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**THE ROLE OF KAZAKHSTAN IN THE NEW GEOGRAPHY OF
PRODUCTION AND TRADE BETWEEN THE ASIAN AND
EUROPEAN MARKETS**

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Introduction¹

For over a decade, the global economic order has been undergoing major macro-economic and geographic changes. International relations evolve with the emergence of countries that face new economic superpowers like China. Federated around this new economic Sino-pole, Asian countries are increasingly attractive to major international investors in particular due to the reduced labor costs and a consumer market of several hundred million people. These events are accompanied by a new geography of the value chain. Indeed, a new transcontinental organization of production of goods generates new trade routes using mainly sea transport to link production areas to consumer markets.

However, despite its undisputed dominance, maritime transport is not the only mode of transcontinental freight. Rail transport starts to attract international freight companies due to its speed. Now, as part of the formation of a rail corridor linking East Asia to Western Europe, Central Asia countries, particularly Kazakhstan, would be located between two major economic regions of the world. In this case, the development of freight traffic could lead to a development of the logistic function and thus accelerate the process of economic development.

The objective of this paper is therefore to study the relevance of new rail corridors and the potential integration of Kazakhstan into the new

¹The results presented in this article come from a study carried out as part of the FASE project (Ferroviaire Asie-Europe), coordinated by MOBIS and funded by the European Union, the French Ministry of Research and the Region Haute-Normandie. The authors thank the MOBIS team for its contribution in this European project.

transcontinental trade routes. For this, after introducing the Euro-Asian trade relations that could generate new freight traffic across Kazakhstan, we will analyze the strengths and constraints of the country to better understand, in a third step, the issues available to it in logistics development.

1. The Europe-Asia trade relations and the issue of rail corridors

1.1. Growing trade between Asia and Europe

Over the past twenty years, international trade has accelerated its dynamics, both in terms of volumes of goods and concerned countries. Indeed, the value of goods traded worldwide grew from 3,676 billion in 1993 to 14,851 billion in 2010 (WTO, 2011). Meanwhile, trade in manufactured goods, which were mainly concentrated in the three poles of the Triad (North America, Western Europe, Japan) have gradually expanded to other countries, thanks to the emergence of newly developed countries: first the four Asian "tigers" (South Korea, Taiwan, Hong Kong and Singapore), then South-East Asian countries, China, India and the great countries of Latin America (Brazil, Mexico). Similarly, the collapse of the socialist economic system in the USSR and the countries of Eastern Europe, as well as the transition to a market economy initiated by Deng Xiaoping in China, made these countries come back to the capitalist system.

This development, together with the gradual opening of markets as a result of GATT and the WTO international agreements and the agreements of regional economic organizations (European Union, NAFTA, MERCOSUR, ASEAN, etc.) strengthened the process of globalization and integration of the various countries of the world in the same economic unit. In this context, trade between East Asia, now the first industrial region in the world and a fast expanding market, and Western Europe, the second production region and world's largest consumer market, increased (+24% annual growth in value between 2005 and 2008 [WorldBank, 2010]). On that basis, the main issue remains that of the geography of the goods flows between the two economic regions.

1.2. Saturation ahead of the Royal Road and the challenge of Asia-Europe rail link

The flow of containerized cargo between Asia and Europe always follows the same maritime route since the opening of the Suez Canal in 1869. It crosses the South China Sea, the Indian Ocean, the Red Sea, the Mediterranean sea and joins Western Europe, successively on the Straits of Malacca, Bab el Mandeb and Gibraltar (Figure 1). On this route, the Suez Canal is a bottleneck which tends to lengthen the travel time of containers and increase the cost of transporting goods (Verny, Grigentin 2009). Today, more than 17200 vessels, including 37% of container ships (6332 ships) and 948 million tons of goods in 2012 (Suez Canal Authorities, 2012) pass through the Suez Canal. And global economic growth, driven by emerging markets, should strengthen the international flows of goods, so that the Egyptian government launched in 2014 the construction of a second channel, parallel to the one built there more than a century before by Ferdinand de Lesseps.

However, in anticipation of this new passage between the Red and Mediterranean seas, other options are available to freight companies. The first is the Northern Sea Route (NSR), which runs along the coast of the Russian Arctic, from the Bering Strait to Norway. This option has been widely studied because of the gradual melting of the polar ice cap caused by the global warming (Verny 2007, 2013). But it still not interests companies, due to its impracticality for nearly eight months of the year, and the need to use Russian icebreaker in order to follow it. As a consequence, the second option, the Eurasian railway line, becomes particularly interesting.

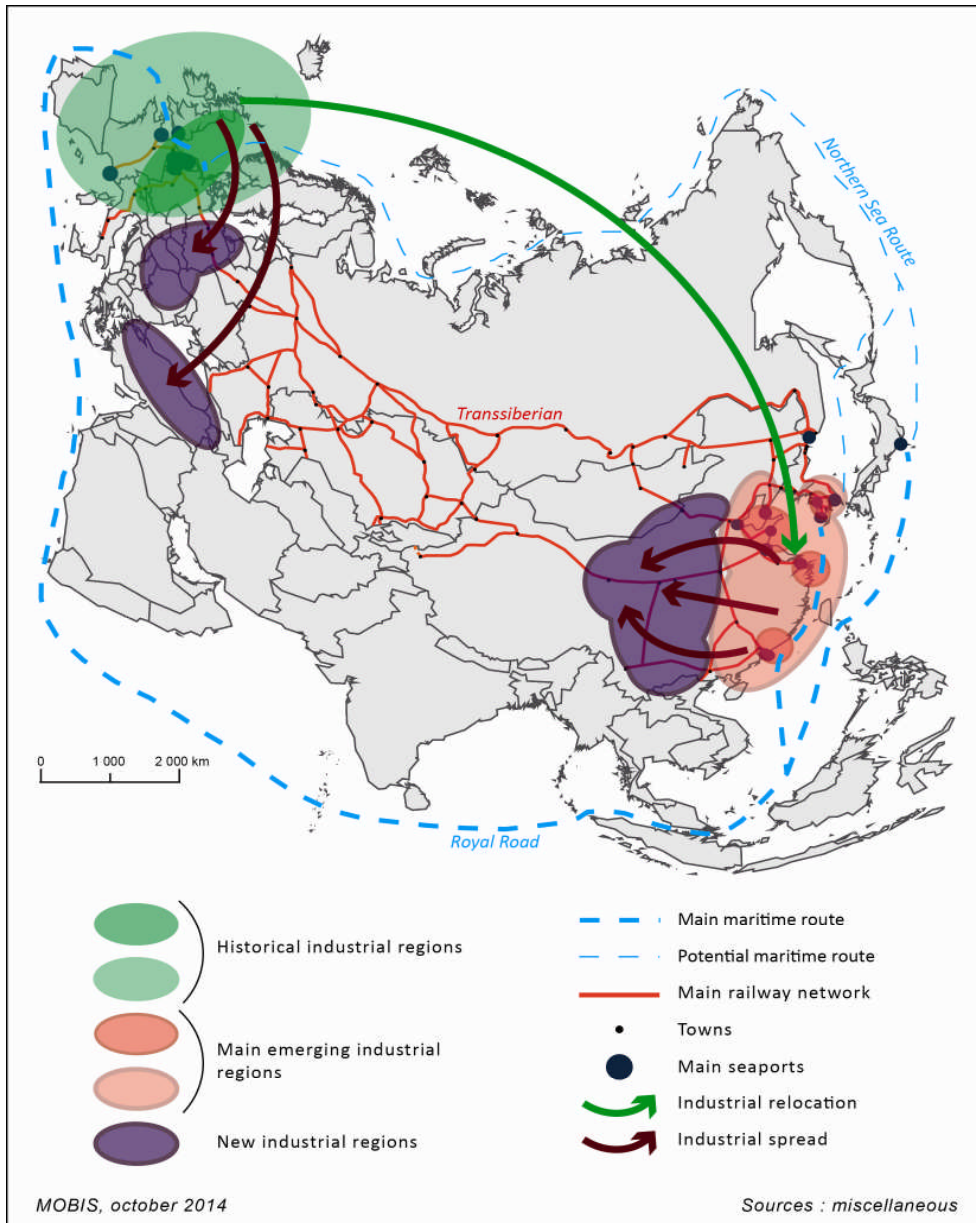


Figure 1: Evolution of the location of the main producing areas in Europe and East Asia

Indeed, rail transport is faster than sea freight. On the route from Khabarovsk (Eastern Siberia) to Potsdam (Germany), the estimated time of shipping through the Royal Road is 1093 hours against 341 hours by train (UNECE, 2012). In addition, as shown in Figure 1, the gradual spread of industry, from the original home of manufacturing activities (Western Europe and East Asia maritime) to the inland of continents (Central and Eastern Europe, Asia Minor in western inland China to the east), tends to shorten terrestrial distances and reduce the interest of maritime transport to connect the two continents. From there, with a view to the establishment of regular freight lines between Europe and Asia, the question of the potential role of the states of Central Asia, and in particular Kazakhstan, in the functioning of the international transport corridor arises.

2. Kazakhstan in the heart of the Asia-Europe rail link

2.1. An economy based on the exploitation of natural resources

Kazakhstan economy is mainly based on the exploitation of natural resources, like the one of its nearest neighbors (Russia, Uzbekistan and Turkmenistan). The main natural resource is oil. Kazakhstan, like Turkmenistan, has, thanks to the cutting border inherited from the Soviet era, access to the Caspian Sea, which is one of the world's largest deposits. The presence of "black gold" in Central Asia has been known since the Middle Ages (Damiani 2013), but its massive exploitation is recent, because the Soviet authorities have long only exploited the resources of the West Caspian coast for the benefit of Azerbaijan. Indeed, Kazakhstan is now only the 16th largest producer of crude oil (1.6 million barrels per day), although getting the 11th World reserves (30 billion barrels [Damiani, 2013]).

This underutilization is also found in natural gas. The reserves of the Karakum Desert are among the largest in the world. Kazakhstan has the 14th "blue gold" global reserve, but is only the 42nd international producer (Damani 2013). However, oil and gas account for three-quarters of the country's exports (Figure2), which reveals both the importance of the energy potential of the country and its weakness inherited from the USSR manufacturing.

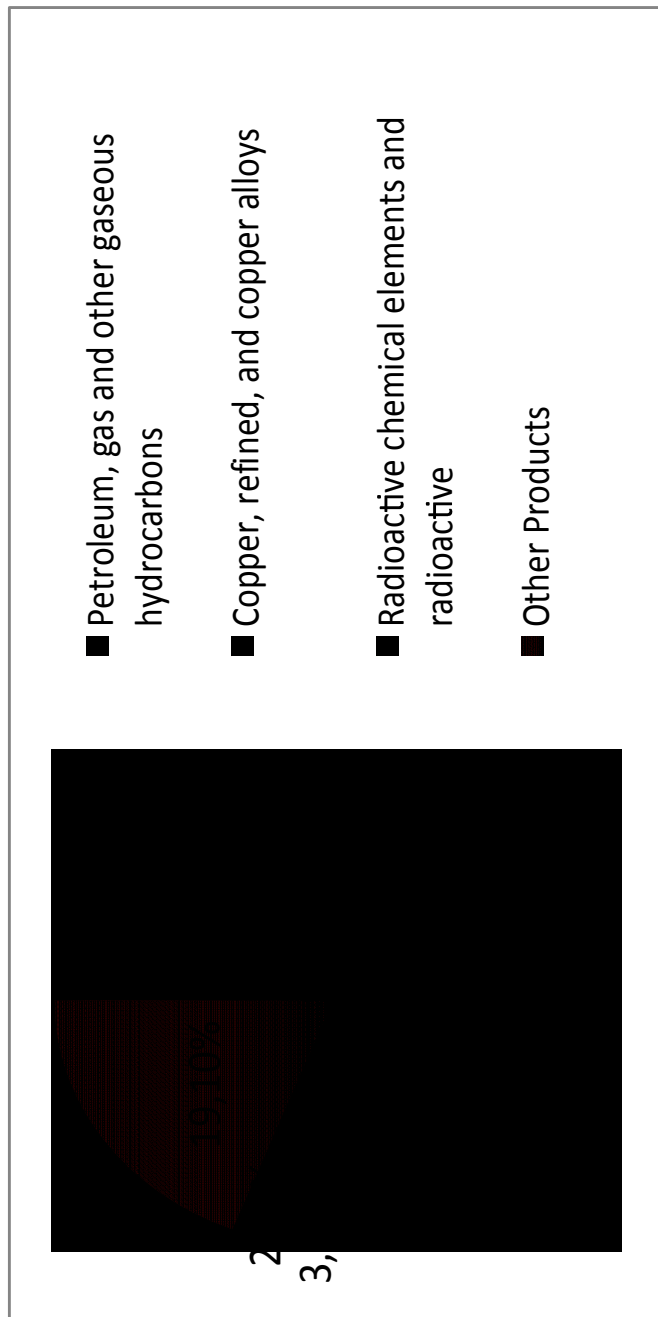


Figure 2: Products exported in 2012 (UN comtrade 2012)

Other Kazakh exports are copper (3.2% of the total of exported products) and uranium (2.8%), of which Kazakhstan is the world's largest producer (Damiani 2013). But unlike its southern neighbors, Kazakhstan has not inherited the main cotton processing zones when cutting the Russian Turkestan by the Soviet authorities. 'White gold' returned to Uzbekistan and Turkmenistan, however, Kazakhstan inherited a portion of the black soil of Siberia, allowing it to establish itself as an important center of agricultural production in the region.

Finally, the Kazakh economy has similar characteristics to those of Russia and other Central Asian countries, namely, a high dependence on energy development. This dependence tends to prevent the emergence of an export-oriented manufacturing industry, because it generates the Dutch disease, i.e. an overvalued domestic currency due to oil exports, encouraging purchase of foreign manufactured goods whose price is more competitive than the price of the goods produced locally. The biased functioning of the economy of Kazakhstan is therefore in the geography of its business relationships.

2.2. A little geographically diversified foreign trade

The main economic partners of Kazakhstan are the European Union, Russia and China, which together account for three-quarters of the country's international trade (76% [International Trade Centre 2013]). However, Kazakhstan today carries nearly half of its trade with the European Union (41%), the Russian big brother representing only 18% of trade at the same level as China (17%).

Nevertheless, the structure of trade differs between partner countries. Indeed, relations with the European Union are primarily in exports of oil and gas by pipeline, thus not involving rail traffic. The other 20% of imports from the European Union (International Trade Centre, 2013) consist mainly of manufactured goods. However, the main imports of goods are from China and Russia. In the first case, China has a competitive advantage thanks to lower prices than its Western competitors. In the second case, a legacy from the Soviet period explains the persistence of strong Russian-Kazakh trade relations, plus the establishment of a customs

union in 2010 between Russia, Belarus and Kazakhstan, exempting from tax goods moving between these three states.

Finally, Kazakhstan maintains only limited trade relationships with the other former Soviet republics: only 7% of its foreign trade is conducted with members of the Commonwealth of Independent States, Russia excluded (International Trade Centre, 2013). These relationships are surprisingly few even with the other republics of Central Asia (Figure 3). The geography of trade in Kazakhstan then leads us to wonder about its location in the heart of Central Asia.

2.3. Strategically located in Central Asia, but still a relatively closed country

The geographical location of Kazakhstan is one of a land locked country, in the middle of a low population density region (6 inhabitants /km²), and only getting a sea access as a closed sea, the Caspian Sea. However, the main centers of global production (excluding America) are located at the ends of the Eurasian land. If we add to this the limit of its productive industry, we have already discussed, and the weakness of its domestic market (17.9million inhabitants), the low Logistics Performance Index¹ (LPI) of Kazakhstan is understandable.

Indeed, with an index of 2.69 in 2012, Kazakhstan does not appear as one of the most efficient countries logistically or more open commercially. As highlighted in Figure 4, Kazakhstan is also similar to its Central Asian neighbors, whose logistics performances are also very low. This not only reflects the effects of the isolation of these countries in the heart of the continent and the lack of connection to the world's major shipping routes, but also the policy of relatively closed economic systems largely state-controlled and heavily permeated with Soviet administrative and policy tradition.

¹The Logistics Performance Index of the World Bank is established on the basis of a survey of a thousand international freight forwarders, reviewing all of the world on the basis of six criteria: "process efficiency customs clearance, quality of trade and transport related infrastructure, ease of organizing shipments at competitive prices, quality of infrastructure services, the ability to track and trace consignments, and frequency with which shipments reach the recipient on time" (World Bank, 2013). From the ratings of freight companies in these six criteria, an index ranging from 1 (the lowest) to 5 (the highest) is established.

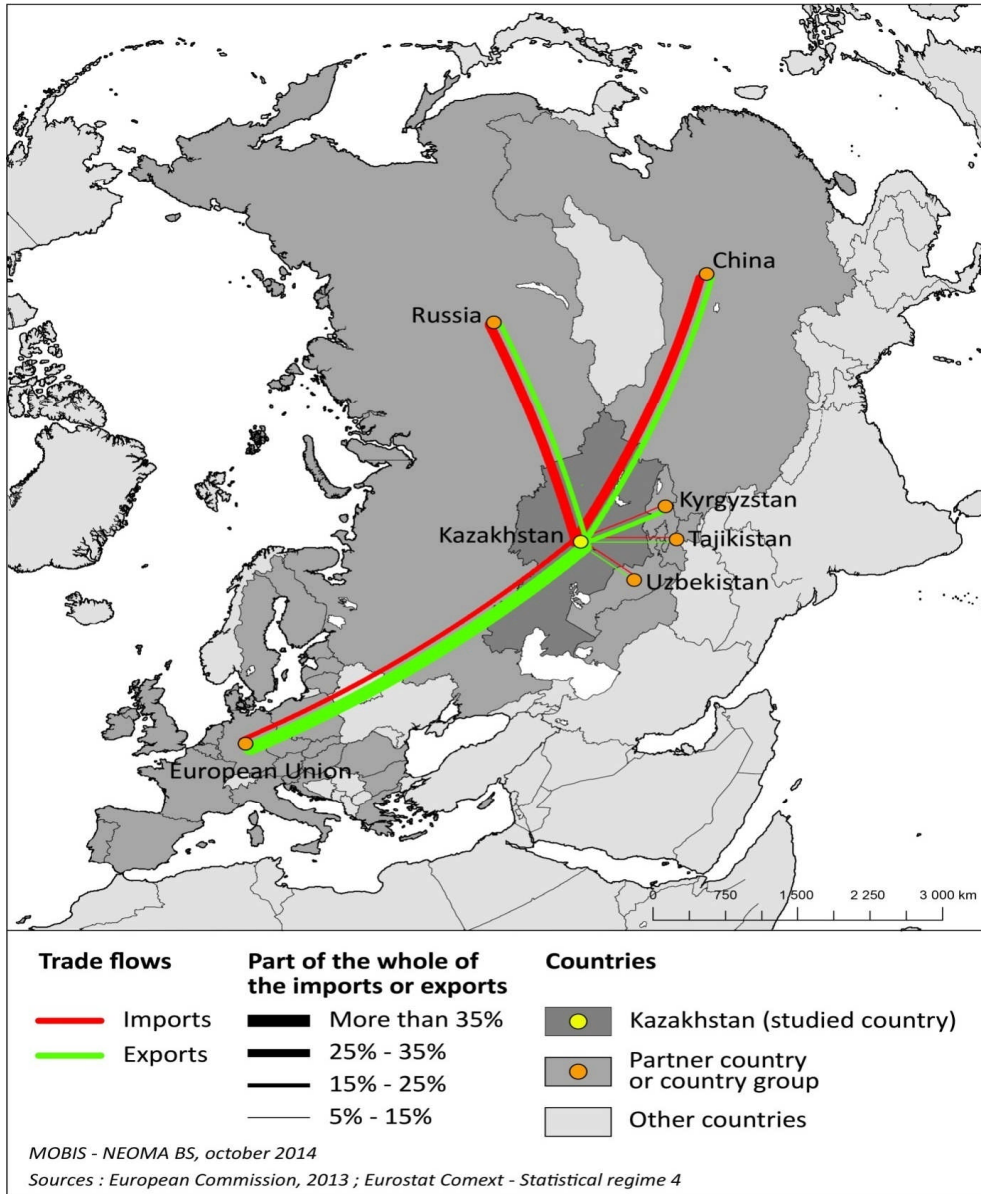


Figure 3 -import-exportflowsbetween Kazakhstanand its major tradingpartners

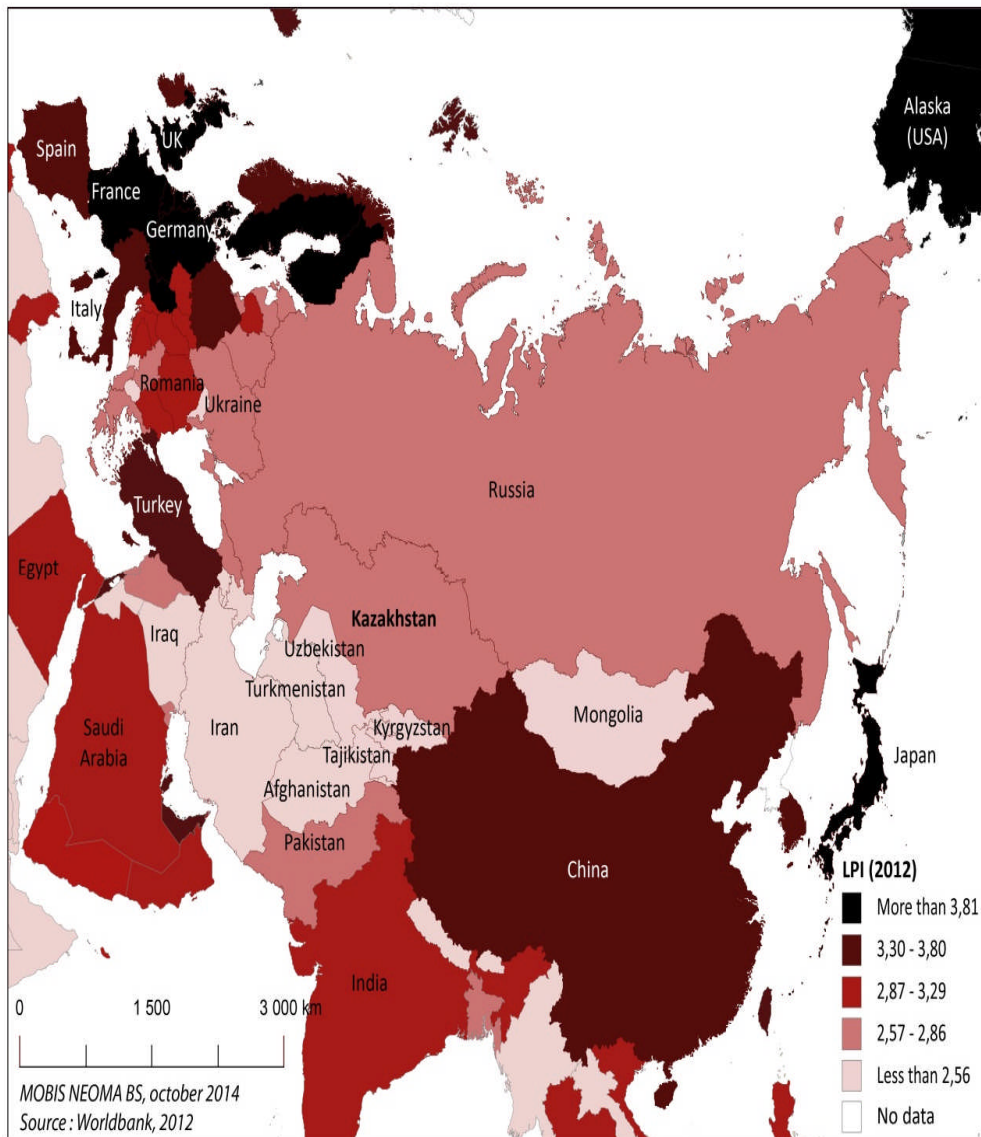


Figure 4: Logistics Performance Index in 2012

Consequently, the development of the strategic location of Kazakhstan, at the heart of Central Asian trade routes, requires an opening of the national economic system, specifically an easing of administrative operations and an improving of local transportation infrastructures. Thanks to the optimization of these key factors, foreign investments can grow and enable Kazakhstan to establish itself as a hub of trade between Europe and Asia.

3. The challenges of logistics development in Kazakhstan Logistics

3.1 A development tool for Kazakhstan

For several decades now, the Central Asian countries have been working to develop and improve their transport system, mainly based on terrestrial infrastructure. On this point, Kazakhstan has advantages over its neighbors, both in terms of accessibility and density of transport infrastructure. Although the railway network inherited essentially from the Soviet period involves, in fact, Russian standards different from those found in Europe or China, such as signaling, track gauge or electrification (Figure 5), Kazakh network is relatively well-connected with East-West corridors (Transcaspian) and North-South corridors (Transaralian and Turksiberian) where regional and international goods passes in transit. Moreover, geographical isolation is less marked for Kazakhstan which has effective transport connections with Russia, China and increasingly with the European transport corridors, via connections between Transaralian and Turksiberian railways and the Trans-Siberian. Indeed, rail traffic appears higher than in neighboring countries (although the lack of data on this point makes it difficult to go even deeper into the subject [Figure 5]).

The growing interest of international investors in Central Asia therefore focuses on Kazakhstan as the country of entry and exit of goods. Their goal is to integrate Central Asia into the global trading system by increasing flows through Kazakhstan. In fact, the significant potential for infrastructural and logistical development in Kazakhstan attracts increasing levels of foreign direct investment (FDI): 134% between 2004 and 2013 according to UNCTAD (Les Echos Data 2014). The strategy of the Kazakh authorities relies also on supporting FDI production and local

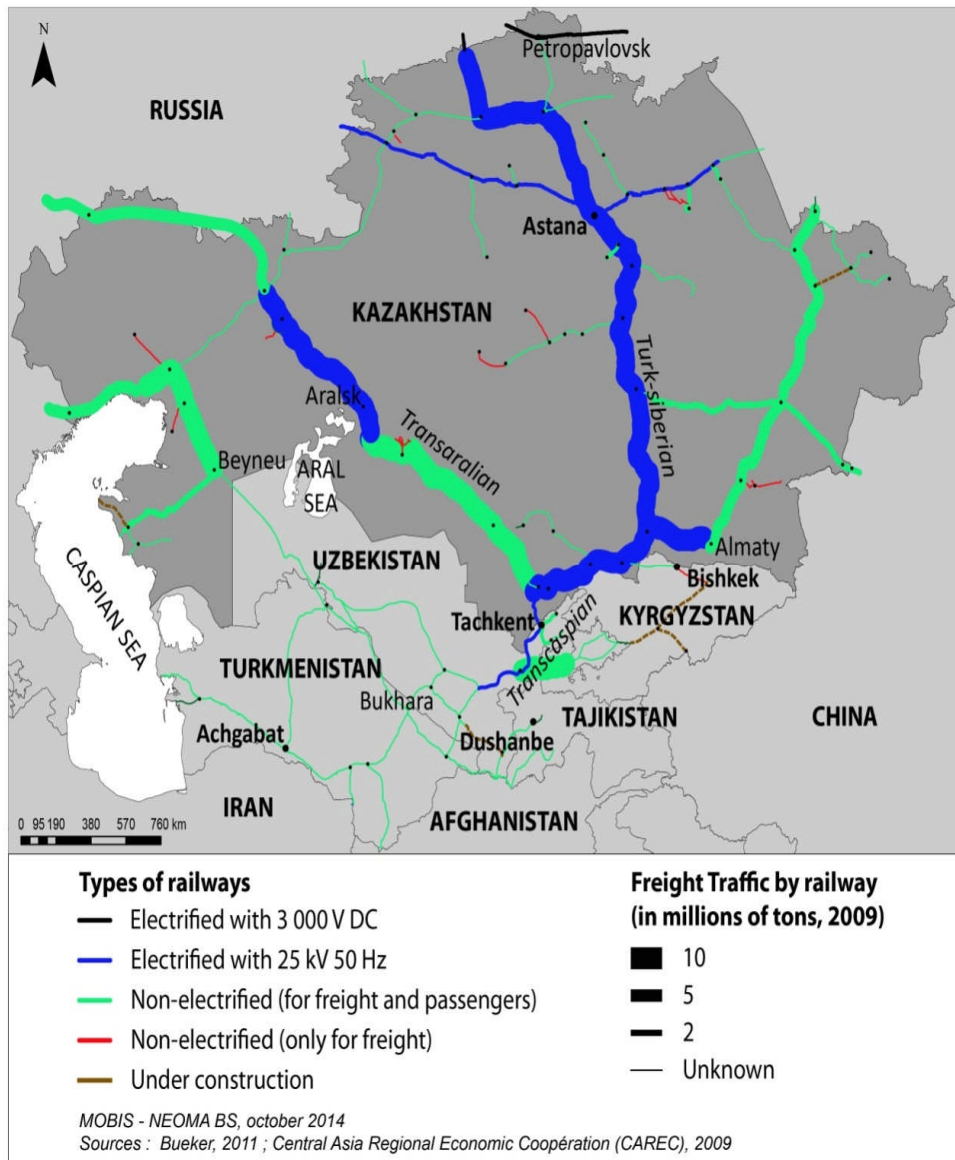


Figure 5: Infrastructure and rail traffic in Central Asia

cooperation, which indicates increasing positive externalities in terms of economic development and jobs.

Finally, the need for transcontinental land transportation services between Europe and Asia requires the creation of new logistics infrastructures causing turmoil for the countries visited. Knowing that logistics facilities to most of them will be set where transport infrastructure will be present, the issue of development of the transport network in Kazakhstan involves strategic planning over the next decades, for the government hopes to assert the countries such as commercial and industrial full partner and not just as a transit of goods on the transcontinental route between Europe and Asia.

3.2. The outlook for industrial and commercial development of Kazakhstan

The increase in FDI flows certainly contributes to the financing of major transport infrastructure projects, but also reinforces the development of the industrial base and the productive apparatus of the country. New opportunities arise for Kazakh leaders with a view to diversifying the national economy still facing the extraction and exploitation of natural resources.

Kazakhstan shows performance rates for some interesting economic indicators, although they need to be improved: a GDP growth of 4.6% in 2014 (Les Echos Data 2014), a growth of trade in 83% between 2009 and 2013 (International Trade Centre 2014), an increase of 134% FDI inflows between 2004 and 2013 (Les Echos Data 2014). Logistics is therefore a strategic lever of development for the country, the latter being a key factor in reducing transportation costs, flow optimization and local development. While it is interesting to note that the industrial economy is important in Central Asia, with an average of 36.4% of GDP for the five countries (World Bank 2010), the Logistics Performance Index of Kazakhstan is, meanwhile, higher than those of its neighbors (2.69 for Kazakhstan, against 2.49 for Turkmenistan, Uzbekistan 2.46, 2.35 and 2.28 for Kyrgyzstan to Tajikistan in 2012), which enhances the country's attractiveness for investments by foreign firms.

Kazakhstan is experiencing intensification of economic relations with Russia and China, as well as increased trade and industrial cooperation with Central Asian countries and the European Union. For example, in an oriented internationalization to Russia and the CIS strategy, Alstom (whose capital has gone largely under the control of General Electric in 2014) opened in 2012 a large factory in the Astana capital of Kazakhstan, in partnership with the Kazakh railway company (KTZ) and its Russian partner, TMH. This partnership aims at meeting the Russian and Kazakh considerable need for contracts of rolling stock, including a new generation of locomotives adapted to the specificities of the former Soviet national networks.

Other major multinationals are also present in Kazakhstan (General Electric, Talgo, and Siemens) and participate in the establishment of the Asia-Europe rail corridor through the Central Asian country. The volumes of cargo flows are thus led to grow and should promote the gradual opening up of Central Asia. However, the challenges can be met only if a commercial opening of the country will be effectively set up together with a statement of political will for economic development. At the same time, progress depends on its ability to overcome resistance to the development of the productive and service economy generated by the dependence of oil and gas exports.

Conclusion

In a volatile global economic environment where companies seek to control their cost of production, including research to optimize their transport chain/logistics, the use of rail freight is emerging as an effective solution to support maritime freight, especially given the difficulties facing it (rising costs and travel time, congestion and saturation of port facilities). The rail transportation solutions between Asia and Europe will not call into question the supremacy of shipping on this major area of international trade. However, they will be an essential complement to the historic trade route in the context of new geography of flows that tends to integrate new players. As such, Kazakhstan, at the crossroads of European and Asian regional economic groupings, crystallizes many geopolitical issues, but mostly presents considerable logistical and economic opportunities.

The challenge for local political and economic actors will be to encourage foreign investments, but also to generate national investments in improving transport infrastructure and the development of logistics services. For this, the current economic system and Kazakh policy must adapt to meet these challenges. The transition from an economy depending on oil and gas to a productive economy and services can only be done by a real political will. Otherwise, transit of goods will not generate new productive functions and could turn thanks to tariffs, into just another financial benefit for the country.

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