

Kalyuzhnova, Yelena; Pomfret, Richard

Working Paper

Trade corridors in the Caspian region: Present and future

ADB Working Paper Series, No. 1266

Provided in Cooperation with:

Asian Development Bank Institute (ADBI), Tokyo

Suggested Citation: Kalyuzhnova, Yelena; Pomfret, Richard (2021) : Trade corridors in the Caspian region: Present and future, ADB Working Paper Series, No. 1266, Asian Development Bank Institute (ADBI), Tokyo

This Version is available at:

<https://hdl.handle.net/10419/238623>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by-nc-nd/3.0/igo/>



ADB Working Paper Series

TRADE CORRIDORS IN THE CASPIAN REGION: PRESENT AND FUTURE

Yelena Kalyuzhnova and
Richard Pomfret

No. 1266
May 2021

Asian Development Bank Institute

Yelena Kalyuzhnova is director of the Centre for Euro-Asian Studies of the University of Reading. Richard Pomfret is a professor of economics emeritus of the University of Adelaide, Australia, and adjunct professor of international economics at Johns Hopkins University, SAIS Europe, Bologna, Italy.

The views expressed in this paper are the views of the author and do not necessarily reflect the views or policies of ADBI, ADB, its Board of Directors, or the governments they represent. ADBI does not guarantee the accuracy of the data included in this paper and accepts no responsibility for any consequences of their use. Terminology used may not necessarily be consistent with ADB official terms.

Working papers are subject to formal revision and correction before they are finalized and considered published.

The Working Paper series is a continuation of the formerly named Discussion Paper series; the numbering of the papers continued without interruption or change. ADBI's working papers reflect initial ideas on a topic and are posted online for discussion. Some working papers may develop into other forms of publication.

The Asian Development Bank refers to "China" as the People's Republic of China, and to "Russia" as the Russian Federation.

Suggested citation:

Kalyuzhnova, Y. and R. Pomfret. 2021. Trade Corridors in the Caspian Region: Present and Future. ADBI Working Paper 1266. Tokyo: Asian Development Bank Institute. Available: <https://www.adb.org/publications/trade-corridors-caspian-region-present-future>

Please contact the authors for information about this paper.

Email: y.kalyuzhnova@henley.ac.uk

Asian Development Bank Institute
Kasumigaseki Building, 8th Floor
3-2-5 Kasumigaseki, Chiyoda-ku
Tokyo 100-6008, Japan

Tel: +81-3-3593-5500
Fax: +81-3-3593-5571
URL: www.adbi.org
E-mail: info@adbi.org

© 2021 Asian Development Bank Institute

Abstract

The historical routes from the People's Republic of China (PRC) and India to the Middle East or Europe ran north of, south of, and across the Caspian Sea. Since 1500, maritime transport has dominated trade between Europe and East Asia. Central Asia became an economic backwater, incorporated into the Russian Empire and later forming part of the Soviet Union from 1917 to 1991. Practically all the trade links ran north to the Russian Federation. In the 21st century, with the increasing significance of Central Asia as an energy producer, countries have constructed several oil and gas pipelines. However, for trade in other goods, new transport corridors opened up more slowly until, in the 2010s, the PRC–EU rail links began operating through Kazakhstan. This paper examines the establishment of new trade corridors in the form of pipelines and railway lines, focusing on trans-Caspian links. It also discusses the impact of the COVID-19 pandemic on international trade. The disruption resulting from lockdowns and quarantine requirements has negatively affected maritime, air, and other types of transportation. The COVID-19 pandemic, coupled with substantially depressed energy prices, is putting additional financial pressure on the Caspian governments, which are struggling with the major medical challenges that the pandemic has created.

Keywords: trade, Caspian region, Trans-Caspian International Transport Route, energy, oil

JEL Classification: F13, P25, P28, Q35

Contents

1.	INTRODUCTION	1
2.	ENERGY AND PIPELINES.....	1
3.	THE EURASIAN LANDBRIDGE	3
4.	THE MIDDLE CORRIDOR	5
5.	COVID AND THE LANDBRIDGE: OUTLOOK FOR THE 2020S.....	6
6.	CONCLUSION AND POLICY RECOMMENDATIONS	9
	REFERENCES	10

1. INTRODUCTION

The historical silk roads from the People's Republic of China (PRC) or India to the Middle East or Europe ran north of, south of, and across the Caspian Sea. Cities flourished in Central Asia; Merv, Bukhara, and Samarkand all had periods of glory between the 1100s and the 1400s. Since 1500, however, maritime transport has dominated trade between Europe and East Asia. Central Asia became an economic backwater, incorporated into the Russian Empire and forming part of the Soviet Union from 1917 to 1991. Almost all trade links ran north to the Russian Federation.

The situation has started to change in the 21st century. With the increasing significance of Central Asia as an energy producer, countries constructed oil and gas pipelines to the Black Sea and to the PRC in the 2000s and exported oil across the Caspian Sea to link up with the Baku–Tbilisi–Ceyhan pipeline to the Mediterranean. For trade in other goods, new transport corridors have opened more slowly, but, in the 2010s, rail links between the PRC and the EU began operating through Kazakhstan. This paper examines the establishment of new trade corridors in the form of pipelines and railway lines, focusing on trans-Caspian links.

2. ENERGY AND PIPELINES

In the 1990s, eight countries in the Caspian region became independent, and many people named some as new potential rivals to the Middle East in the production of oil and gas. Without doubt, the region possesses sizable energy reserves, around 2.7% of the total proven oil reserves and 7% of the proven natural gas (Kalyuzhnova et al. 2002), with a complicated geopolitical situation and an interesting location between the Russian Federation, the PRC, Iran, and Turkey. The region is a magnet for foreign countries (the neighbors as well as the US, Europe, Saudi Arabia, Pakistan, Japan, etc.) and their businesses. Political, economic, and business interests intersect here. All this creates competition and cooperation but sometimes even leads to conflicts, making this region attractive and, at the same time, challenging. Historical factors play a crucial role along with commercial interests competing with political settings.

For the last two decades, the newly independent countries in the Caspian region have been building new institutions and creating their own national identities. At the same time, the countries have been suffering from economic hardship (Kalyuzhnova et al. 2002; Kalyuzhnova 20011; Pomfret 2003, 2019b). The countries were attempting to reform backward and very inefficient industries as well as reducing their overdependence on trade with the Russian Federation. Unfortunately, all the Caspian region's countries had a low level of economic development with concentration on the raw material sectors. A common theme of all the Caspian countries is the dependence of their economies on mineral wealth. "The last 20 years have brought significant changes to their economic development, with the hydrocarbons sector in particular giving these economies a new shape, for example in the strategic importance of Russia, Kazakhstan and Azerbaijan in world energy markets" (Kalyuzhnova and Patterson 2006: 6).

The size and distance played an additional negative role in economic growth. Being a landlocked area with a low GDP and population density, the region had limited domestic markets. The extremely large distances of the Caspian hydrocarbon reserves from the international energy-consuming regions were a real obstacle to the full development of the energy sector. Realistically, only hydrocarbon resources could give a quick financial

return at that time to the countries struggling with economic transition. However, the landlocked geography created logistical obstacles to exploration and production (Soligo and Jaffe 2002).

Soon, increasing competition, as well as co-operation, for the control of hydrocarbon resources emerged among several of the geopolitical actors (the Russian Federation, Iran, Turkey, the PRC, India, Pakistan, Afghanistan, the United States, the European Union and its particular member states, ethno-religious groups, transnational corporations, crime groups, etc.). In the academic literature, this is also known as the New Great Game (Kalyuzhnova et al. 2002; Amineh 2003; Bayramov 2020).

It was already clear in the 1990s that, to gain control of the Caspian region's hydrocarbon resources, it was necessary to construct transport routes. The question of where to construct pipelines created conflicts (including ethno-religious conflicts) between the interested actors, which often caused problems and obstacles to the building of the most economically viable and secure pipelines (Yenikeyeff 2011).

The Caspian nations faced problems such as the legal status of the Caspian Sea, which created uncertainty in pipeline construction (Karataeva 2020), and the lack of infrastructure, technology, and finance. The Caspian basin has a reputation as the most challenging "oil prospecting territories in the world" (Soligo and Jaffe 2002: 110). In addition, the region wanted to avoid overdependency on the Russian Federation, so the concept of using multiple export routes became the preferred option (Lee and Kalyuzhnova forthcoming).

The complexity of all these issues around energy resources in the Caspian region have settled down slightly over the years. The economies became stronger due to the high oil prices over a long period (1999–2014). The interests of the main actors also became more pragmatic and, from the "New Middle East," the region quickly gained a new name as the "region with substantial hydrocarbon resources," the exploration and production of which are expensive and technologically difficult.

The legacy of the Soviet era was the oil pipeline system (Atyrau–Samara and Baku–Novorossiysk) to transport oil from the Caspian region, which the Soviet Union designed to serve its energy needs. These pipelines passed through the Russian Federation. During the first two decades after its independence, the region developed a new oil export infrastructure with a focus on diversification of the pipeline routes to reach new markets. The Caspian pipeline infrastructure includes the following pipelines: Baku–Supsa—1999; the Caspian Pipeline Consortium (CPC)—2003; and Baku–Tbilisi–Ceyhan (BTC)—2006.

At the same time, the cooperation between the PRC and Kazakhstan (the major oil producer in the region) developed significantly. "The PRC's first steps into Kazakhstan's oil and gas sector came with the Chinese National Petroleum Corporation's (CNPC) purchase in June 1997 of a 60% stake in Aktobemunaigas, then the country's fourth-largest oil producer" (Kalyuzhnova and Lee 2014: 209). It constructed the pipeline that linked the Aktobe and Douth Turgay regions as well as a line connecting Aktobe and Atyrau (Lee and Kalyuzhnova forthcoming). Gradually, the PRC became one of Kazakhstan's most important trade partners. The Sino-Kazakh energy and economic cooperation created good potential for further development of beneficial links for both countries.

Kazakhstan was not the only country in the Caspian region in which the PRC possessed great interest. From Turkmenistan (the major gas producer), the PRC built natural gas pipelines through Uzbekistan and southern Kazakhstan. Undoubtedly, at the present time, the PRC has filled its strategic oil reserves with crude at low prices, tapping into the

Caspian region's vast energy resources. This might change, but only if other actors decide to work proactively in the region. For example, the EU needs the Caspian region's natural gas as much as the PRC does. A conflict of interests and competition are clear here. In this light, the soon-to-be-completed Southern Gas Corridor (SGC), a new source and route of the gas supply to Europe, has led to renewed interest in constructing a Trans-Caspian Pipeline (TCP). The proposal for a new pipeline along the seabed of the Caspian Sea has been the subject of discussion for several decades. By 2018, countries had reached an agreement on the delimitation of the Caspian Sea, which reduced the legal obstacles to a TCP. The only economical way to move natural gas from one side of the Caspian to the other is via pipeline.

From time to time, there have been intermittent efforts to revive this project. The importance of a TCP is due to its possibility of strengthening European energy security and linking the region with the EU. At the present time, some of the current arguments about the construction of the TCP are about lower construction costs and higher returns when energy prices increase (for further information on the TCP, see Lee and Kalyuzhnova forthcoming).

3. THE EURASIAN LANDBRIDGE

In 2000, several rail lines connected the PRC and Europe; none were competitive with sea freight. International traffic made little use of the TransSiberian Railway after the 1960 Sino-Soviet split. A rail line between Kazakhstan and Xinjiang, completed in 1990, mainly took Kazakh coal, steel, iron ore, and other minerals to the PRC in return for Chinese manufactured goods. After a Turkmenistan–Iran railway opened in 1997, a line south of the Caspian Sea from Turkmenistan through Iran and Turkey to Europe featured on UN maps as a TransAsian main line, but the line operated far below capacity due to burdensome regulations for crossing Turkmenistan and Uzbekistan, a cumbersome change of gauge operations at the Turkmen–Iran border, poor track maintenance in western Iran and eastern Turkey, and the need for a ferry across Lake Van. As its flagship aid program to Central Asia, starting in 1993, the EU promoted the Transport Corridor Europe–Caucasus–Asia (TRACECA) route from Central Asia across the Caspian Sea to Baku and then across the Black Sea from Georgia to Europe, but the changes of mode (rail–sea–rail–sea–rail) made the TRACECA route commercially unattractive.

In 2008–9, German car companies commissioned block trains to carry components via the TransSiberian Railway to their joint venture assembly operations in the northeast of the PRC (VW/Audi in Jilin and BMW in Shenyang). Similar services were provided for Daewoo, which sent components by sea from the Republic of Korea to Lianyungang and then by rail to the company's car assembly operations in Uzbekistan. These trips showed that overland rail transport was feasible, but other potential customers did not use them because the trains did not run to a schedule and they still believed that overland freight was uncompetitive with sea transport, apart from special cases. The situation changed dramatically between 2011 and 2016.

The stimulus for change was the decision of major electronics firms (Foxconn, HP, Acer, and others) to build large assembly facilities for laptops, printers, and other electronic equipment in Chongqing. The initial intention was to export the products via the Yangtze River and Shanghai, but the Yangtze River route soon became congested. An alternative was to send the goods by train to Europe. In 2011 and 2012, individual trains connected Sichuan Province and Chongqing Municipality with Europe, much like the block trains on the TransSiberian Railway. An important additional development was the establishment

of a regular rail service between Chongqing and Duisburg in 2013, the frequency of which increased to three times a week in 2016 and daily in 2018.

The Chongqing–Duisburg route was so successful that other cities in the PRC and Europe trialed rail connections. Some routes were successful, with regular established services (e.g., Yiwu–Madrid), and some termini would become hubs; for example, Łódź (Poland) became an Eastern European hub and Klaipėda (Lithuania) a hub for southern Sweden, while other routes would be unprofitable. By May 2017, China Railway Express trains were connecting 37 cities in the PRC to destinations in 11 EU countries. China Railway reported over 6,000 trips in 2018 and 5,266 in the first eight months of 2019 (*Global Times* 2019).

The creation of the Eurasian Landbridge was market driven as rail companies responded to the demand by coordinating services and agreeing on transit procedures (Pomfret 2019a). The revenues for Deutsche Bahn and China Railway Express and the transit fees to Kazakhstan, the Russian Federation, Belarus, and Poland were substantial. Freight forwarders and couriers responded by offering more services, for example arranging multimodal connections and improved tracking, consolidating part-container loads, organizing clearance for goods subject to EU–Russian Federation mutual sanctions, and including refrigerated containers in trains. Through this service provision, hubs such as Duisburg, Łódź, and Yiwu have become popular termini. Traffic on the PRC–Kazakhstan–Belarus route grew from 46,000 TEUs in 2015 to over 100,000 TEUs in 2016 and 175,000 in 2017 (Railfreight.com 2018).

Customers valued the speed and reliability of rail traffic compared with the cheaper but slower sea transport or faster and much more expensive air transport. Major customers were car and electronics customers that produced along international value chains and for which inventories are anathema, whether to allow for variations in delivery times or in the form of goods in transit. The rail times between the PRC and Europe of 12–16 days compared favorably with the maritime shipping times from Shanghai to Rotterdam of 35–45 days and longer times between inland termini. Moreover, the rail track prioritizes freight trains and the arrival times are reliable, whereas ships can be delayed by poor weather, piracy around the Horn of Africa, and congestion in the Suez Canal.¹

Although the Kazakhstan–Russian Federation–Belarus–Poland route is the most popular, volumes are also increasing on other routes between Europe and the PRC. Between January and August 2018, the TransSiberian route from the PRC through the Russian Federation shipped 590,000 containers, already more than the 262,000 containers in 2017, according to Oleg Belozarov, CEO and Chairman of the Board of Russian Railways (Railfreight.com 2018). However, it is not clear whether this figure for TransSiberian traffic includes bilateral PRC–Russian Federation traffic as well as trains between the PRC and Europe.²

In an October 2013 speech in Astana, the PRC's President Xi Jinping announced the Silk Road Economic Belt, an overland connection with the support of funding from the Asian Infrastructure Investment Bank. Chinese maps showed the Belt following a route south of the Caspian Sea through Iran and Turkey, in contrast to the Landbridge routes through the Russian Federation. Together with the Maritime Road that the PRC

¹ In March 2021, the 200,000-tonne *Ever Given* container ship ran aground in high winds and a sandstorm, blocking the Suez Canal for a week and highlighting the potential for delays.

² There is a general problem of inconsistent data depending on the source; compare Table 1 in Watanabe, Shibasaki, and Arai (forthcoming). However, all the estimates of freight traffic along the landbridges north of the Caspian Sea tell similar stories of continuous rapid growth since 2011.

announced soon afterwards, this would become the Belt and Road Initiative (BRI). In May 2017, representatives of over 130 countries attended the Belt and Road Forum in Beijing for the formal launch of the BRI.

Although the BRI often appears to be a grand overarching plan, the PRC's actions can be opportunistic. One week after the lifting of the UN sanctions on Iran in January 2016, President Xi visited Tehran.³ On 28 January, the first train left Yiwu for Tehran with 32 containers; the train bypassed Uzbekistan by crossing Kazakhstan before following the Caspian coastal rail line from Kazakhstan to Turkmenistan and Iran, which had opened in 2014 (Pomfret 2019b: 270). A Yinchuan–Tehran train service began operation in September 2017, and, by the end of 2017, two trains per month were running to a regular schedule. The establishment of a route from Bayannur in the PRC's Inner Mongolia Autonomous Region to Tehran took place in May 2018. Reports circulated that the PRC, Iran, and Turkey were discussing an extension to a Tehran–Europe service.

A rail link between Kashi (Kashgar), the most western point on the PRC's rail network, and Andijan via the Kyrgyz Republic is under active discussion.⁴ That would complete a continuous line from the PRC, via Uzbekistan, Turkmenistan, Iran, and Turkey, to Europe. Uzbekistan is actively supporting this southern route, which, since the election of President Mirziyoyev in December 2016, no longer seems like a transit-unfriendly bottleneck. Turkey's rail tunnel under the Bosphorus (the Marmaray Tunnel), which opened in 2013, added an important piece to the southern route to Europe as it means that transferring to a ferry across the Bosphorus may no longer be necessary.

Meanwhile, traffic along the old TRACECA multimodal route via Baku, which people now refer to as the Middle Corridor, has started to increase. The westbound traffic along this corridor amounted to 200 TEUs in 2017 and 15,000 TEUs in 2018, with expectations of 60,000 TEUs in 2019 (RailFreight.com 2019).

4. THE MIDDLE CORRIDOR

During the 2010s, interest in the Middle Corridor connecting Central Asia to Europe via a Caspian Sea crossing revived. Despite the resumption of the TRACECA project, the EU has not participated directly but has been a facilitator on the western side by extending its Trans-European Transport Networks (TEN-T) to include Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine with a view to connecting the TEN-T with networks in Asia. The completion of two long-standing projects formed an important background: the 988 km Trans-Kazakhstan railway between Zhezkazgan and Beyneu in 2014, which greatly reduced east–west travel times between the PRC and the port of Aktau,⁵ and the much-delayed Baku–Tbilisi–Kars line in 2017, linking the Caspian port to the Turkish rail network.

³ The PRC's \$1.5 billion loan for the electrification of the Meshed–Tehran rail line was the first loan to Iran after the lifting of sanctions, although it did not sign the contract to start work on electrifying the line until August 2019.

⁴ However, the Kyrgyz Republic is wary of contracting debt, even on concessional terms, from the PRC; the proposed line passes through sparsely populated regions and would be unlikely to generate sufficient transit revenue to service a loan (Pomfret 2020: 79–83). At the Second BRI Forum in April 2019, the PRC promised to address concerns about the original concept by establishing a BRI Debt Sustainability Framework and a panel of international mediators from BRI countries to resolve disputes arising from BRI projects.

⁵ Watanabe, Shibasaki, and Arai (forthcoming) document other Kazakh government initiatives across Kazakhstan and at Caspian Sea ports intended to improve the PRC–Caspian region rail links.

Kazakhstan signed the Trans-Caspian International Transport Route (TITR) Protocol with Azerbaijan and Georgia in April 2017, establishing the TITR Headquarters in Astana (now Nur-Sultan) and opening a TITR Istanbul office later in the year. The PRC also promoted the Middle Corridor. In November and December 2018, it launched services between Venlo (the Netherlands) and Xian and from Lianyungang to Istanbul, both of which used the Middle Corridor and the Baku–Kars railway.⁶

Links between Eastern Europe and Iran via the Caspian region have also undergone testing. In May 2018, a train from Slavkov in Poland to Bandar Abbas in Iran via Ilyichevsk (Ukraine), Batumi (Georgia), Baku, and Turkmenistan took 12 days to cover the 5,311 kilometers. In October 2019, a 42-container train from Xian crossed the Caspian Sea to Baku and then ran via the Marmaray Tunnel to Prague, highlighting the potential complementarities between the Middle and the Southern Corridor.⁷ There are also complementarities with the TSR route. In May–June 2020, a shipment of forty-one 40-foot containers took 15 days to travel from Yantai in Shandong province to Kyiv via Mongolia, the Russian Federation, and Kazakhstan, loading the cargo onto ships at Aktau to cross the Caspian Sea and back onto a train in Baku before crossing the Black Sea from Georgia to Ukraine. A second train from Wuhan in June 2020 used the northern route via Mongolia and the Russian Federation, avoiding sea crossings.

Kenderdine and Bucsky (forthcoming) examined the viability of the Middle Corridor in detail. While acknowledging the major improvements in the rail segments during the 2010s and the less dramatic improvements in the Caspian Sea crossing, they emphasized that the Black Sea leg is still the Achilles heel of the route, which makes it less popular among logistics providers. Boat services from the Georgian ports to Ukraine, Romania, or Bulgaria are slow and have outdated equipment.⁸ Using the Baku–Tbilisi–Kars railway avoids the need for a Black Sea crossing but involves congestion around Ankara and difficulties crossing the Bosphorus due to problems scheduling access to the Marmaray Tunnel.

5. COVID AND THE LANDBRIDGE: OUTLOOK FOR THE 2020S

COVID-19 is spreading economic suffering worldwide, and the Caspian region is no exception. The virus is contagious medically as well as economically. There are sources with connections to the economic shocks, namely medical shocks, which prevent workers from working (ill workers) and producing the GDP; the economic impact on the social infrastructure, for example the closure of educational institutions (schools, universities, etc.); quarantine; travel restrictions; and so on.

The COVID-19 pandemic has seriously disrupted international maritime trade. Even as lockdowns eased and factories started up, containers and ships were in the wrong location as managers dealt with crew safety issues and dockside biosecurity. Manufacturers, distributors, and logistics agents, which had previously relied on maritime

⁶ The train from Venlo in the Netherlands departs to the PRC twice a week via the Middle Corridor. On 26–27 November 2019, Venlo hosted the European Silk Road Summit, a two-day international event dedicated to the New Silk Road.

⁷ ADY Container LLC (a subsidiary of Azerbaijan Railways) and the PRC's Xian Continental Bridge International Logistics Co. signed an agreement at the 2nd BRI Forum in Beijing in April 2019; both companies agreed to launch a total of 30 container trains by the end of 2019.

⁸ The attraction of entering the EU via Bulgaria or Romania is offset by the poor state of the railway track in both countries and by the need to cross Serbia, which requires customs checks, en route to other EU countries.

transport between East Asia and Europe, turned to overland freight routes. Although initially disruptive for many operators, the overland alternatives often turned out to be easier and more profitable than anticipated as users experienced reliable delivery schedules at a time when the air freight alternatives had become increasingly expensive. In May 2020, at the height of the crisis in Europe, 52,500 TEUs were shipped on the Landbridge, the highest ever figure for a single month. The Middle Corridor via Turkey has been busier than ever, with the frequent announcement of new flows.⁹

The year 2020 capped a decade of growth in rail connectivity across Eurasia (Table 1). The initial steps responded to specific requirements of car and electronics companies trying to link their European and Chinese operations. However, the growth in traffic has been remarkable as more services have encouraged greater traffic, which has allowed further specialization among service providers and competition for routes. The original routes ran north of the Caspian Sea, either via Kazakhstan or along the TransSiberian Railway. Their success has encouraged the exploration of alternative routes either south of the Caspian to Iran or along the Middle Corridor with a sea crossing.

Table 1: Volume of Traffic on PRC–EU–PRC Container Trains, 2015–20

Year	Number of Twenty-Foot Equivalent Containers (TEUs)
2015	46,000
2016	100,500
2017	175,800
2018	280,500
2019	333,000
2020	546,900

Source: UTLC website at www.utlc.com (accessed 22 February 2021).¹⁰

Using a variety of modeling techniques, the prospects for the Middle Corridor are examined in greater depth. Kumagait, Tusbota, and Gokan use a spatial computable general equilibrium model to estimate the impacts at the sub-national level. Azhgaliyeva, Mishra, Yoshino, and Karymshakov use enterprise data to identify the impact of variables such as customs efficiency and internet access on different types of firms (e.g., SMEs and large firms).

⁹ This paragraph draws on the report posted on 20 August 2020 at <https://www.railfreight.com/business/2020/08/20/new-silk-road-work-practices-are-a-success-story/>. Watanabe, Shibasaki, and Arai (forthcoming) made similar observations about the comparative advantage of overland versus ocean freight with respect to the Middle Corridor, although it is unclear whether biosecurity measures increased the transit times across the Caspian.

¹⁰ Belarus, Kazakhstan, and the Russian Federation have equal shares in the joint stock company United Transport and Logistics Company (UTLC), which provides services for the transportation of containers via regular container block trains on the PRC–Europe–PRC route through the three countries.

Crises always affect oil, be they financial crises or pandemics. In such situations, it is important to distinguish the duration and the effect. Short-term disruption is inevitable, but people will quickly forget this. The COVID-19 pandemic is having immediately visible effects on economic activity. The rapid contraction in economic activity, the collapse of trade, and the dramatic increase in the unemployment rate are without precedent. The more fundamental question concerns the long-run consequences. It is possible to resolve this crisis only if the global oil demand picks up once lockdowns ease and economies recharge. A crisis such as the COVID-19 epidemic serves as a stress test for the system—a dye inserted and circulated to highlight its functioning in terms of efficiency and capacity.

The facts for the oil industry in 2020 speak for themselves: the oil price is collapsing, and the demand has vanished. In April 2020, West Texas Intermediate (WTI) cost minus \$37/barrel for the first time. Arguably, our energy future will no longer be business as usual. Indeed, the short-run health, economic, social, and psychological impact of the disease has been unprecedented since the end of World War II.

Why has this happened? The possible answer lies in the issues of flexibility and storage. Some storage providers are benefiting from the current oil market state. The upside potential is quite limited as the world is close to reaching storage capacity. Storage expansion is a costly and lengthy process.

An alternative way to stabilize the market is to reduce the supply. Leaving aside the geopolitical and strategic questions, we concentrate on the economics of this approach. It is understandable why oil companies are reluctant to cut their production. Such a process could become extremely costly. At the same time, there is a danger that closing the oil wells could permanently damage them, which could make the losses greater than the profitability damage incurred by temporarily selling oil at a price below the marginal costs or even below zero. In such a situation, at least some producers are ultimately less flexible as they do not have the ability to change production when necessary.

Another emerging question concerns the chance for the oil prices to become negative again. In the current storage situation, this possibility is limited. The supply and demand are becoming quite inelastic, and a large oversupply is temporarily present. There are good reasons to believe that negative oil prices might reappear.

Most of the time, finding storage availability is easy for the suppliers. According to Puranik of GlobalData, “Lack of demand is weighing on liquid storage, which is now edging towards full capacity. Consequently, oil producers and traders are turning to oil tankers as floating storage, thus leading to a surge in tanker chartering rates” (GlobalData 2020).

The COVID-19 pandemic has had a severe impact on air travel (Reed 2020). At the beginning of pandemic, individual behavioral changes took place, such as fear-induced aversion to workplaces and other public gathering places as well as people stopping driving. However, when the lockdown eased, an increase in traffic congestion was apparent. As soon as Wuhan (the PRC) lifted its 76-day lockdown, traffic jams returned to normal. In fact, roads are even more congested since people are wary of using public transport. The disruption is persistent and depends on people’s attitude: do people want to travel on planes and so on?

If the oil demand cycle remains low for longer, that means a longer-term impact and a huge impact on investments in exploration and production. Royal Dutch Shell is cutting dividends for the first time since World War II. The depth of the crisis is showing that there is no return, but the situation also depends on how people behave. In addition, the

oil supply chain will change. Some firms will not survive. There is a critical risk for supply chains.

Oil experts have stated that there will be no return to normal (Barbosa et al. 2020). Clearly, the present time is a defining moment of “restructuring.” The supply chain will gain a new shape, and new opportunities for large oil companies and private equity firms will arise. However, oil service providers as well as refineries will face exposure to the worst of the crisis. “The current disequilibrium in global energy markets is a signal that the post-COVID-19 new energy normal would be characterised by a more uncertain future for the oil and gas industry. To a certain extent, the COVID-19 Pandemic has and will reshape of our energy future. The oil and gas industry will experience short and long term impacts from the crisis to which it will have to adjust, with the potential for future oil demand to be significantly reduced from pre-pandemic forecasts” (Kalyuzhnova and Lee 2020: 174).

The Caspian region remains a key transportation and logistics route. The COVID-19 pandemic coupled with substantially depressed energy prices is putting additional financial pressure on the Caspian governments, which are struggling with the deep medical challenges that the pandemic has created. The reality confronting the region is that medical threats do not recognize borders; nevertheless, overcoming the challenges that the pandemic has created requires cooperation and ability from the leaders of the region. The collateral engagements and honesty in recognizing the problem of the pandemic will be preconditions for victory.

6. CONCLUSION AND POLICY RECOMMENDATIONS

To make the Central Asian economies more diversified and competitive, good transportation routes are necessary. Thirty years ago, all roads, railways, and pipelines from Central Asia ran north to the Russian Federation. Since the 1990s, new pipelines and transport routes have become available, increasing the trade partner options for Central Asian producers and consumers. The Caspian region has reached a critical crossroads in politico-economic terms, and now it must decide which transportation directions to take. The future success of the countries in the region will depend on whether they can take advantage of the opportunities.

The economic impact of COVID-19 has been significant, and it will reverberate for the next few years. Some Caspian countries, like Iran, are among the hardest-hit economies; however, the fallout is also already apparent among all the Caspian states. Since the end of the resource boom (2014), the Caspian countries have banked on trade with their immediate neighbors as a stopgap remedy for their economic needs. This policy of prioritizing trade and other economic ties with immediate neighbors came under even more pressure due to COVID-19. Therefore, the issue of the establishment of new trade corridors in the form of pipelines and railway lines, focusing on trans-Caspian links, is even more important at present.

Central Asian countries recognize the desirability of economic diversification. The improved Eurasian connectivity with new pipelines from the Caspian countries to the PRC and to the Mediterranean and new rail services from the PRC to Europe, Iran, and other destinations provide a window of opportunity for achieving this goal. To take advantage of the new transport options, including the trans-Caspian corridor, Central Asian countries need to implement domestic policy reforms that will make it easier to start new businesses and to trade across borders. Additionally, the region will benefit from common approaches to international trade, embodied in WTO and WCO commitments, and from regional cooperation through organizations such as CAREC.

REFERENCES

- Amineh, Parvizi Mehdi. 2003. *Globalisation, Geopolitics and Energy Security in Central Eurasia and the Caspian Region*. Published by Clingendael International Energy Programme (2003) ISBN 10: 9050310850 ISBN 13: 9789050310857.
- Azhgaliyeva, Dina, Ranjeeta Mishra, Naoyuki Yoshino, and Kamalbek Karymshakov. Forthcoming. "Infrastructure and Firm Performance in CAREC Countries: Cross-Sectional Evidence at the Firm Level."
- Barbosa, F., S. Nyquist, K. Yanosek, G. Bresciani, and P. Graham. 2020. "Oil and Gas after COVID-19: The Day of Reckoning or a New Age of Opportunity?" McKinsey & Company. 15 May. <https://www.mckinsey.com/industries/oil-and-gas/our-insights/oil-and-gas-after-covid-19-the-day-of-reckoning-or-a-new-age-of-opportunity#>.
- Bayramov, Agha. 2020. "Conflict, Cooperation or Competition in the Caspian Sea Region: A Critical Review of the New Great Game Paradigm." *Caucasus Survey*. DOI: 10.1080/23761199.2020.1774856.
- GlobalData. 2020. "Covid-19 Pandemic Has Considerably Disrupted Oil and Gas Supply Chains, Says GlobalData." <https://www.globaldata.com/covid-19-pandemic-has-considerably-disrupted-oil-and-gas-supply-chains-says-globaldata/>.
- Global Times*. 2019. "China Sees Expanding China–Europe Freight Rail Services." 15 September. <http://www.globaltimes.cn/content/1164438.shtml>.
- Kalyuzhnova, Yelena. 2011. "Eurasia: Natural Resources and Economies—An Introduction to the Symposium." *Comparative Economic Studies* 53 (1): 1–4. ISSN 0888-7233. doi: 10.1057/ces.2010.27.
- Kalyuzhnova, Yelena, and Julian Lee. 2014. "China and Kazakhstan's Oil and Gas Partnership at the Start of the Twenty-First Century." *Emerging Markets, Finance and Trade* 50 (5): 206–21. ISSN 1558-0938. doi: 10.2753/REE1540-496X500515.
- Kalyuzhnova, Yelena, and Julian Lee. 2020. "Will COVID-19 Change Oil Markets Forever?" In *A New World Post COVID-19*, 165.
- Kalyuzhnova, Yelena, Amy Myers Jaffe, Dov Lynch, and Robin Sickles (Editors). 2002. *Energy in the Caspian Region: Present and Future*. Palgrave. Basingstoke.
- Kalyuzhnova, Yelena, and Kerry Patterson. 2016. "Kazakhstan: Long-Term Economic Growth and the Role of the Oil Sector." *Comparative Economic Studies* 58 (1): 93–118. ISSN 0888-7233. doi: 10.1057/ces.2015.31.
- Karataeva, Elena. 2020. "The Convention on the Legal Status of the Caspian Sea: The Final Answer or an Interim Solution to the Caspian Question?" *International Journal of Marine and Coastal Law* 35(2), 232-63.
- Kenderdine, Tristan, and Péter Bucsky. Forthcoming. "Middle Corridor—Policy Development and Trade Potential of the Trans-Caspian International Transport Route."
- Kumagait, Satoru, Kenmei Tusbota, and Toshitaka Gokan. Forthcoming. "Corridor Developments for Transforming Central Asia."
- Lee Julian, and Kalyuzhnova Yelena, Forthcoming. "Trans-Caspian Transport Corridor Infrastructure: Oil and Gas Pipelines."

- Pomfret, Richard. 2003. "Economic Performance in Central Asia since 1991: Macro and Micro Evidence." *Comparative Economic Studies* 43 (4): 442–65.
- . 2019a. "The Eurasian Landbridge and China's Belt and Road Initiative: Demand, Supply of Services, and Public Policy." *The World Economy* 42 (6): 1642–53.
- . 2019b. *The Central Asian Economies in the Twenty-First Century: Paving a New Silk Road*. Princeton, NJ: Princeton University Press.
- . 2020. *China's Belt and Road Initiative, the Eurasian Landbridge, and the New Mega-Regionalism*. Singapore: World Scientific Publishing Company.
- Railfreight.com. 2018. "Eurasian Rail Traffic in 2018: Heading to a Million TEUs." 24 December 2018. <https://www.railfreight.com/specials/2018/12/24/eurasian-rail-traffic-in-2018-heading-to-a-million-teus/>.
- Reed, D. 2020. "Airlines Can't Shrink Fast Enough to Keep Up with the Unprecedented Collapse in Global Travel Demand." *Forbes.com*. 26 March. [Forbes.com/sites/danielreed/2020/03/26/airlines-cant-shrink-fast-enough-to-keep-up-with-the-unprecedented-collapse-in-global-travel-demand/](https://forbes.com/sites/danielreed/2020/03/26/airlines-cant-shrink-fast-enough-to-keep-up-with-the-unprecedented-collapse-in-global-travel-demand/).
- Soligo, Ronald, and Amy Myers Jaffe. 2002. "The Economics of Pipeline Routes: The Conundrum of Oil Exports from the Caspian Basin." In *Energy in the Caspian Region*, 109–32). London: Palgrave Macmillan.
- Watanabe, Daisuke, Ryuichi Shibasaki, and Hirofumi Arai. Forthcoming. "Logistics Policy Analysis and Network Model Simulation for Cross-Border Transport on Trans-Caspian Transport Corridor: From Kazakhstani Viewpoint."
- Yenikeyeff, S. M. 2011. "Energy Interests of the 'Great Powers' in Central Asia: Cooperation or Conflict?" *The International Spectator* 46 (3): 61–78.