

## The Transcaspian Transport Route – Current Developments and Challenges

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### Extended Abstract

**Summary.** The article discusses the current state and potential of the Transcaspian Route, a transport route connecting Asia and Europe via Kazakhstan and the Caspian Sea. The route is intended as an alternative to the classic transport corridor through Russia, which became unfeasible due to the consequences of the war in Ukraine. The inductive qualitative research, where eight in-depth interviews with logistics service providers and political stakeholders along the route were conducted, explores four fields of action: Political Framework, Infrastructure, Cooperation, and Technology. The findings will offer guidance to policymakers, investors, and researchers for further developing and improving the usability of the route as a transportation alternative.

**Keywords.** political framework, bottlenecks, international cooperation, digitization

### 1. Motivation and Research Question

Kazakhstan, the largest landlocked country, has made significant strides in improving its logistical infrastructure, particularly in the area of transport and transit corridors. One noteworthy transit route is the Transcaspian Route (TR), which connects Kazakhstan to Europe and Asia via the Caspian Sea. The TR, also known as the Middle Corridor, is intended as an alternative to the transport corridor through Russia. The route starts in Urumchi (China) and then goes to the port of Aktau (Kazakhstan), passes by sea to Azerbaijan and through Georgia and Turkey to Europe. Alternatively there are two northern routes. The first one transit through Kazakhstan and further through Ekaterinburg (on the territory of Russia). The second one transits via Vladivostok or Krasnoyarsk through the territory of Russia.

The consequences of the war of aggression on Ukraine, like sanctions against Russia and Belarus, and the suspension of business activities in Russia by several large logistics companies such as Maersk, DSV, and DB Schenker, led to the blocking of the last two routes, resulting in a surge in demand for the TR (DVZ 2022). Although the Middle Corridor is still in the planning and development stage, it might have the potential to enhance transportation between Asia and

Europe and could play a significant role in the sustainable and resilient development of global trade in the future. This research examines the current state of the transport sector in Kazakhstan and the potential for developing the TR. Specifically, we answer the following research question:

*What is the current state of the transcaspian freight transport route, and what are the challenges faced along this route?*

Given the limited knowledge of the Middle Corridor and its dynamic technological and political development, an inductive qualitative research approach was employed to answer this research question. Eight in-depth interviews were conducted with logistics service providers (LSPs) and political stakeholders along the route to gather rich and context-specific data. The study identifies four fields of action and presents the findings along them: Political Framework, Infrastructure, Cooperation, and Technology.

The study contributes to a better understanding of the transport sector in Kazakhstan and its growth potential, with a specific focus on the TR. The findings are of great interest to policy-makers, investors, and researchers in logistics and transportation, providing valuable insights into the challenges and opportunities for the development of the transport sector in Kazakhstan. Thereby it enriches the literature on research on intermodal transportation networks.

The remainder of this paper is structured as follows: Section 2 provides some background information on the TR. Afterwards, we introduce the methodological approach adopted in Section 3. In Section 4, the four fields of action are analyzed and presented. The final section concludes and highlights future fields of research.

## **2. Background on the Transcaspian Route**

The TR is a trade route connecting China and Europe, spanning the Central Asian steppe, the Caspian Sea, and the Caucasus Mountains. It aims to reduce shipping time between East Asia and Europe to as few as 12 days, making it a competitive option to the other major trade routes, the Northern Corridors (approx. 19 days) and the traditional maritime route through the Indian Ocean (22 to 37 days) (Chang 2023).

The first big step forward of the TR came in 2014 with the opening of the Trans-Kazakhstan railway, followed by the completion of the Baku-Tbilisi-Kars railway in 2017. The geopolitical uncertainty created by Russia's 2014 invasion of Ukraine made it essential for countries in Central Asia and the Caucasus to search for an alternative overland trade route to global markets independent of Russia (Eldem 2022).

Since then, cargo shipments along the Middle Corridor have risen rapidly, albeit from a very low base. Between 2020 and 2021, goods moved along the corridor grew from roughly 350,000 tons to 530,000 tons (van Leijen 2022). However, what boosted the use of the corridor was Russia's 2022 invasion of Ukraine and the subsequent economic sanctions of the West. Cargo shipments along the Middle Corridor have risen rapidly, with shipments swelling to 3.2 million tons in 2022 on the TR. Chang (2023) anticipates that the capacity of the Middle Corridor will climb to 10 million tons, given Turkey's completion of the Marmaray railway under the Bosphorus Strait, enabling rail cargo from Central Asia to travel directly into the heart of Europe. Nevertheless, that growth should be kept in perspective. Even though the prospects for TR are promising, the volumes are rather small compared to ocean freight.

### 3. Methodology

**Research design.** A rigorous and systematic approach is required for research on the TR, given the lack of available literature and the high level of uncertainty surrounding the route. Therefore, an exploratory qualitative research design was employed in this study, with the Middle Corridor serving as the unit of analysis. Since the TR is an abstract concept, we selected the actors involved in the route as the units of data collection, following the approach suggested by Durach, Kembro, and Wieland (2017). Our data was gathered through semi-structured interviews and supplemented with public information obtained from web searches. The grounded theory methodology from Corbin and Strauss (2015) was used to analyze the data, while the methodological guidance provided by Gioia, Corley, and Hamilton (2013) ensured that a robust and rigorous approach was taken.

**Sample selection and data collection.** We aimed to create a diverse sample of interview partners representing a variety of perspectives on the TR. We prioritized LSPs actively utilizing the Middle Corridor, as well as infrastructure and financial companies involved in the development of the route. To identify appropriate firms for our sample, we partnered with the German-Kazakh University in Almaty, Kazakhstan. Together, we established contact with several actors involved in the TR. Furthermore, we deliberately used a snowball approach by asking interviewees for recommendations for specific, previously missing perspectives on TR that could enrich the emerging body of knowledge. Our sample includes eight firms: five LSPs, one railway undertaker, and two finance sector actors. Half of the firms have headquarters located in Western Europe, the other half in central Asia. However, our interviewees focus their activities on Kazakhstan, covering the most important parts of the route. Following the approach of Corbin and Strauss (2015), we iteratively go back and forth between collecting and analyzing our data. We terminated our data collection when we had gained a broad and reflective understanding of the challenges faced along the TR. Between September 2022 and December 2022, we conducted eight semi-structured interviews. Seven of the interviews took place in person in Almaty. We developed an initial, semi-structured interview protocol mainly consisting of open-ended questions. The protocol was piloted in a workshop with the German-Kazakh University. However, based on the recommendation of Gioia et al. (2013), in an effort to accommodate the different perspectives of the interviewees and our growing understanding, we have always kept the interview protocol flexible. The interviews lasted between 15 and 73 minutes. We triangulated the interviews with internal data provided by several interviewees and with publicly available information.

**Data analysis.** We transcribed the 322 minutes of interviews, resulting in 128 pages of data. To analyze this data, we employed MAXQDA software to apply the methodological practices of open, axial, and selective coding, as recommended by Corbin and Strauss (2015). The authors conducted intensive discussions of the codes to ensure consistency and resolve conflicts. Open coding allowed for the initial decomposition of data into meaningful units (Randall and Mello 2012), while the interpretation and summary of text segments were used to develop categories. Axial coding helped us group similar categories and develop a comprehensive understanding of them. The selective coding process provided a holistic, high-level view of the data, enabling us to draw insights from the collected information on the state and current challenges of the TR.

## 4. Findings

Our findings indicate a generally positive attitude toward the TR. Those involved in the TR are interested in further development, indicating the potential for the continued growth of the TR. However, our interviews also revealed some challenges that need to be addressed. In light of these perceptions, we developed four fields of action to characterize the challenges faced. A more practice-oriented summary of our findings can be found in (Elbert and Rentschler 2023).

**Political Framework.** The category of the present political situation emerges as one of the most extensively discussed and dynamic themes in the interviews. Prior to the onset of the war, transportation through Russia overwhelmingly dominated, with the Middle Corridor lagging far behind the northern corridors. This disparity primarily resulted from the increased costs of the TR, longer transit times, and the need for coordination amongst several actors. However, with the outbreak of war and the imposition of direct and indirect sanctions, the TR experienced a surge in demand. Despite this recent uptick in transport demand and subsequent heightened interest in the TR, the current political situation remains rife with uncertainties. There exists the risk that transport demand could sharply decline once again should the route through Russia be reinstated. Ultimately, the long-term prospects of the TR hinge upon China's geopolitical motivation, which currently serves as the driving force behind the development of the route.

**Infrastructure.** The present infrastructure along the TR is operational and reliable. However, the smoothness of transport is impeded by various bottlenecks. Specifically, port infrastructure, border crossings, and ferry services in the Caspian Sea have been identified as significant challenges. Concerning border crossings, hurdles such as entry permit requirements, varying track widths between China and Kazakhstan, and the involvement of multiple agencies in the customs process have been widely discussed in our interviews. Concerning ferry services, the present capacity of container platforms and ferries necessitates expansion, especially given Azerbaijan's monopoly on the Caspian Sea ferries. The expansion and diversification of the ferry fleet could effectively boost capacity and ensure more competition in transport. Furthermore, weather-induced ferry service delays frequently occur, especially during the summer months, and limit the operability of the route.

**Cooperation.** The "One Belt, One Road" initiative is the driving force behind the development of the TR, as China has a significant interest in expanding its trade and economic influence across the Eurasian continent. By investing in the development of the TR, China can access new markets in Europe and reduce its reliance on the traditional maritime route. Even though China is the leader in the development of the route, the countries bordering the route also have a vested interest in advancing it further. To focus this interest and to work towards a mutually beneficial outcome, the Trans-Caspian International Transport Route (TITR) Association was founded. The Association, comprising the leading actors in the region, seeks to promote the development and expansion of the TR. Through this initiative, stakeholders are cooperating to address critical issues related to transport infrastructure, including port infrastructure, border crossings, and ferry services in the Caspian Sea.

**Technology.** The technological development of the TR has been identified as a major impediment to its progress. The presence of disparate IT systems across the various countries the TR passes through complicates the transportation process. To mitigate this challenge, there is a need to accelerate the digitization of freight documentation and border controls to enable a seamless exchange of data and optimize logistics operations. The digitization of customs procedures, in particular, holds great potential in reducing both time and cost in the transportation process.

## 5. Conclusion

The present state of the Transcaspian Route marks a pivotal point in its evolution. Although the TR is experiencing high demand owing to the war, its long-term prospects remain uncertain. To ensure sustainable growth, the TR requires several improvements. Among others, investments in infrastructure are necessary to increase capacity, unified IT systems as well as greater digitalization to improve the transport process, and better cooperation between the countries involved in the route to ensure political stability. These measures are necessary to attract long-term demand and offer shippers a long-term alternative to the northern routes. Such an alternative would mitigate the risk of disruptions and would thus contribute to stable land-based transport chains from Asia to Europe.

The stakeholders and investors along the route face a critical decision, whether to invest in the TR now to make it more attractive for the long term or to wait for the current high demand to persist. Although the ongoing war is an abhorrent reality, it provides an opportunity for Central Asia to advance the TR and capitalize on the upswing in demand.

## Acknowledgements

We gratefully acknowledge the funding provided by the German Academic Exchange Service e.V. (DAAD) and the German Federal Foreign Office.

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This paper could be cited as:

- Elbert, Ralf, and Johannes Rentschler. 2023. "The Transcaspian Route – Current Developments and Challenges." In *2023 International Scientific Symposium on Logistics: Conference Volume*, ed. by Thorsten Schmidt, Kai Furmans, Bernd Hellingrath, René de Koster, Anne Lange, and Hartmut Zadek, 79–84. Bremen: Bundesvereinigung Logistik. <https://nbn-resolving.org/urn:nbn:de:bsz:14-qucosa2-855743> <https://doi.org/10.25366/2023.126>