dominated by iron and copper concentrates, the exports of which increased by more than 400% in 2004–2014. The share of transit cargo in the transportation structure of Mongolia is only 19% [6]. The Mongolian economy has limited diversification and is strongly dependent on the extracting industry that accounts for 90% of export (tables 1, 2).
Table 1. The main export products of Mongolia.

| Product          | Value (thousand USD) |
|------------------|----------------------|
|                  | 2018     | 2019     |
| Copper           | 35565.3  | 39450.8  |
| Molybdenum       | 849      | -        |
| Zinc ore         | 707.2    | 1860     |
| Ferrum ore       | 14264.5  | 14674    |
| Zinc concentrate | 4518.6   | 2265.2   |
| Hydrated copper  | -        | 573.5    |
| Raw cashmere     | 809.7    | 205.2    |
| Cashmere         | 913.6    | 791.8    |
| Coal             | 38468    | 40139.4  |
| Raw oil          | 13261.4  | 25330.3  |

The promising cocked coal deposits of Tavan Tolgoi and copper deposit Oyu Tolgoi are developing; the railroad from Baotou with the giant metallurgy industry is already being built and now has reached the Chinese-Mongolian border. The development of the manufacturing industry requires large investments both for Mongolia as the Irkutsk Region, but without this, the dependence on raw material export will further strengthen. Mongolia needs to diversify its export markets and exports of products and services to reduce its over-dependence on imports from one country. To this end, close cooperation with neighboring countries will significantly improve the trade efficiency and competitiveness of Mongolia [7].

Table 2. The main import products of Mongolia.

| Product             | Value (thousand USD) |
|---------------------|----------------------|
|                     | 2018     | 2019     |
| Diesel              | 31273.3  | 22755.6  |
| Petrol              | 21320.4  | 16171.6  |
| Cars                | 10253.4  | 14177.2  |
| Railway carriage    | 12583    | 4543.8   |
| Tobacco             | 2835.4   | 4080.2   |
| Electroenergy       | 542.8    | 3598.2   |
| Medicine            | 1848.5   | 1801.7   |
| Sugar               | 440.2    | 1054.7   |
| Alcohol             | 932.1    | 1307.6   |
| Reactive fuel       | 3611.8   | 851.5    |
| Public transport    | 405.1    | 468.6    |
| Wheat flour         | 715.5    | 609.3    |
| Butter              | 240.1    | 938      |
| Beer                | 406.1    | 492.3    |
| Green tea           | 196      | 169.5    |

Meanwhile, the China-Mongolia-Russia economic corridor also opens up opportunities for cooperation between the Irkutsk Region and Mongolia as inland territories. The economic distance brings together not only China but also the raw material markets of Siberia and Mongolia. The structure of import-export relations between the Irkutsk Region and Mongolia is differentiated, and
The most effective project for the development of an industrial base in the considered region is “New Angarstroy” founded by the classic of economic geography Kolosovsky and currently being developed at the Institute of Geography of the Siberian Branch of the Russian Academy of Sciences. Its key part is the organization of large-scale metallurgical production, including high-quality full-cycle ferrous metallurgy and titanium-magnesium industry up to the production of final products. The non-raw products prevail in the export from the Irkutsk Region. Import from Mongolia to Irkutsk is very low (tables 3, 4).

**Table 3.** The import-export balance of the Irkutsk Region with Mongolia in 2015-2019.

| Year | Export (thousand USD) | Import (thousand USD) |
|------|-----------------------|-----------------------|
| 2015 | 53 776.80             | 1 766.90              |
| 2016 | 53 480.5              | 1 155.8               |
| 2017 | 60 188.5              | 1 296.0               |
| 2018 | 63 129.8              | 1 141.2               |
| 2019 | 70 373.9              | 467.4                 |

The convergence of commodity markets resulted from the implementation of the China-Mongolia-Russia economic belt concept makes it possible to develop efficient end-use production facilities up to the creation of cross-border territorial production complexes in Siberia.

**Table 4.** The main export products of the Irkutsk Region to Mongolia in 2019.

| Product                                           | Value (thousand USD) |
|---------------------------------------------------|----------------------|
| Food products                                     | 15 924.0             |
| Fertilizers                                       | 17 337.7             |
| Mineral fuel                                       | 10 506.1             |
| Constructor materials                             | 1 424.1              |
| Electrical machines                               | 3 325.1              |
| Plastics and rubber                               | 3 254.7              |
| Products made of stone, asbestos                  | 3 031.6              |
| Chemical production                               | 2 869.9              |
| Railway locomotives                               | 2 484.6              |
| Transport                                         | 2 286.5              |
| Wood mass, cellulose                              | 2 286.4              |
| Boilers and electro equipment                      | 1 859.5              |
| Aluminum and its products                         | 1 025.0              |
| Pet feed                                          | 866.3                |
| Timber and its products                           | 644.9                |
| Furniture                                         | 304.9                |
| Ferrous metals and products                        | 261.0                |
| Artworks                                          | 150.5                |
| Other production                                  | 106.1                |
| Textile                                           | 92.0                 |
| Non-ferrous metals                                 | 54.8                 |
| Optics                                            | 51.8                 |
main objects of the project are the development of the largest deposits in the Baikal region, Chineyskoye and Malotagulskoye (vanadium-containing titan magnetite ores), Udokanskoye (copper), Savinskoye (magnesium), Synnyrskoye (synnyrites), and Kovykta (gas condensate), as well as metallurgical plants in Ust-Kut, Zheleznozorsk-Ilimskiy, Taishet, and Zima. The main products are spongy iron (a product of ore reduction by gas), high-quality steel, rolled products, and steel products, which can be further processed at aircraft factories into products with high added value [8]. The routes of the China-Mongolia-Russia economic belt fit the objects of “New Angarstroy”, which makes the Irkutsk Region a full-fledged member of this concept [9].

Moreover, using the potential of the inner regions of Mongolia, it is possible to expand this project by creating joint Mongolian companies with the involvement of its resource potential. In the area of construction of the North Mongolian Railway (Erdenet-Arts-Suri), there are also deposits of high-quality coking coal (Ovoot), iron ore (Khuren-Chuluut), and molybdenum ores (Mandal), but Mongolia does not have enough electricity capacity (even taking into account the construction of the Shuren hydroelectric power plants) and personnel resources for the construction of own local metallurgical plants. This fact shows the prospects of cross-border territorial production complexes in the territories of Mongolia and the Irkutsk Region and embodies the idea of “Greater Eurasia”, discussed at the governmental level.

However, it should be noted that distances are not so critical circumstances in building an innovative economy. Innovative materials as a base for the economy of new mode have high added value, but they are also produced on a small scale and from rare earth metals with a high-value component. For example, the Russian innovative company Rosnano is engaged in the creation of industrial production of ultra-high-strength nanostructured wires made from an alloy of copper and niobium, which are increasingly used in shipbuilding, high-speed highway technologies, aircraft construction, etc. Now, the only similar experienced company in the post-Soviet space has existed since 2011 in Moscow, which is extraterritorial to the raw material markets. Taking into account the fact that the Irkutsk Region has large reserves of niobium (Beloziminskoye, Zashikhinskoye, Belorechenskoye, and Bolshetagninskoye deposits of rare metals), which are included in the “New Angarstroy” project, and the growing demand for innovative materials with improved properties in the technology of creating high-speed transport routes, including the creation of the China-Mongolia-Russia transport corridor, the creation of a complex of production here has great prospects, and in this case, on the contrary, production will promote accelerated construction of transport corridors.

However, the main problem of both this project and many other programs and strategies for the development of the territories of the Irkutsk Region, as well as the remote territories of Mongolia, lies in the institutional and political field. The institutional problem lies in the responsibility for realization, and there are no existing mechanisms regarding it at the government level in either Russia or Mongolia. Regional development strategies affect the zones of several ministries at once, and the final result does not belong to the competence of either federal or regional power. In Russia, such guarantors could be the institutes of the presidential commissioners for federal districts, but recently, their influence has been decreasing because of the centralization of credentials. Even the organization of the Ministry of the Far East to solve the problems of one federal district has not significantly resolved the issue of overlapping powers. The problem of a political nature is that large state corporations Mechel, RusAl, Rosnano, and others should initiate investments, but since 2014, these companies have been forced to engage in self-rescue amid the growing pressure of anti-Russian sanctions. Of course, interaction with China provides new opportunities for redirecting financial flows, but fiscal and stock exchange problems of corporations do not make it possible to expand producing activity.

The One Belt One Road initiative gives new advantages for the regional development of resource-exporting regions. This initiative has the own mechanisms to support industries: the Silk Road Fund and the Asian Infrastructure Investment Bank. Investments in large-scale projects in countries located along the economic belt of the Silk Road and the Maritime Silk Road were announced as the main task of the first-mentioned organization. According to the management of the fund, the organization will
invest only in those projects that guarantee a return of funds in the medium and long term. In the territory of Russia, the fund managed to participate in several projects: financing the purchase of Pirelli shares by the Chinese CNTC company, due to which the Kirov and Voronezh tire factories came under the control of China [10], and acquiring part of the shares from NOVATEK within the framework of the Russian Yamal LNG project. In 2017, it purchased a 10% stake in Russia's largest petrochemical holding Sibur. However, for three years, there have been no reports on the activities of the Silk Road Fund in Russia. Another instrument is the Asian Infrastructure Investment Bank established in 2015, the authorized capital of which also included Russian capital. Since 2015, the fund has supported 129 projects for a total amount of more than $12 billion, but among them, Russia and Mongolia are represented only by one project. The comprehensive Mongolian project involves a loan to implement a set of responses to mitigate the impact of COVID-19. Russia is represented by the Russian road agency project that has been granted a loan for the reconstruction of highways for $500 million and the planned reconstruction of the Kola highway. Therefore, this is not correlated with the infrastructure problems of Siberia and the Chinese initiative of the Silk Road Economic Belt in particular, but only $96.7 million will be spent on that; no other subprojects were reported [11]. At the same time, it should be understood that Chinese companies are ready to invest in not only infrastructure and mining enterprises but also refining, which is proved by the cooperation of the Irkutsk Oil Company with Chinese investors.

4. Conclusion
Thus, currently, the Irkutsk Region is still poorly integrated into the concept of the Silk Road Economic Belt and acts mainly either as a transit territory or as a resource periphery. The creation of new transport routes along the China-Mongolia-Russia economic corridor, an increase in throughput, and a reduction in the cost of rail transportation can consolidate the role of a raw material appendage for Siberia and enhance the export of Siberian timber and ores. Mongolia, the economy of which is even more susceptible to dependence on the extractive industry, is experiencing the same problems. However, the China-Mongolia-Russia economic corridor not only shortens the economic distance to the major world markets for the raw material regions of Mongolia and Siberia but also brings them closer together, which allows for cooperation aimed at producing end-use products locally. However, the presence of institutional and political problems in the management structure of Russia and Mongolia hampers this. Alternative methods of financing projects are financial institutions embedded in the concept of "One Belt – One Road", such as the Silk Road Fund and the Asian Infrastructure Investment Bank, but it is necessary to refrain from completely transferring enterprises into the hands of Chinese investors.

Acknowledgments
The reported study was funded by RFBR and MECSS, project number 20-55-44023.

References
[1] Sukhodolov Y A 2020 Trade of Russia and Mongolia: trends and prospects International Trade and Trade Policy 1 83-96
[2] Bezrukov L A 2008 Continental-Oceanic Dichotomy in International and Regional Development (Novosibirsk: Geo) p 369
[3] Bezrukov L A 2018 The geographical implications of the creation of "Greater Eurasia" Geography and Natural Resources 4 287-95
[4] Shuper V A 2018 Transport factor of moving of Russia to East and creation “The Greater Eurasia” Regional Researches 2 131-8
[5] Sysoeva N M 2013 Institutional problems of the development in Baikal region Region: Economy and Sociology 1 55-72
[6] Otgonsuren B 2015 Mongolia-China-Russia economic corridor infrastructure cooperation Erina Report 127 3-6
[7] Davaanyam S 2019 Participation of Mongolia in Northeast Asian Economic Integration *Erina Report* **148** 3-7

[8] Nikolskiy A F 2017 «New Angarstroy» as a key project of future industrialization of Russia *Geography and Natural Resources* **4** 143-53

[9] Fartyshhev A N 2018 Irkutsk region in the conception Economic Belt "Silk Road" and project “New Angarstroy” *The Bulletin of Irkutsk State University Series: Political Science and Religion Studies* **26** 37-45

[10] Kuznetsov A V 2017 Limits of interaction of russian and chinese business in the countries of Eurasian Economic Union *Outlines of Global Transformations: Politics, Economics, Law* **10** 15-9

[11] Balakin V I 2016 Silk Road Fund and Asian bank of infrastructure investments: perspectives of foundation *Strategy of Economic Belt Silk Road and Role of SCO in its Implementation* (Moscow: Institute of Far East RAS) pp 4-9