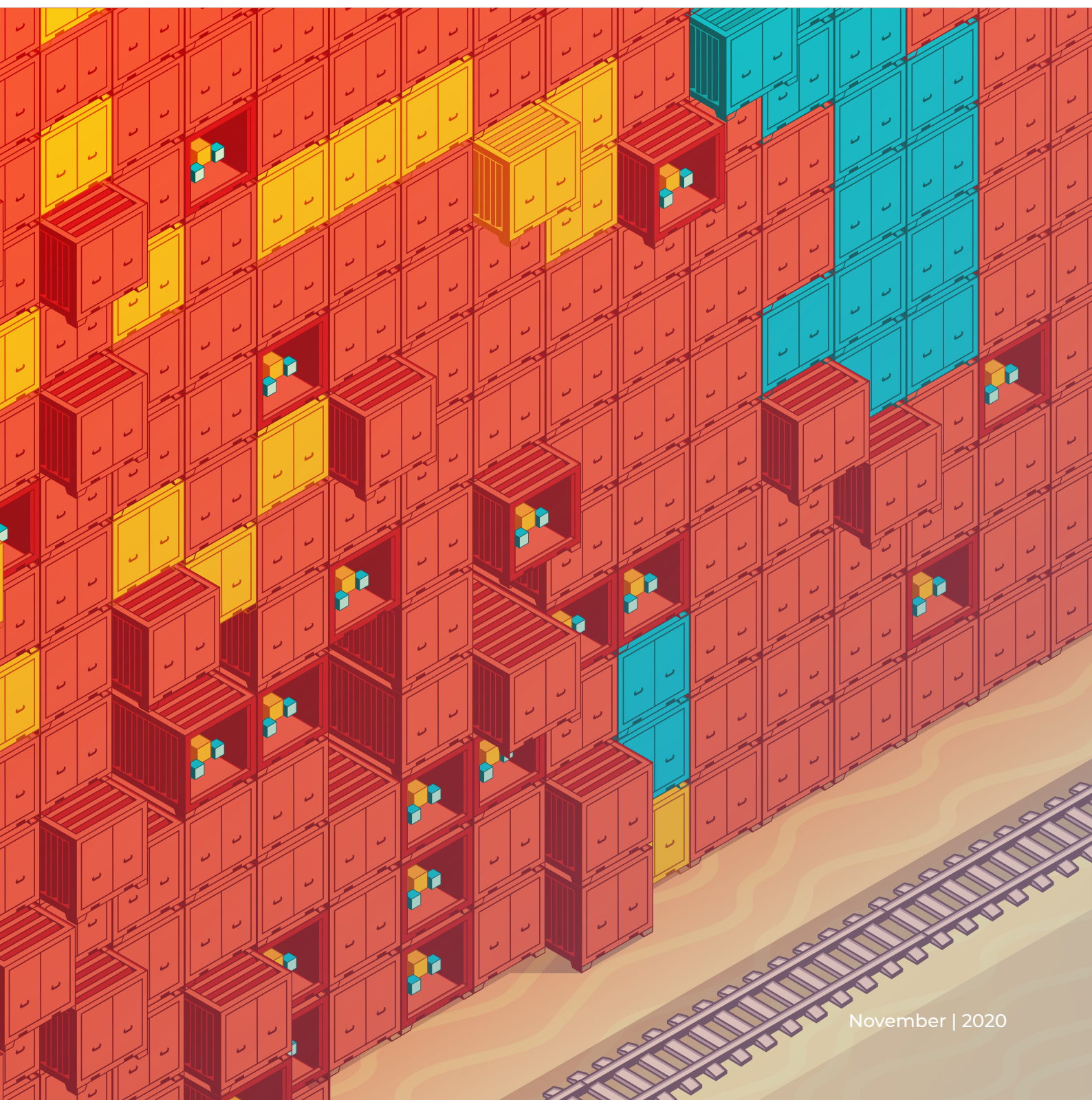


INTERNATIONAL TRANSPORT CORRIDORS IN THE EURASIAN SPACE: DEVELOPMENT OF MERIDIONAL ROUTES



— Table of contents

—	Introduction.....	2
—	Architecture of the North — South Transport Corridor.....	3
	Institutional Framework and Prerequisites of Corridor Setup.....	3
	Main Advantages and Disadvantages of the Corridor.....	5
	Infrastructure along the Route and Interests of Participants.....	7
—	Cargo Base of the North — South Transport Corridor.....	14
	India's Special Aspects of Trade: Partners and Commodity Pattern.....	14
	India-Russia Bilateral Trade: Promising Transit Commodities.....	18
	Iran's Special Aspects of Trade: Partners and Commodity Pattern.....	19
—	Conclusion. Potential of linking Northern Latitudinal and Meridional Routes.....	23

INTRODUCTION

International transport corridors (ITC) are designed to overcome objective physical, economic and political restrictions on the way of commodity flow through establishment of a predictable and transparent operational environment for shippers and consumers of their services. As they connect spaces, transport corridors are considered particularly important on the territory of Eurasia, where states are challenged with their continental location. ITCs are also a point of economic growth, since they connect regions, attract investments and allow countries deriving a benefit from cargo transits across their territories.

In the context of rapid development of various latitudinal routes in the East — West direction (China — EU), particularly of the Eurasian transit route through Kazakhstan, Russia and Belarus, greater attention is paid to development of complementary meridional corridors. The North — South Corridor is one of the vital historical corridors that link Europe and Russia with Iran and South Asian countries. Despite the early start (in accordance with the intergovernmental agreement, a decision was made to set up the North — South ITC in 2000 already), the corridor faced some fundamental restriction that hindered its development.

The North — South ITC is currently a set of logistically unrelated routes united under the shared title of the North — South ITC. Yet, all the countries along the route are interested in fulfillment of its transit potential, though there are also their own interests coming from flow pulling. Though efforts of states are often poorly coordinated, availability of their own development plans, update and expansion of the corridor infrastructure, including railroad one, has been already changing the competitive landscape and geography of commodity flows.

However, its trade that remains the major barrier leading to restrictions associated with a cargo base. While the cargo flow from India to Russia has some containerization potential coming from deliveries of pharmaceutical products and food industry products, the backward flow largely comprised of raw commodities, i.e. liquid bulk cargos and bulk loads, presents a problem of deadheading backwards.

However, gradual, though multidirectional, development of infrastructure along the route, Russia's aspiration to create a uniform operator (which was voiced in 2020), India's inevitable development as one of the critical economic poles of the modern world, these factors tell that it is crucial to estimate possible ways of linking Northern latitudinal routes in the East — West direction to the North — South ITC.

ARCHITECTURE OF THE NORTH — SOUTH TRANSPORT CORRIDOR

Institutional Framework and Prerequisites of Corridor Setup

The international [agreement](#) between Russia, Iran and India on the International North — South Transport Corridor was signed on September 12, 2000, in the course of the Second International Euro-Asian Conference on Transport. In May 2003, ministers of transport signed the protocol on official opening of the corridor in Saint Petersburg. When making the decision parties relied upon increasing regional and global interdependence, their aspiration to enhance trade exchange and transit traffic as a means to accelerate economic growth both within the countries and in the regions along the route.

To support those efforts the Charter of the Coordination Council (CC) of the North — South ITC, the ITC governing body, was approved by ministers of participating countries in 2002. Countries are rotated to chair in CC for the period of one year. Two expert groups operate in the framework of the CC: Commercial & Operational Matters and Documents, Custom Duties & Collateral Issues.

Re-orientation of land transport logistic chains requires significant time and investment. It puts the issue of arranging predictable long-term rules on the part of ITC participants in the foreground. Meanwhile, the longer a transport corridor functions, the more stable and strong the economic relations built around it get, particularly when intracontinental corridors such as North — South ITC are involved.

As it has been pointed out in the previous overview dedicated to the main routes in Eurasia in the East — West direction, a transport corridor is a set of conciliations aimed at changing the speed and direction of commodity flows within a certain space. According to the UN, a transport corridor is also a set of rules regulating the aspects of transportation and transit of goods along a specific route, supported by an agreement signed by the participating countries. Transparency and predictability are key factors in practical application of ITCs.

Investments in transport connectivity reduce the expenses of enterprises, ensure synergetic effect, and become a driver for development of territories. As Russian practices have shown, each ruble invested in infrastructure brings more than one ruble of extra revenue to related branches of the economy. Similar multiplicative effect can be caused by implementation of transport corridor projects.

Thus, countries of the North — South Corridor (NS ITC) seemed to have established required rules for accelerated development of the project through the intergovernmental agreement. Moreover, the North — South Transport Corridor largely takes priorities of development of countries along the route into account, since, aside from the transit between India and Russia, creating of NS ITC was also aimed at development of regional ties in the Trans-Caspian area.

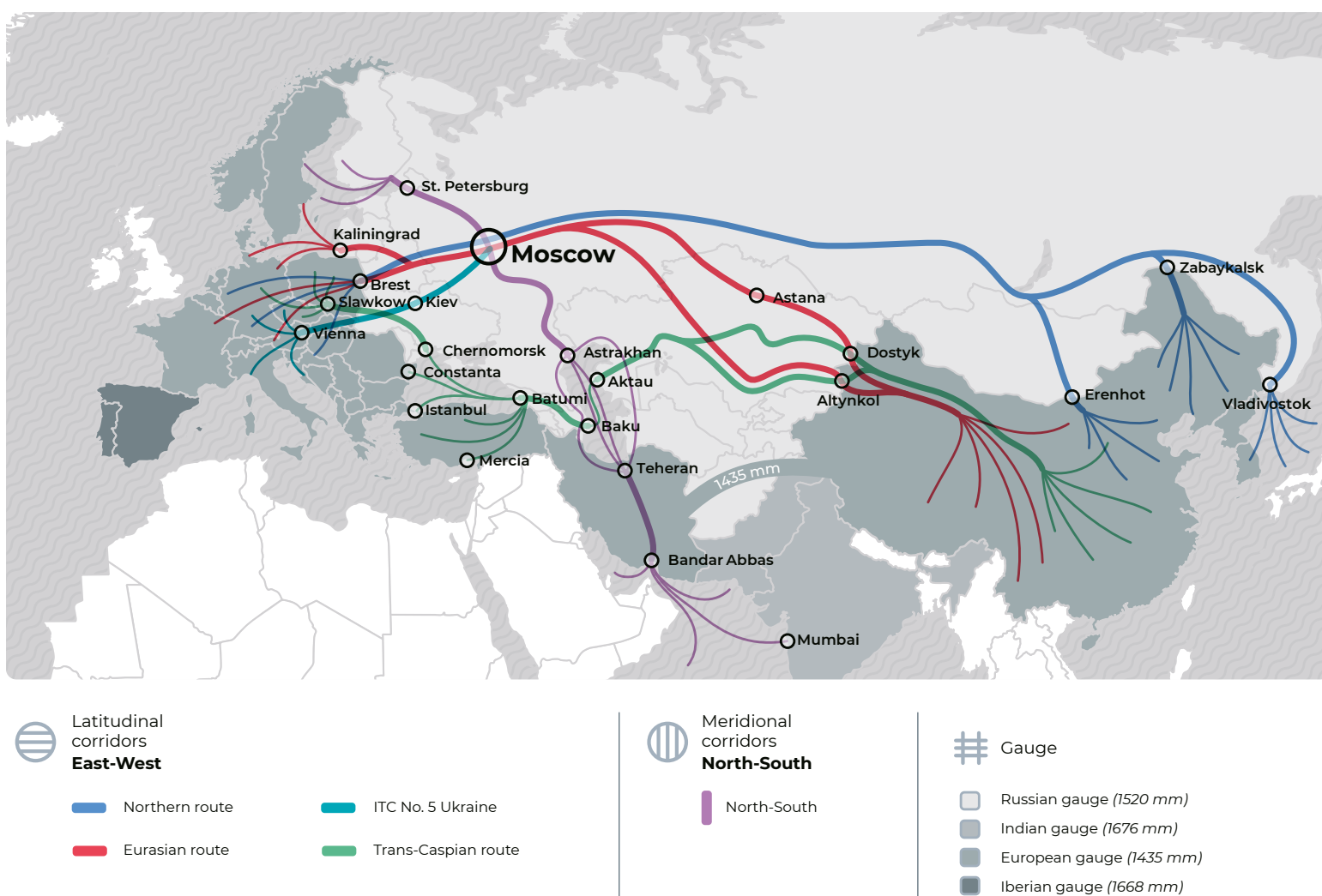
A corridor with a transit across territories of several countries along the way irrespective of priorities for national or regional development and establishment of trans-regional relations face some barriers in the long term. **Thus, the issues of transit logistics should be linked with the issues of trans-regional interaction and establishment of local points of economic growth, as well as with improved regulation and modernization of the infrastructure to serve long-term interests of NS ITC countries.**

Following this paradigm, after the agreement on NS ITC is concluded, it was joined by other interested countries. In 2005, the agreement was joined by Azerbaijan. It was followed by Armenia, Belarus, Kazakhstan, Oman and Syria. Thus, NS ITC became a truly multilateral initiative that united Trans-Caspian region with those adjacent to it. However, active launch and expansion of NS ITC didn't result in successful implementation.

Main Advantages and Disadvantages of the Corridor

From the perspective of pulling transit flows to the railroads, NS ITC is positioned as an alternative to the Suez Canal and sea communication in general. A direct track from St. Petersburg (the point of diffusion to Europe) to the Bandar Abbas Port (the largest port in the South of Iran, a point of freight diffusion) is over 7,000 km depending on the route in the central segment where the corridor is divided into three routes: Trans-Caspian (through the Caspian Sea), Western (through Azerbaijan) and Eastern (through Turkmenistan and Kazakhstan).

BASIC CONTINENTAL INTERNATIONAL TRANSPORT ROUTES OF EURASIA



As the market analysis has shown, at the average the term of container delivery from the Bandar Abbas Port to St. Petersburg is up to 30–35 days by sea and up to 7–10 days by air. Direct delivery from Mumbai (the Port of Bombay on the Western Indian coast, the largest one in the country) to St. Petersburg takes

43–45 days (\$1,850 for TEU). Besides, both paths require transshipment in ports of the Netherlands or Germany. However, these time calculations include customs procedures. According to other data, the term of container delivery by sea along the route Mumbai — St. Petersburg can take about 30 days.

According to the **transportation logistics calculator**, currently there's no opportunity for direct international transportation of a container by railroad along the route St. Petersburg — Bandar Abbas. Therefore, **NS ITC is currently a set of logistically unrelated routes united under the shared title of the North — South ITC.**

After a **trial dispatch** of cargos for the Federation of Freight Forwarders' Associations in India in 2014 suggested at the 5th Meeting of ITC CC in Baku on June 24–25, 2013, that had taken place along various routes, the following results were obtained:

- 1. Route 1:** Nhava Sheva (Mumbai, India) — Bandar Abbas (Iran) by sea (1,265 nautical miles). Bandar Abbas — Baku by car (1,900 km across the territory of Iran plus 250 km through Azerbaijan).
- 2. Route 2:** Nhava Sheva — Bandar Abbas by sea (1,265 nautical miles). Bandar Abbas — Amirabad (Iran) by car or by railroad (1,500 km). Amirabad — Astrakhan through the Caspian Sea (1,000 nautical miles).
- 3. The current delivery route:** Mumbai — Hamburg/Bremerhaven — St. Petersburg (8,675 nautical miles; transit time — 30 days). The cost is \$955–1,400 for a 20 HQ container; \$1,500–1,900 for a 40 HQ one. Main operators: Maersk Line, MSC Line, CMA CGM Line, CSAV Line.

By some estimates, **the launch of direct traffic along the entire route will allow delivering cargos in 12–14 days.** However, to achieve such performance targets a whole range of transportation and logistics problems needs to be solved, infrastructure needs to be updated and, which is more, potential cargo flow needs to be increased along the route.

On the first stage it's important to map a route to Astrakhan that might become a logistics hub for both NS ITC and the possible adjustment of the corridor to latitudinal routes. However, the trial dispatch of containers to Astrakhan and Baku has revealed significant overrun of the expected delivery time — **43 days.** First of all, such a result was caused by down time in ports: The cargo crossed the Caspian Sea in eight days (instead of expected four), while the path from Mumbai to Bandar Abbas took ten days (instead of three). As a result, **by some estimates,** no more than 12–16% of the Russian-Iranian container flow go through Russian ports of the Caspian Sea (Astrakhan, Olya, Makhachkala). There are almost no cargos from India.

In a matter of two decades while the corridor has existed, estimates of the potential flow for a fully operating North — South Corridor have been gradually decreased. Nowadays the trafficability of transit through NS ITC is estimated at 5,000,000 tons (by some estimates — **3.5 mln tons**) at the early stage and at up to 15–20 mln tons in the prospect. So, firstly, these estimates are by several orders lower than the current turnover of the Suez Canal — more than 900,000,000 tons of net tonnage (about a half of the tonnage is container ships). Secondly, this potential is largely based on bulk loads and liquid bulk cargos, and the containerization potential here might be even lower.

Thus, the following advantages of NS ITC can be noted:

- Potentially shorter time of cargo delivery between India and Russia.

- Already existing link of the corridor to national and regional development priorities of Caspian Region countries which makes countries strategically interested in development of NS ITC.
- The potential adjust of NS ITC to latitudinal corridors in the East — West direction in selected transportation and logistics hubs, for example, in Astrakhan.

As for the major challenges at the current stage, the following ones can be noted:

- A lack of a uniform multimodal operator and, therefore, a uniform through rate.
- A lack of the container fleet: as a rule, container lines reluctantly provide their containers for deliveries from Bandar Abbas to Moscow, since the line loses control over the container that travels by land and, therefore, doesn't make money off sea deliveries with this container.
- The problem of returning empty containers. It's largely raw commodities (bulk loads) and liquid bulk cargos that go from the North to the South. Therefore, there's deadheading for containers in this direction. To set up a transportation hub for customs clearing and cargo distribution before they arrive to Moscow could have become a solution. Here NS ITC could be integrated with latitudinal routes.
- All the abovementioned results in non-competitive delivery terms (by some estimates, approximately from \$3,486 to \$7,000 for FEU), particularly for raw commodities (bulk loads) that are more cost-efficient to be sent by sea (for example, from Novorossiysk) which is cheaper.

Infrastructure along the Route and Interests of Participants

In its central part NS ITC is geographically divided into three routes:

- **Trans-Caspian Route:** using Russian ports of Astrakhan, Olya, Makhachkala, and ports of Iran — Anzali, Nowshahr and Amirabad.
- **Western Route:** direct railway communication through border-crossing points, such as Samur (Russia) / Yalama (Azerbaijan) with further access to the Iranian railway system through the border-crossing point of Astara (Azerbaijan) / Astara (Iran).
- **Eastern Route:** direct railway communication through Kazakhstan and Turkmenistan with an access to the Iranian railway system.

Considering the abovementioned transportation and logistics problems infrastructural barriers are an obstacle for the route development. Whether they are overcome largely depends on commitment of states along the way. Consequently, it's important to address their interests and attitudes.

INDIA

For India to take part in NS ITC is an opportunity to increase its export, especially when it comes to high-added value products, and get access to deliveries of raw materials from Caspian Region countries (uranium, copper, titanium, coal, phosphorus, gas, ironstone, oil, etc.) Considering some forecasts that suggest

a chance for India to become the third economy in the world by 2030, and the population of the country to grow enormously (as well as the consumer market), India has prospects to become a new driver of global development. Hence, India has a potential to become an important actor of the global trade just like China, which will affect the potential of all ITCs focused on this country.

Meanwhile Iran as a point of transit has a few positive and negative effects on Delhi. First, since the Iranian Revolution of 1979 Teheran has been under the US sanctions that have not just hindered development of the country significantly (PL 115-44, CAATSA), but also restricted third countries in their interactions with Iran, primarily when it comes to finances. It's a largely constraining, though not major factor for India as an ally of the USA.

India's pragmatic approach and focus on its national interests of development impose a need to expand transport routes through Iran, especially considering confrontation with Pakistan. India strives to balance Chinese investments in Pakistan, modernization of the Gwadar Port and a railroad in the North of the country (the project worth of \$7.2 bln. with an access to Western China). India plans investing \$500,000,000 in development of the Chabahar Port on the coast of Iran and about \$1.5 bln. in construction of railroads and motor roads. The Chabahar Port will be the first deep water port in Iran, also located straight on the coast of the Indian Ocean instead of the Gulf.

However, Indian projects are not focused on NS ITC as such only. One of India's goals is to launch a corridor from Chabahar to Kabul in order to get access to Herat, the headmost province in Afghanistan, and then, most likely, straight to Uzbekistan and Turkmenistan. In 2016, a Trilateral Agreement for Transit was concluded. In 2019, container traffic along the corridor started, though in scope of tens only. Volumes of cargo transshipments in Chabahar are supposed to amount up to 10 mln. tons annually with a prospect of 80 mln. tons in the future.

IRAN

NS ITC offers Iran a possibility to use beneficial economic and geographical situation of the country, overcome negative external effects and drive economic development of the country. Iran has 13,000 km of railroads. Iran requires investments of up to \$2 bln. into railroads and land terminals, and up to \$1 bln. into the port business annually. By some estimates, it might take up to 30 bln. dollars in total to update the railroad infrastructure for NS ITC needs. Due to external sanctions imposed on the country as well as the country's landscape railroads of the country are poorly developed in comparison with neighboring countries.

From the perspective of NS ITC development, the problem was caused by 'bottle necks' in the railroad infrastructure of the country. Only about 4% of cargos in the country are transported by rail. The fact that most railroads in Iran are also single-track and non-electrified restricts opportunities for rapid growth of transit cargo traffic.

A lack of direct railway communication between Russia and Iran is caused by two factors. Firstly, the historical road that connects Teheran and Moscow through Armenia and Nakhchivan (Azerbaijani enclave) was closed, because Armenia was placed under siege by Azerbaijan. Secondly, the Astara — Rasht — Qazvin section designed to connect the railway systems of Iran and Azerbaijan is still under

construction. In 2019, due to the [credit](#) in the amount of \$500,000,000 provided by Azerbaijan [communication along the Rasht — Qazvin section was launched](#). It is planned to put the Rasht — Astara section into operation in 2021 completing the project.

Insufficient financing makes Iranian railroads severely dependent on external investments, which is obviously exemplified by Indian, Azerbaijanian and Russian investment projects. In 2017, JSC Russian Railways and Islamic Republic of Iran Railways signed the [Memorandum on Strategic Partnership](#), including the contract for electrification of the Garmsar — Incheh Borun railway section (with access to Turkmenistan) and supply of Russian equipment and locomotives to Iran. To fulfill the project Iran was granted a [credit](#) of about €1 bln. (85% of financing for the project). In February 2020, JSC Russian Railways made decision to [withdraw from the project](#) because of sectoral sanctions of the USA.

AZERBAIJAN

The government of Azerbaijan consistently pursues a course on turning the country into a critical transportation hub of the region. Both beneficial economic and geographical situation of Azerbaijan and availability of funds for investments in large projects are advantageous for the country. Aside from the project on connecting with Iranian railroads, Azerbaijan was the main investor in construction of the Baku — Tbilisi — Kars latitudinal railroad (about \$775,000,000) which is a part of the Trans-Caspian Corridor.

In the framework of NS ITC Azerbaijan also develops a piece of track that gives into Russia. In 2018, about [\\$180,000,000](#) was invested to expand the trafficability of the Sumgait — Yalama section in the framework of the national investment program. As early as on May 6, 2019, the [Memorandum](#) on Cooperation was signed by JSC Russian Railways, CJSC Azerbaijan Railways (AzRW) and Turkish State Railways (TCDD). Thus, Azerbaijan managed to ensure adjustment of latitudinal and meridional routes, while Turkey was included in the system of Eurasian transport corridors.

Since oil products constitute a significant part of Azerbaijanian export, the country has a substantial export potential which also drives development of infrastructure and logistics.

KAZAKHSTAN AND TURKMENISTAN

Just like Azerbaijan, Kazakhstan strives to use benefits of its location at the joint of European roads to the fullest extent through development of transit. The Eastern route of NS ITC goes through Kazakhstan and Turkmenistan. Since the breakup of the Soviet Union three joints with Iranian railroads have been constructed in Turkmenistan. By 2014 [construction of the railroad](#) Uzen (Kazakhstan) — Gyzylgaya — Bereket — Etrek (Turkmenia) — Gorgan (Iran) with an access to the railway system of JSC Russian Railways was completed. Considering small commodity turnover between Central Asian countries and Iran this trunk line is designed specifically for potential transit of NS ITC.

As of yet, the road is underemployed. In 2018, the volume of cargos passing across the border with Iran amounted to 1,200,000 tons only, including 226,000 tons of transit flow. **Thus, the rout is hardly connected with transit flows and used as a regional route for trade of Kazakhstan and Turkmenistan with Iran.** Specificity of commodities transported along the route is also important, since they are mostly raw commodities and low-added value products that make containerization difficult.

Some prospects for increasing transit volumes are linked with Chinese export to Iran which is obviously limited due to the economic situation in Iran. Nevertheless, by some estimates, shipment from China to Iran by rail is still better in terms of speed than by sea. Besides, 80% of the Iranian population live in Northern regions that gravitate toward the Caspian region.

As for European cargos, in this case the Eastern route is inferior to the Western one laid through Azerbaijan at least because of a slightly larger transportation leg. It takes 12 days for a TEU container to arrive from Moscow to Astara, while the way from Moscow to, let's say, Turkmenian Bereket takes 14 days. It's important to consider the distance of the latter one from the Iranian border.

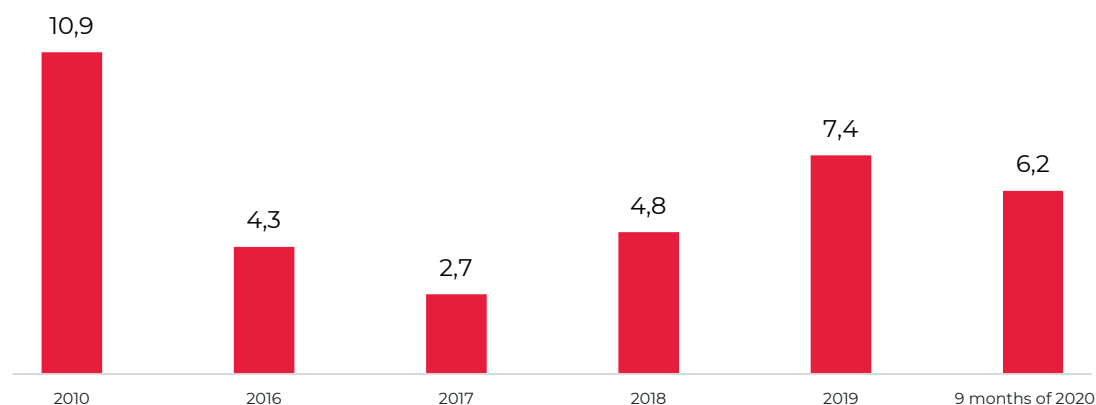
RUSSIA

At the moment NS ITC fulfills several tasks for Russia. Firstly, South — East is designed to drive economic development of Southern regions of the country, primarily such as the Astrakhan Region, the Republic of Dagestan and the Republic of Kalmykia. Secondly, the corridor must fulfill the transit potential of the country in terms of meridional routes. Thirdly, it is to drive trade with India and Iran. Currently none of these tasks is fulfilled to the full extent.

Economies of the Astrakhan Region and the Republic of Dagestan have significant fulfillment potential due to unique location of regions. Historically, Astrakhan has been a center of trade with Persia. It's the 'Caspian Gate' merchant Afanasy Nikitin started his 'journey beyond three seas' with. Nowadays 91% of port turnover in the Astrakhan Region is accounted for by cargos of the Iranian direction.

TURNOVER OF RUSSIAN CASPIAN BASIN PORTS

mln. t

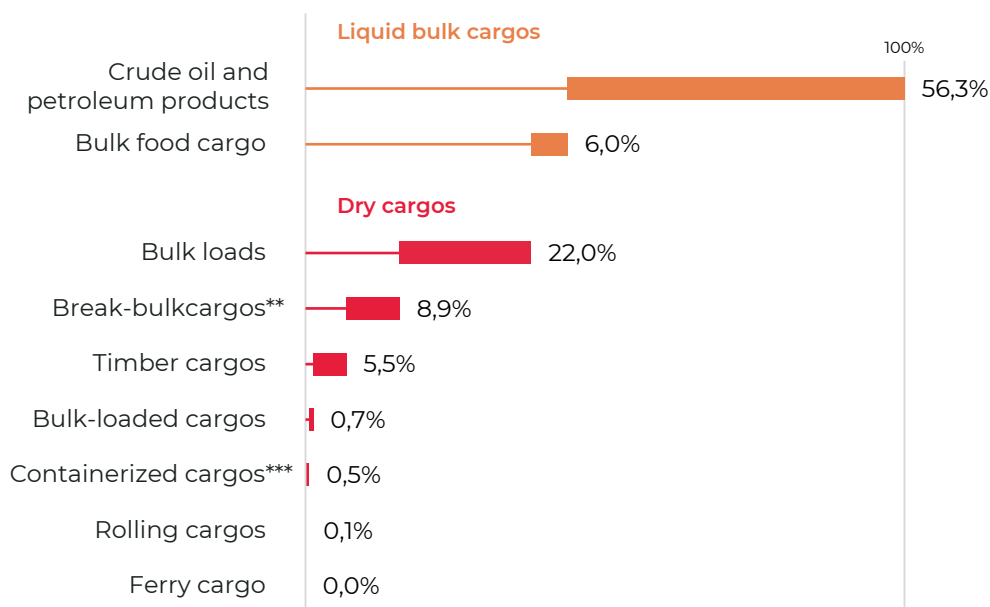


Despite positive dynamics of the cargo turnover in 2019 and 2020 (+53% against 2018), such a dynamics is rather a recovery, since in 2010 the turnover used to reach 10,900,000 tons. As evidenced by statistics, the main cargos are liquid bulk cargos (oil going through the Makhachkala port), bulk loads (grains showing sustainable growth) and break-bulk cargos (primarily ferrous metals). Dependency on raw commodities makes the turnover subject to the state of the market. Therefore, Iran's development of its own ferrous metallurgy gradually reduces traffic for commodities of the industry.

Existing capacities of Russian ports in the Caspian Region don't have a competitive port infrastructure to develop container traffic. According to the results of 2019, the container turnover of the Russian Caspian Basin amounted up to 3,000 TEU. Meanwhile, only 1–1.5% of turnover of the Russian ports is accounted for by Caspian ports.

CARGO TRANSSHIPMENT IN RUSSIAN PORTS OF THE CASPIAN SEA* IN 2019 (TT)

thousand tons



*Astrakhan, Olya, Makhachkala

**Ferrous metals, scrap metal

***36,5 thousand tons

According to the Strategy for the development of Russian seaports in the Caspian Basin as well as road and railway approaches to them till 2030, container cargo turnover between Russia and India through the Caspian Region and further transit across the territory of Iran is a promising direction with a potential fulfillment of which requires a few measures, including construction of a new deep water sea port (terminal) to be taken. Given all the measures are successfully taken by 2030, it is planned to reach the mark of 265,000 TEU of container cargo turnover.

In the context of NS ITC the phenomenon of flow pulling and development prioritization manifested itself starkly. For a long time there had been high hopes for development of the Lagan Port on the territory of the Republic of Kalmykia. The Strategy of 2017 pointed out inexpediency of modernization of Kalmykia's only port

in Lagan. However, by Edict of the Government of the Russian Federation [No.1980-r dated July 29, 2020](#), renovation of the Lagan Port at the cost of 41.3 bln. RUB was included in landing planning of the Russian Federation. The port will be expected to have a capacity of 12.5 mln. tons annually, include a terminal of liquid bulk cargos with the capacity of 500,00 tons per year, a container terminal with a capacity of 5 mln. tons per year, and a terminal of break-bulk cargos with a capacity of 2 mln. tons per year.

Significant support for unlocking the transit potential of the Caspian Sea Region can be derived from granting the status of a [special economic zone](#) to Astrakhan ports. It would allow establishing stable 'rules of the game' for completion of customs formalities, as well as transferring the center of those formalities straight to the transportation hub. Such a special status is already assigned to Iranian ports in Gilan Province ([Anzali Free Zone](#)) which makes the Anzali Port one of the [best-equipped and most modern](#) in the Caspian region.

As for development of linear infrastructure, JSC Russian Railways has the following [plans](#) in the framework of work on NS ITC in the period until 2025:

- arrangement of high-speed operation of passenger train in the St. Petersburg — Buslovskaya section;
- development of the Moscow railway junction;
- reconstruction of and electrification of the Rtishchevo — Kochetovka section;
- reconstruction of a roundabout route for the Saratov railway junction;
- comprehensive reconstruction of the Trubnaya — Verkhny Baskunchak — Askaraiskaya section;
- projects on arrangement of high-speed operation and high-speed running, etc.

Finally, in February 2020 a [Set of Measures](#) for development of North — South ITC transit potential was approved by A.R. Belousov, First Deputy Prime Minister of the Russian Federation. Key measures can be pointed out:

- establishment of ANO Directorate of International Transport Corridors responsible for expert and analytical follow-up of North — South ITC;
- organization of reception for the first trial containers along North — South ITC using existing infrastructure in the Astrakhan Region;
- design of a financial model for the organizational structure of the Uniform Operator of North — South ITC and establishment of this operator; conclusion of agreement with large shippers;
- examination of reasonability of arranging international sea (container and ferry) communication along the following routes:
 - ports Olya/Astrakhan/Makhachkala — Anzali, Amirabad (main route),
 - ports Olya/Astrakhan/Makhachkala — Aktau/Kuryk,
 - ports Olya/Astrakhan/Makhachkala — Turkmenbashi,
 - ports Olya/Astrakhan — Baku;
- organization of a special port economic zone in the Astrakhan Region (on the territory next to the Olya sea port), its integration into the Caspian cluster with the SEZ Lotos of production and industrial type as a cargo base for North — South

ITC with a uniform managing company and delegation of authorities regarding cluster management to the Ministry of Economic Development of Russia;

- exploration of the issue of creating multimodal transport and logistics centers in key foreign ports of North — South ITC (Anzali, Aktau (Kuryk), Chabahar, Mumbai) and delegation of authorities regarding their establishment and management to the managing company of the Caspian cluster, and a few others.

In addition to the government efforts there was an important practical step in the form of agreement between RZD Logistics and Indian corporation CONCOR (Container Corporation of India Ltd), the largest operator of railway container traffic in India, signed in February 2020. The agreement calls for provision of a container fleet by the Indian party to organize the flow across the corridor.

Thus, despite certain stagnancy of the recent years and existing restrictions, NS ITC can soon receive its uniform operator which will allow shaping the final architecture of the corridor — on both institutional and transportation-logistics levels. It makes sense to examine the issue of possible connection of the Eurasian route to NS ITC in case implementation of all the abovementioned measures is successful.

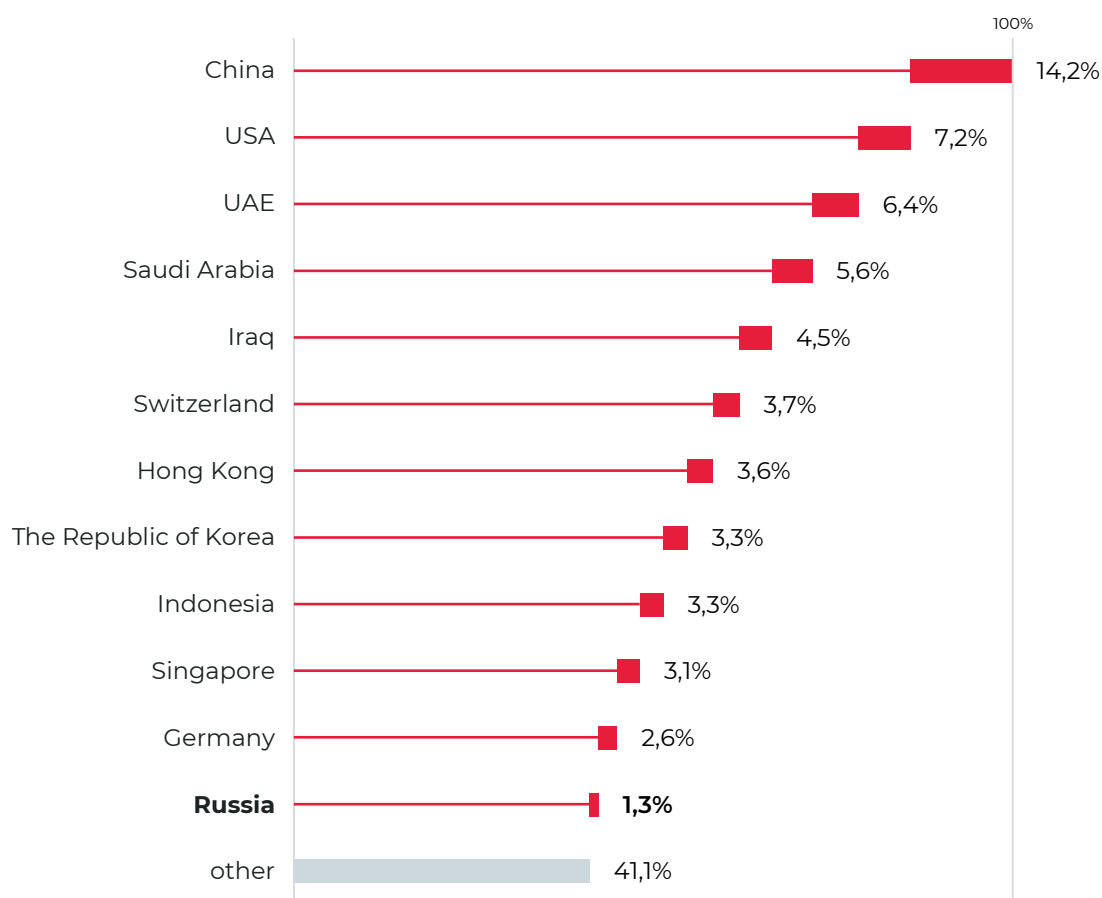
CARGO BASE OF THE NORTH — SOUTH TRANSPORT CORRIDOR

India's Special Aspects of Trade: Partners and Commodity Pattern

Its social and economic dynamics makes India one of the most promising markets. In 2019, the population of the country amounted to 1.36 bln. people, while remaining rates of natural increase will soon bring the country to the first place in the world by population. Besides, the country is relatively young; the average age of the population is 28.7 years. And a level of urbanization is 34.9%. Per capita GDP is \$7,200 (compare with PRC where it's \$19,000). All of it makes India a country with a huge potential despite existing problems.

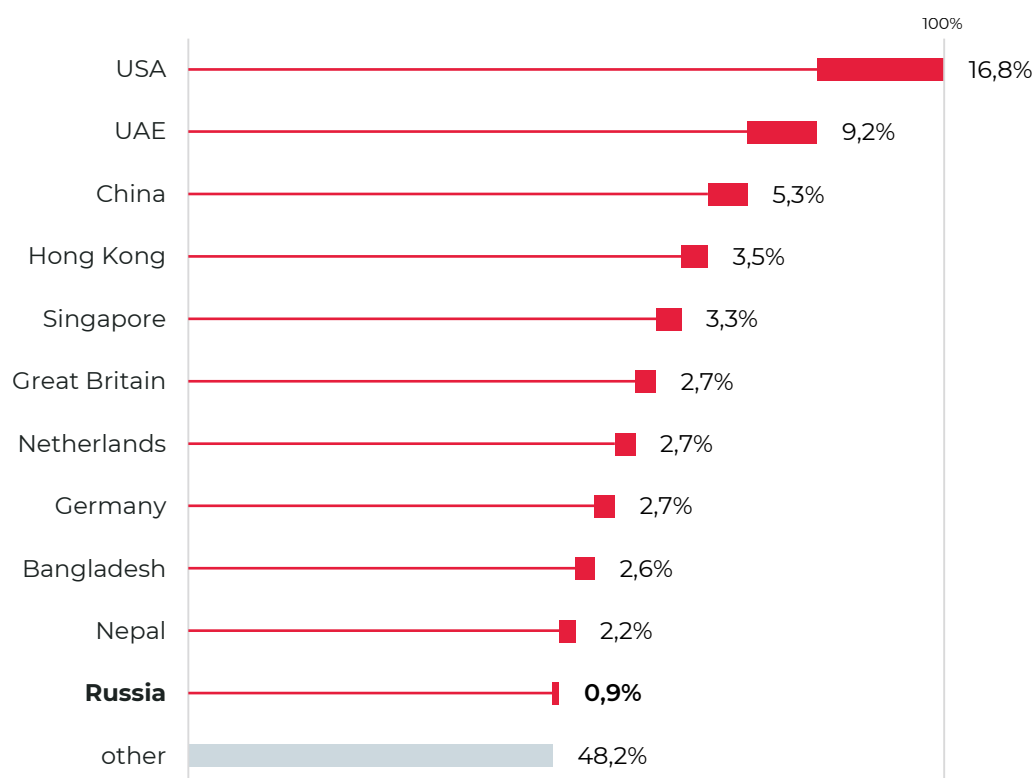
According to the World Bank, in 2019, India's GDP at purchasing power parity reached the mark of \$9.6 trln. At the same time, India's trade-to-GDP ratio, a major indicator of the country's openness to the world, is about 40% and has been decreasing consistently since 2012 (55%).

According to ITC data of 2019, India has a negative balance of the commodity turnover (–157 bln. dollars). The total export volume of the country is \$322.8 bln., and the import volume is \$480 bln. As the diagrams show, lists of key trade partners for export and import differ. The main importer of Indian commodities is the USA (\$54.1 bln.) Meanwhile, the major volume of India's export is accounted for by PRC (\$68.2 bln.).

MAIN DIRECTIONS OF IMPORT TO INDIA (2019)

Historically, the country has had strong ties with the USA and Great Britain. Latitudinal relations are well-developed as well: firstly, with Gulf countries, suppliers of energy resources with the Indian diaspora of about 6,000,000 people, and, secondly, with Asia-Pacific Region States (Hong-Kong, Singapore, Korea, Indonesia).

MAIN DIRECTIONS OF EXPORT FROM INDIA (2019)



India's participation in the global trade has its special features. Limited natural resources make the country put the issue of energy supplies in the foreground. Almost 32% of the country's import is accounted for by mineral fuel, including oil. Import of precious stones that ranks second in the world is also raw materials-based for a well-developed jewelry industry of the country. The country also imports a lot of electronics from PRC and Eastern Asia. As for the structure of the country's export, it's more diverse.

Examination of India's trade commodity composition allows making some important conclusions. First of all, the country is oriented on latitudinal trade. Secondly, **India's import largely consists of raw commodities that are less subject to containerization.** Thirdly, **the export potential of the country in terms of container traffic is tied to pharmaceuticals (about 5% of valuable export) and textiles** (also about 5% of export in total). Fourthly, analysis of the country's trade partners points out a relatively small share of EU member countries in India's import which hampers full-fledged focus on this end market.

Commodity group	Export in 2019 (Thous. USD)	Export share, %
All commodities	322,786,377	100%
Mineral fuel, oil and petroleum-derived products, bituminous substances, mineral waxes	44,081,090	13.66
Natural or cultured pearl, precious and semi-precious stones, precious metals, clad metals and commodities made of them, bijouterie, coins	36,650,342	11.35
Nuclear reactors, boilers, equipment and mechanical devices, their parts	21,158,021	6.55
Organic chemical compounds	18,296,277	5.67
Vehicles for land transport except railway and tram rolling stock, their parts and accessories	17,188,139	5.32
Pharmaceutical products	16,124,969	5.00
Electric machines and equipment, their parts; sound-recording and sound-reproducing equipment; equipment for record and reproduction of TV image and sound, their parts and accessories	14,672,931	4.55
Ferrous metals	9,665,316	2.99
Articles of clothing and accessories except jersey, machine- or hand-knitted goods	8,599,203	2.66
Articles of clothing and accessories — jersey, machine- or hand-knitted goods	7,908,865	2.45
Plastics and plastic commodities	7,425,253	2.30
Cereals	7,383,962	2.29
Commodities of ferrous metals	7,246,870	2.25
Cotton	6,261,658	1.94
Fish and shellfish, mussels and other water invertebrates	6,143,340	1.90

Commodity group	Import in 2019 (Thous. USD)	Share of Import, %
All commodities	480,002,972	100%
Mineral fuel, oil and petroleum-derived products, bituminous substances, mineral waxes	153,515,316	31.98
Natural or cultured pearl, precious and semi-precious stones, precious metals, clad metals and commodities made of them, bijouterie, coins	60,003,049	12.50
Electric machines and equipment, their parts; sound-recording and sound-reproducing equipment; equipment for record and reproduction of TV image and sound, their parts and accessories	50,380,048	10.50
Nuclear reactors, boilers, equipment and mechanical devices, their parts	44,058,900	9.18
Organic chemical compounds	20,542,164	4.28
Plastics and plastic commodities	14,642,078	3.05
Ferrous metals	11,574,128	2.41
Fats and oils of animal or vegetable origin and their degradation products; ready-made edible fats; waxes of animal or vegetable origin	9,606,429	2.00
Optical, photographic, cinematographic, measuring, control, precision, medical or surgical instruments; their parts and accessories	9,493,302	1.98
Fertilizers	7,332,699	1.53

India-Russia Bilateral Trade: Promising Transit Commodities

In 2019, India-Russia bilateral trade reached the mark of \$8.9 bln. Meanwhile, India has a negative balance of –3,3 bln. dollars in commodity trade with Russia. India's export to Russia that amounted to \$2.8 bln. in 2019 features positive dynamics with an increment of 31% in comparison with 2017. India's import from Russia in 2019 amounted to \$6.1 bln. with a reduction by 23% in comparison with 2017.

Commodity group	India's export to Russia (Thous. USD)			
	2017	2018	2019	Export share, %
All commodities	2,139,563	2,338,940	2,804,276	100%
Electric machines and equipment, their parts; sound-recording and sound-reproducing equipment; equipment for record and reproduction of TV image and sound, their parts and accessories	64,113	238,827	498,322	17.77
Pharmaceutical products	405,591	410,385	461,505	16.46
Nuclear reactors, boilers, equipment and mechanical devices, their parts	190,023	210,464	225,347	8.04
Organic chemical compounds	131,202	147,563	188,916	6.74
Coffee, tea, mate or Paraguay tea, and spices	136,334	128,433	117,856	4.20
Vehicles for land transport except railway and tram rolling stock, their parts and accessories	109,040	120,085	102,830	3.67
Ferrous metals	81,963	77,006	101,992	3.64
Fish and shellfish, mussels and other water invertebrates	66,194	84,560	89,152	3.18
Other chemical products	42,195	46,850	65,265	2.33
Various food products	70,051	47,162	64,517	2.30
Meat and edible meat offal	34,311	54,194	60,576	2.16
Edible fruits and nuts; peels and rinds of citrus fruits or melons	44,786	54,886	55,873	1.99
Natural lac; gums, resins and other vegetable juices and extracts	35,640	47,933	48,671	1.74

A list of export nomenclature from India to Russia largely correlate with the trade composition of the country in general, though it has a few special features. Two main items of export to Russia are electric machines and equipment and pharmaceutical products that rank sixth and seventh respectively in the total export of the country. Besides, export nomenclature to Russia is largely represented with agricultural and food industry commodities (coffee, fish, meat, fruits, vegetable juices) amounting to about \$500,000,000 in total. A lack of Indian textiles among major commodities is also interesting.

Commodity group	India's import from Russia (Thous. USD)			
	2017	2018	2019	Share, %
All commodities	7,976,972	6,823,232	6,120,389	100%
Mineral fuel, oil and petroleum-derived products, bituminous substances, mineral waxes	1,989,173	2,210,776	2,881,958	47.09
Natural or cultured pearl, precious and semi-precious stones, precious metals, clad metals and commodities made of them, bijouterie, coins	3,675,344	1,829,993	642,042	10.49
Fertilizers	346,449	378,861	427,162	6.98
Not specified (private article)	155,601	679,090	348,965	5.70
Paper and cardboard; commodities made of paper pulp, paper or cardboard	280,613	258,455	282,536	4.62
Plastics and plastic commodities	81,193	129,185	188,597	3.08
Ferrous metals	223,648	172,106	175,597	2.87
Salt; sulfur; soils and stones; plastering materials, lime and cement	108,610	118,675	149,363	2.44
Fats and oils of animal or vegetable origin and their degradation products; ready-made edible fats; waxes of animal or vegetable origin	28,204	10,827	117,221	1.92

Import from India to Russia is extremely concentrated: 47% of import in value terms is accounted for by mineral fuel represented with oil and oil products. Also, due to well-developed jewelry industry various precious stones are transported to India for processing. Besides, about 6% of import is comprised of private article commodities. As a rule, this category includes export of weaponry which is subject to fluctuations of the political environment and does not abide by laws of the market economy.

Thus, among all the items of a promising commodity nomenclature pharmaceuticals, food products (in refrigerator containers) and, if there's a demand for it, textiles can be pinpointed for organization of transit container traffic across North — South ITC. A large problem is backward cargo flow represented mainly with liquid bulk cargos. As a result, transport and logistics development of North — South ITC faces restrictions of the cargo base.

— Iran's Special Aspects of Trade: Partners and Commodity Pattern

Despite Iran's status of one of leaders in the region, its economy has been under the external pressure for a long time, including pressure caused by sanctions, which is one of the largest factors defining specificities of Iran's external trade. In its turn, trade inequalities have a negative impact on development of North — South ITC caused by the issue of the route's cargo base.

When analyzing Iran's external trade, it's important to note the problem of accessibility and correctness of statistical data. Since such a work relies on UN statistics processed by ITC (International Trade Center), the most proper year to describe tendencies of Iran's trade is 2018.

In 2018, Iran's trade import amounted to \$41.2 bln. with the export of \$96.6 bln. (data by UN Comtrade Database). Thus, the country has a significant positive balance. However, detailed analysis of Iran's trade commodity composition has revealed that the country's export is based on raw commodities. 69% of export in value terms (\$66.34 bln.) is accounted for by mineral fuel, oil in particular. Other important export items are plastics (6%), organic chemistry (4%) and ferrous metals (4%), fruits and nuts (2%).

Commodity group	Iran's export in 2016 (Thous. USD)	Iran's export in 2017 (Thous. USD)	Iran's export in 2018 (Thous. USD)
All commodities	78,267,311	91,737,444	96,617,521
Mineral fuel, oil and petroleum-derived products, bituminous substances, mineral waxes	51,323,294	61,111,371	66,366,802
Plastics and plastic commodities	4,940,010	6,042,678	5,551,469
Organic chemical compounds	3,687,847	3,955,392	4,105,898
Ferrous metals	2,491,561	3,438,364	3,905,528
Edible fruits and nuts; peels and rinds of citrus fruits or melons	2,256,561	2,259,891	1,718,813
Ores, slag and ash	1,103,045	1,842,902	1,138,483
Vegetables and some edible root and tuber crop	614,903	633,911	1,074,662
Fertilizers	790,490	769,517	843,714
Salt; sulfur; soils and stones; plastering materials, lime and cement	809,050	860,716	785,180
Others			10,426,417

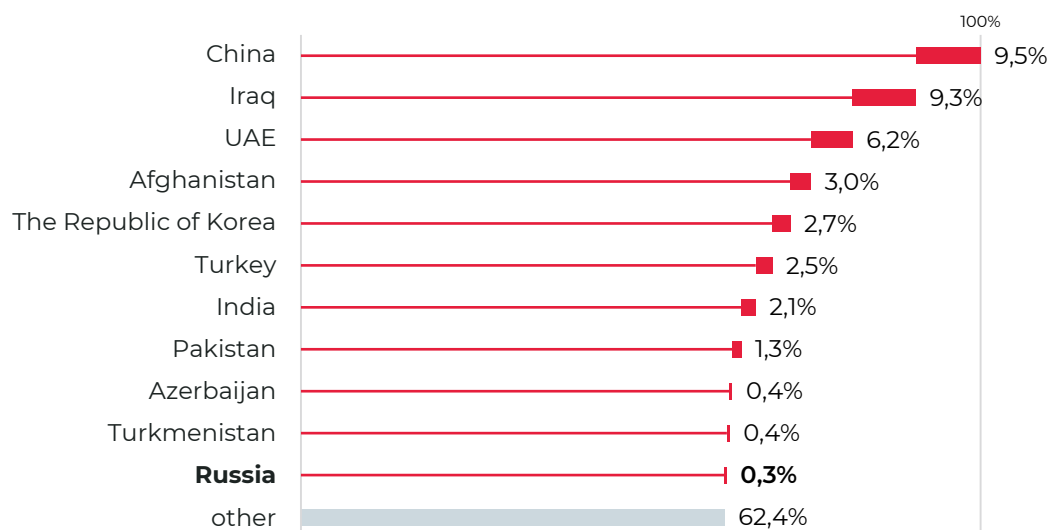
Iran's import is diverse enough which is related to the sanctions imposed on the country, since they determine the inflow of the most important commodities and parts that are not produced within the country. Iran imports such commodities as equipment of all kinds (19% of import); cereals, including grains (10%), electronics (9%), pharmaceuticals (4%), vehicles for land transport (4%), etc. Therefore, Iran's structure of trade creates some restrictions for the process of cargo flow containerization because of raw materials-based export of the country and its import comprised of higher-added value commodities.

Interestingly, import of ferrous metals is gradually reduced due to efforts of the government of the country to develop the industry. Import of ferrous metals has been reduced since \$1.9 bln in 2016 to \$1.3 bln. in 2018, and it's still being reduced.

Commodity group	Iran's import in 2016 (Thous. USD)	Iran's import in 2017 (Thous. USD)	Iran's import in 2018 (Thous. USD)
All commodities	42,702,118	51,612,277	41,236,168
Nuclear reactors, boilers, equipment and mechanical devices, their parts	7,561,602	8,848,565	7,686,643
Cereals	2,788,165	3,407,175	4,350,129
Electric machines and equipment, their parts; sound-recording and sound-reproducing equipment; equipment for record and reproduction of TV image and sound, their parts and accessories	4,538,473	4,939,081	3,658,308
Not specified (private article)	1,989,112	4,123,798	2,730,360
Pharmaceutical products	1,456,460	1,568,906	1,577,328
Vehicles for land transport except railway and tram rolling stock, their parts and accessories	3,094,254	3,294,331	1,531,118
Oil seeds and fruits	1,396,633	1,471,015	1,511,493
Optical instruments and devices	1,295,203	1,739,247	1,406,191
Organic chemical compounds	1,037,554	1,350,776	1,385,798
Plastics and plastic commodities	1,578,590	1,792,188	1,283,768
Ferrous metals	1,874,803	2,089,790	1,210,176
Others			12,904,854

Specificities of commodity composition determine a set of major export directions for Iran. The first place is occupied by PRC with a share of 21% which amounts to \$9.2 bln. Meanwhile, trade with PRC is organized largely by sea in conjunction with places of mining and production of four major commodities: plastics (\$2.9 bln.), mineral fuel (\$2.4 bln.), organic chemistry (\$2.2 bln.), ore (\$1 bln.) A significant share is also accounted for by Iraq, UAE, Afghanistan, Republic of Korea and Turkey.

IRAN'S EXPORT IN 2018



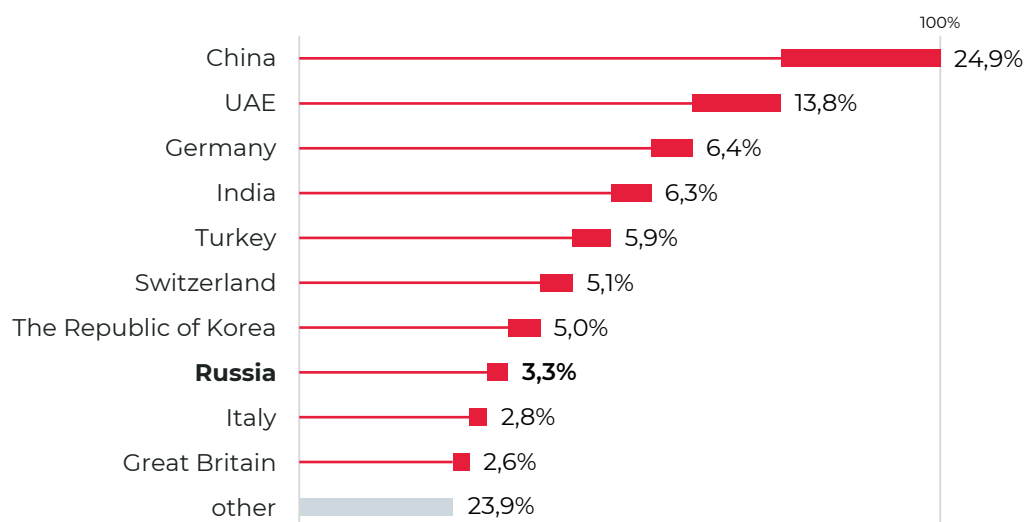
As for import, the first place here also goes to China (25% of Iran's import). Chinese import amounts to \$10.2 bln. and comprises mostly equipment (\$2.4 bln.), electronics (\$1.6 bln.) and various consumer goods (\$1.7 bln.) In the list of importing country China is followed by UAE (14%), India (6%), Turkey (6%) and Germany (6%). Import from these countries is similar to the Chinese one by structure, since it's where electronics, equipment and consumer goods prevail.

Trade between Iran and Russia is slightly different by nature. According to the Federal Customs Service of Russia, in 2019, Russia-Iran turnover was \$1.6 bln. having been reduced by 8.73% in comparison with 2018. Russia's export to Iran amounted to \$1.2 bln., and import — \$391 mln.

Russia's export comprises such groups as food commodities and agricultural products (about 80% of export; grains and fat-and-oil products), machines and equipment (8%), timber and pulp and paper products (7%). Meanwhile, in 2019 only export of ferrous metals was reduced by \$72.4 mln.

Russia's import from Iran has a similar structure, though it's largely raw materials-based, and it also differs from Iran's export to other key partner countries. About 78% of import is accounted for by food commodities and agriculture. Then there are products of the chemical industry (9%) and metals (3%). Thus, on the one hand, Russia's import and export in the country's trade with Iran are similar by structure. On the other hand, the fundamental role of low-added value products or raw materials restricts development of container cargo traffic and makes the trade between countries subject to the state of the market depriving it of any predictability.

IRAN'S IMPORT IN 2018



As a result, Iran's external trade is quite specific by both commodity composition and partner countries. Sanctions against the country make a significant impact on the economy of the country resulting in dominance of raw commodities and low-added commodities in the country's export structure and in the reverse situation for import, which is represented with higher-added value commodities. Such a situation presents a challenge for development of North — South ITC from the perspective of both loading the route with commodities and consistency of these flows.

CONCLUSION.

POTENTIAL OF LINKING NORTHERN LATITUDINAL AND MERIDIONAL ROUTES

Development of North — South ITC faces some fundamental challenges: a limited cargo base, fragmented essence of the route at the current stage, various interests of states though joint under the shared aegis. From the perspective of transportation and logistics, potential railway trains will have to cross the sea at least once, change the gauges (1,676 mm in India, 1,435 mm in Iran, 1,520 mm in Russia) and cross several borders.

When estimating the integration potential of the Eurasian corridor in the East — West direction to North — South ITC, the cargo base and a possible route need to be estimated. Examination of the cargo flow has revealed restrictions related to specificities of India's external trade and the containerization potential. India's trade is mostly latitudinal. While the cargo flow from India includes some high-added-value commodities suitable for container transportation, the counter flow from Russia comprises mainly raw materials.

The issue of transit to EU countries of PRC requires further examination when it comes to cargo flows. Nevertheless, based on trade statistics, a secondary role of the European market for India can be noted. As for trade with China, India has a significant negative trade balance of \$51.2 bln. This will also lead to inequalities when arranging transport corridors.

From the perspective of transport logistics, only some regions of PRC, Europe and India will gravitate toward North — South ITC given convenient sea routes available. In India the state focused on trade through Iran is Gujarat, one of the most important centers of the country. In Europe the most important connections for India are still through Great Britain, as they are logically organized by sea. In this regard, India should possibly focus on trade with Germany, Poland and Nordic countries which is insignificant in the total volume of Indian trade.

India's relations with PRC are potentially restricted with political differences that can become a hindrance on the way of creating any transport corridors. Essentially, transport corridors are aimed at establishment of world economic relations through a certain degree of integration (a uniform rate, a uniform operator or a set of solid agreements).

Nowadays North — South ITC in its northern part mostly operates in favor of trade between Russia and Iran. Given there are already three routes in the central part of the corridor, they start competing. Russia most likely tends to the central or Trans-Caspian Route that goes through Iran directly to Russia. It is promising to set up a transportation hub in Astrakhan or in any other place on the territory of the country.

The path that using a single economic space of the EAEU seems the most convenient, i.e. a route through the Caspian Sea to the ports of Kazakhstan or Russia depending on the destination of the cargo. Therefore, when choosing adjustment routes, it would be reasonable to focus on Astrakhan/Olya or Kuryk/Aktau ports specifically considering their integration points.

It's important to consider that even with the positive institutional dynamics (establishment of a uniform operator, elimination of 'narrow places' in the infrastructure) North — South ITC will face limitations of the cargo base for trade with India. Hence, increased cargo flow at this route will be primarily caused by trade with Iran and only then — with development of a transit from India.