The Analysis of China Kyrgyzstan Uzbekistan Railway Project and Its Advantages for Kyrgyzstan

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Abstract. This article analyzed the potential construction of the China Kyrgyzstan Uzbekistan Railway project. This research is relevant like never before because of the transport isolation and lack of railway network in the Kyrgyz Republic. Briefly described transport and logistics situation in the Kyrgyz Republic. The purpose of the article to deeper understand the existing problems in the implementation of this project. Described in detail the benefits and advantages of the railway construction project for each of the participating countries.

Kyrgyzstan is located in Central Asia, borders with Kazakhstan, China, Tajikistan and Uzbekistan. Today Kyrgyzstan represented by all major types of transport: air, railways, roads and pipelines. Road transport plays a major role; it accounts about 99.8% of passenger traffic and 58% of cargo turnover. The country's auto park according to the SRS (State Registration Service) is about one million one hundred thousand cars. You can get to the all-neighboring countries by road. The total length of roads is 34,000 km, including 8810 km of public roads and 15190 km of roads in settlements.

| Items           | 2013   | 2014   | 2015   | 2016   | 2017   |
|-----------------|--------|--------|--------|--------|--------|
| Total           | 2662.3 | 2497.1 | 2525.1 | 2466.4 | 2641.0 |
| Overland transport |       |        |        |        |        |
| Railroad        | 1001.7 | 1010.0 | 917.8  | 807.0  | 937.3  |
| Motor vehicles  | 1392.0 | 1264.7 | 1401.7 | 1501.3 | 1527.1 |
| Pipelined transport | 156.7  | 136.2  | 145.9  | 140.7  | 163.5  |
| Water transport | 2.0    | 2.8    | 2.3    | 0.5    | 0.0    |
| Air transport   | 109.9  | 83.4   | 57.4   | 16.9   | 13.1   |

Source: The National Statistical Committee of the Kyrgyz Republic [3]

The country's railway system consists of isolated dead-end lines, the total length of which is about 400 km. Separate lines connect the southern regions with Uzbekistan and north with Kazakhstan.

The logistics of Kyrgyzstan has its own characteristics, which are based on the following factors:

- The lack of direct access to the oceans and, as a consequence, the inability to deliver goods by sea.
- A significant predominance of the mountain landscape, which occupies up to three-quarters of the country's territory and adjusts the routes and delivery technologies.

Considering the fact that the transport infrastructure providing roads, air and railways is in critical condition, and the volume of passenger-and-freight transportation increases to 10% per year, the strategic focus of development will be to increase the country's transit potential to improve access to the market for goods and services.

Kyrgyzstan has large deposits of coal, antimony, mercury, uranium, zinc, tin, tungsten, lead, rare earth metals and other minerals. However, the lack of the necessary infrastructure hinders the development of these resources and the development of relevant extractive industries. A serious problem is the geographical and communication isolation. Particularly acute is the need to connect
the North and South of the Republic by an advanced rail system. That is why Kyrgyzstan is in dire need of new Railways.

Among the projects that are focused and attract active attention are the development of projects for the construction of the following railways. The first is a project to build a China – Kyrgyzstan – Uzbekistan (CKUR) railway. The second is a project linking the northern and southern regions of the country in order to give impetus to the economic development of the interior regions of Kyrgyzstan, the ARPA - Kochkorka - Balykchi railway, which will pass through the subsidized, but rich in potential mineral deposits Naryn region.

Both projects pursue their goals, for example, the construction of a railway within the country between the northern and southern regions is aimed at solving internal social economic problems and the development of the country, the first project CKUR is more considered as part of a large – scale economic and geopolitical project to form a transcontinental transit between China and Europe through Kyrgyzstan and other countries, called "One Belt - One Road".

The concept of the "New Silk Road" is a global strategy for the development and creation of an extensive infrastructure network from the western borders of China through the countries of Central Asia, Russia, and Iran to Europe. The basic idea is that the construction of transport infrastructure (railways and roads, pipelines, etc.) should lead to significant growth within Eurasian trade and to the intensification of the economic development of the vast internal territories of Eurasia, as well as countries of South and Southeast Asia, Middle East and Africa.

Central Asia has a certain transit potential, when transporting goods by rail, the distance between Europe and Asia is almost two times less than by sea. Thus, the speed of cargo delivery is also faster: 14 days compared to 30-35 days by sea. However, land transit is much more expensive than sea transit. The new super container ships Maersk have a capacity of up to 19200 TEU (20-foot containers). Container train carries an average of 100-120 TEU. Thus, the new super container ship is equal to about 170 land container trains.

Therefore, land-based transcontinental rail transport has the potential to serve only specific market segments. These are goods with a high unit cost per kilogram of weight, as well as goods for which a high speed of delivery is vital (some food products; premium textiles and etc.).

Now, all Uzbek and Tajik cargoes passing around Kyrgyzstan transit through Kazakhstan, which has two operating joints with China: Dostyk - Alashankou and Korgas - Khorgos. Thus, China already has access to Kazakhstan with two transitions.

At the same time, Beijing is ready to support the construction of another railway branch in the Central Asian direction, which, on the one hand, will connect Uzbekistan and Kyrgyzstan with its Northern provinces, and on the other hand, will provide access to Uzbekistan and further to the Caspian sea, Iran, in addition, will create a shorter route to Europe, which will reduce the time of cargo transportation.

The CKUR project has been under consideration since the end of 1996, when the first meeting of representatives of China, Uzbekistan and Kyrgyzstan was held in Tashkent on research issues and compilation of preliminary feasibility studies. The project line of the railway with the length of 268 km was supposed to look like this: Kashgar (China) - Torugart - ARPA valley - Fergana ridge - Uzgen - Kara-Suu (Osh region) – Andijan (Uzbekistan) (table 1). First time in 2003, a technical grant of 20 million yuan ($2.8 million) was allocated for the development of a preliminary feasibility study of the railway. The project provides for the construction five crossings, 48 tunnels with a total length of 48.9 km, 95 bridges with a total length of 23.3 km with a maximum height of 50 meters. According to the project, the railway line can recoup itself within 10 years. The construction phase is expected to create 20 thousand new jobs, during the operation is planned to employ more than 2 thousand people.
Table 2. Main technical indicators of CKUR.

| Indicator                                      | Value          |
|-----------------------------------------------|----------------|
| Total length                                  | 286.4 km       |
| Number of main lines                          | 1              |
| Rails                                         | R65            |
| Basis                                         | Wood / ferroconcrete |
| The maximum slope                             | 20%            |
| Average permissible speed during transportation of goods and passengers | 50-80 km / h  |
| Engine                                        | Diesel-electric locomotive |
| Train weight                                  | 2000t/3000t    |
| The control system of movement of trains      | Semi-automatic locking |

Source: The project of China Kyrgyzstan Uzbekistan Railway construction by China Road and Bridge Corporation, Part 1 “Project Statement” [4]

The construction of the railway will improve the condition of transportation between Central Asian countries and provide them convenient access to the sea. According to preliminary estimates, Bishkek will receive about $ 200 million annually from the transit of goods through its territory. According to the best estimates, the volume of domestic cargo within Kyrgyzstan will be no more than 5 percent.

The most important issue is the question of financing the construction of this railway and its accessories. The cost of construction of the railway line on the territory of Kyrgyzstan is estimated at about 2 billion USD. Since Bishkek does not have its own sources of financing for this railway, it is assumed that the construction will be carried out at the expense of the China or a third party. As compensation, the Kyrgyz Republic can provide investors with mineral deposits, in particular the Kara-Keche coalmine and etc. However, accurate calculations and figures will be determined during the development of the full feasibility study. According to the latest updated forecasts, the volume of cargo transportation by railway may increase to 15 million tons per year, and the growth of passenger traffic - up to 250 thousand people annually.

Interest in the new line is easy to explain. By building the China - Kyrgyzstan - Uzbekistan Railway (CKUR), Bishkek will have an opportunity to develop its economy, agriculture and, above all, mining industry. Thus, according to the preliminary plan for the construction of the railway, along the line, it is possible to begin the development of such fields as gold deposit Kara-Kazyk (the volume of which is estimated at 543 kg of gold, 1911 kg of silver and 670 tons of copper), Kara-Shoro located in the Uzgen basin (456.8 million tons), scattered and explored oil fields in the Alai valley (about 100 million tons) etc. On a regional scale, the project will develop the transport infrastructure of Central Asia, reduce transport routes from East Asia to the Middle East by 900 km, or seven to eight days, and will provide access to the ports of the Persian Gulf. This railway line is also important for Uzbekistan, because they together with Kyrgyzstan, are isolated from the world ocean, in other words, they need free access to the ocean and the markets of the Asia-Pacific countries. As for Uzbekistan, for example, in the Uzbek Asak (Andijan region) there is an automobile factory "Uz-Daewoo", about 80% of components for which are supplied from South Korea. The Eurasian railway through the port of Lianyungang on the East coast of China will link, in particular, with the Korean port of Pusan, which will have a positive effect the volume and cost of supplies to Uzbekistan. In addition, the construction of CKUR will change the transport structure in Xinjiang region and Western China as a whole.

Despite the fact that the Kyrgyz Republic highly need of implementing new transport and logistics projects, the project has not been adequately supported by the government, perhaps due to the fact that many aspects (such as financing, standards, geopolitical consequences) are uncertain.

By the way, the railway gauge standard for the new road has long been a key issue. Kyrgyzstan adhered to the preservation of its own, existing track, the so - called "Russian standard", where the width of the gauge is 1520 mm-this is a common standard for all post-soviet countries, as well as for Slovakia, Finland, part of Afghanistan and Iran. China initially insisted and ensured that the road
must have a European gauge—1435 mm. But it is already clear that the line will be single-track and non-electrified.

The implementation of this project is possible only under the following condition - the railway cannot be built by increasing the national debt. In this case, it is necessary to attract direct investment from investors or consideration of public-private partnership.

Thus, based on the existing projects, it can be concluded that the leadership of the Kyrgyz Republic is trying to find a way out of the transport isolation in which Kyrgyzstan found itself after the collapse of the Soviet Union and make maximum use of the transit potential.

The need for the construction of the CKUR and the railway line connecting the North and South of the country comes from the national interest of the Kyrgyzstan. This direction was mentioned in the National Strategy for Sustainable Development of the Kyrgyz Republic for the period 2013-2017 (NSSD of KR) and will obviously be implemented in the framework of the long-term development strategy of the Kyrgyz Republic until 2040.

In the age of globalization and strengthening of regional rivalry, Kyrgyzstan, like many other post-soviet countries, is in the conditions of geopolitical choice. Therefore, it is important for each Central Asian Republic to diversify its transport system and provide access to the main seaports. In the end, for the development and implementation of this project, the expansion of the economic potential of the country requires a multilateral and coordinated position of all countries involved.

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