Strengthening International Trade and Logistics through Private Sector Participation in Mongolia and Pre-feasibility Study for a Dry Port in Zamiin Uud

Prepared by The World Bank for the Ministry of Road Transport Development (MRTD), Mongolia
Some rights reserved

Disclaimer

This work is a product of the World Bank. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of the Executive Directors of the World Bank or the governments they represent.

The World Bank does not guarantee the accuracy, completeness, or currency of the data included in this work and does not assume responsibility for any errors, omissions, or discrepancies in the information, or liability with respect to the use of or failure to use the information, methods, processes, or conclusions set forth. The boundaries, colors, denominations, links/footnotes, and other information shown in this work do not imply any judgment on the part of the World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries. The citation of works authored by others does not mean the World Bank endorses the views expressed by those authors or the content of their works.

Nothing herein shall constitute or be construed or considered to be a limitation upon or waiver of the privileges and immunities of the World Bank, all of which are specifically reserved.

Rights and Permissions

The material in this work is subject to copyright. Because the World Bank encourages dissemination of its knowledge, this work may be reproduced, in whole or in part, for noncommercial purposes as long as full attribution to this work is given.

Attribution

Please cite the work as follows: World Bank. 2024. Strengthening International Trade and Logistics through Private Sector Participation in Mongolia and Pre-feasibility Study for a Dry Port in Zamiin Uud. World Bank.

Any queries on rights and licenses, including subsidiary rights, should be addressed to World Bank Publications, the World Bank, 1818 H Street NW, Washington, D.C. 20433, USA; fax: 202-522-2625; e-mail: pubrights@worldbank.org.

Cover photo: © Gilles Marie Veuillot/World Bank. Further permission required for reuse.
Contents

Acknowledgement ........................................................................................................ vi
Acronyms .................................................................................................................... vii
Executive Summary .................................................................................................... x

Chapter 1. Introduction .............................................................................................. 1
  1.1 This Report ........................................................................................................... 1
  1.2 Mongolian Context ............................................................................................. 1
  1.3 Transport and Economic Corridors .................................................................... 2
  1.4 Corridor Strategy ............................................................................................... 3
  1.5 Mongolia’s Central Corridor ............................................................................... 3

Chapter 2. Transport and Trade Demand .................................................................. 7
  2.1 Background ......................................................................................................... 7
  2.2 Analysis of Mineral Exports by Destination, Mine, and BCP .............................. 10
  2.3 Modes of Mineral Export ................................................................................... 14
  2.4 Analysis of Trends in Non-mineral Exports ....................................................... 16
  2.5 Forecasting Central Corridor Freight Demand to 2030 ....................................... 18
  2.6 Implications of Traffic Demand Forecasts at Zamiin Uud and Altanbulag Central Corridor BCPs 23

Chapter 3. Railway Efficiency and Operations ......................................................... 26
  3.1 Structure of Sector ............................................................................................ 26
  3.2 Physical Condition of Central Railway Corridor ................................................ 28
  3.3 Investment Needs for UBTZ’s Capacity Enhancement – Short- to Medium-term .................................................................................................................. 29
  3.4 UBTZ’s Financial Situation ............................................................................... 31
  3.5 Improvement of Operational and Financial Performance of Railway .................. 31
  3.6 Policy Choices ................................................................................................... 34
  3.7 Role of Technological Innovation in Improving Operation and Efficiency of Border Stations......................................................................................... 35

Chapter 4. Trade Facilitations and Border Operations ............................................. 37
  4.1 Landscape of International Trade ....................................................................... 37
  4.2 Border Management and Trade Facilitation ....................................................... 39
  4.3 Transport and Logistics ...................................................................................... 44
  4.5 Result Management ......................................................................................... 46
  4.6 Conclusion .......................................................................................................... 48

Chapter 5. Prospects for Private Sector Participation in Corridor Development ....... 50
  5.1 Background ........................................................................................................ 50
  5.2 Legal Framework for PSP in Infrastructure and Dry Ports .............................. 51
  5.3 Institutional Environment for PSP in Infrastructure and Dry Ports ........................ 54
Chapter 6. Proposed Corridor Strategy and Development of Dry Ports .................. 62

6.1 Corridor Efficiency and Main Bottlenecks ................................................. 62
6.2 Establishment of One or More Dry Ports ..................................................... 66
6.3 Functions and Requirements of Key Corridor Nodes ................................. 67
6.4 Comparison of Key Corridor Nodes ............................................................ 85
6.5 Potential Dry Ports in Central Corridor – Preliminary Assessment .............. 92
6.6 Pre-feasibility Study of a Dry Port at Zamiin Uud ....................................... 94
6.7 Proposed Corridor Strategy ........................................................................ 97

References ........................................................................................................ 103

List of Tables
Table 1: Mineral Exports by Port and Mine in 2022 ........................................... 11
Table 2: Mineral Exports by Rail Corridor in 2022 .............................................. 13
Table 3: Mongolia Trade Traffic With China and Russia 2014–2021 ..................... 18
Table 4: Rail Freight Growth Rates .................................................................... 21
Table 5: Rail Freight Forecast ............................................................................. 21
Table 6: Forecasts for GDP, Imports and Exports in 2030 ................................. 22
Table 7: Zamiin Uud Exports – First 10 Months of 2023 ................................... 23
Table 8: Exports and Imports of Leading BCPs – First 10 months of 2023 .......... 24
Table 9: Exports and Imports of Sukhbaatar/Altanbulag ................................... 24
Table 10: Planned Expansion of Stations and Intersections, Technical Modernization of Inter-tracks in Phase I 29
Table 11: Planned Expansion of Stations and Intersections, Technical Modernization of Inter-tracks in Phase II 30
Table 12: LPI Ranking of Mongolia Compared with Kazakhstan ....................... 47
Table 13: Waiting Time and Cost when Crossing the Border by Activity ............. 48
Table 14: Vehicles and Passengers Passing through Altanbulag Border Port .......... 67
Table 15: Altanbulag Export and Import Indicators, as % of Total for Four CMREC Nodes ........................................ 68
Table 16: Capacity of Ulaanbaatar City Terminals ............................................. 71
Table 17: Ulaanbaatar Export and Import Indicators, as % of Total for Four CMREC Nodes ........................................ 72
Table 18: Candidate Locations for Logistics Center ............................................ 78
Table 19: Sainshand Export and Import Indicators, as % of Total for Four CMREC Nodes ........................................ 79
Table 20: Number of Vehicles and Passengers Passing through the Zamiin Uud Border Crossing (Thousand)................................................................................................................................. 81
Table 21: Zamiin Uud Export and Import Indicators, as % of Total for Four CMREC Nodes .......... 82
Table 22: Summary of Key Features .................................................................................................................. 85
Table 23: Zamiin Uud Exports – First 10 Months of 2023.................................................................................. 85
Table 24: Exports and Imports of Leading BCPs – First 10 Months of 2023 ............................................. 86
Table 25: Exports and Imports of Sukhbaatar/Altanbulag – First 10 Months of 2023 ......................... 87
Table 26: Central Corridor Customs Data 2019, with % Share of Each Node .............................................. 88
Table 27: Preliminary Estimate of Investment Needed at Zamiin Uud to Make it an Efficient Dry Port 94

List of Figures

Figure 1: CMREC – Mongolia Railway Corridors................................................................................................. 4
Figure 2: CMREC – Mongolia Road Corridors ...................................................................................................... 5
Figure 3: Map of Mongolia’s Largest Mines and Links to Export BCPs.............................................................. 10
Figure 4: Plans for New Rail Connections from Key Mines to BCPs.............................................................. 15
Figure 5: NRP Goals for BCP Export Capacity Expansion ............................................................................. 16
Figure 6: Rail Freight Share of International Trade from 2014 to 2021 – Imports, Exports and Transit 19
Figure 7: Mongolia Total Trade over GDP (% 1997–2021) ........................................................................... 37
Figure 8: Mongolia Exports/Imports (US$ million, 2012–2021) ................................................................. 38
Figure 9: Mongolia’s Main Export Destinations (average 2012–2021) ......................................................... 39
Figure 10: Mongolia’s Main Import Sources (average 2012–2021) ............................................................... 39
Figure 11: Mongolia Status of TFA Implementation Commitments .................................................................. 40
Figure 12: Zamiin Uud BCP Exports/Imports in Volume and Value (2014–2022) ........................................... 43
Figure 13: Ratio of Containerization by Transport Mode and for Imports and Exports through ZU BCP45
Figure 14: Key LPI Dimensions for Mongolia Compared with Kazakhstan ................................................. 47
Figure 15: Location Map of New Airport City (Aero City/New Zuunmod) and its Surrounding Areas ......... 76
Figure 16: Candidate Locations for the Logistics Center .............................................................................. 77
Figure 17: Problem Tree: Development of Mongolia Portion of the China-Mongolia-Russia Economic Corridor ........................................................................................................................................... 90
Figure 18: Objective Tree: Development of Mongolia Portion of the China-Mongolia-Russia Economic Corridor ........................................................................................................................................... 91
Acknowledgement

This knowledge product was funded by the Public-Private Infrastructure Advisory Facility (PPIAF), the World Bank, and managed by a World Bank team that includes Noroarisoa Rabefaniraka (Sr. Transport Specialist), Olivier Hartman (Sr. Private Sector Specialist), Elikia Abraham (Infrastructure Specialist), and Gilles Marie Veuillot (Senior PPP Legal Consultant). Tae Hyun Lee (Country Manager, EACMF), and Benedict L.J. Eijbergen (Practice Manager, IEAT1) provided overall guidance.

Peer reviewers for this knowledge product were Rufat Alimardanov (Resident Representative, IFC, Mongolia), Victor Aragones (Senior Transport Economist, IECT1, Uzbekistan), Michael Kobina Kane (Senior Infrastructure Finance Specialist, IPGGF, Washington, D.C.), Charles Kunaka (Lead Transport Specialist, ITRGK, Washington, D.C.), and Chanin Manopiniwes (Senior Transport Economist, IEAT1, Singapore).

Specialists from David Lupton Associates (DLA) – David Lupton (CEO); Bill Bikales (Team Leader and Logistics Specialist), Adiya Munkhbold (Deputy Team Leader and Logistics Specialist), Ying Qian (Trade Facilitation Specialist), Jianhong Wu (Rail Freight Specialist), Graeme Keay (Legal Expert), and Chimed-Ochir Bayartuul (Legal Expert) – prepared the background reports for this knowledge product based on field visits, interviews, a desk review, and analysis.

The knowledge product team also would like to acknowledge colleagues who provided input over the course of this knowledge product: Monica Sawyer (IEAT1), Munkhjargal Ayurzana (IEAT1), Khaliun Bat Orig (IEAT1), Clemens Portenlaenger (IEAT), and Angar Enkhtur (EACMF).

Any inquiries about this knowledge product may be submitted to Noroarisoa Rabefaniraka, nrabefaniraka@worldbank.org, Olivier Hartman ohartmann@worldbank.org, and Elikia Abraham eabraham1@worldbank.org.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABTEMA</td>
<td>Mechanized Loading and Unloading Transport Expedition Unit</td>
</tr>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
</tr>
<tr>
<td>AH3</td>
<td>Asian Highway 3</td>
</tr>
<tr>
<td>AH4</td>
<td>Asian Highway 4</td>
</tr>
<tr>
<td>BCP</td>
<td>border crossing point</td>
</tr>
<tr>
<td>BTEG</td>
<td>Bold Tumur Eruu Gol Company</td>
</tr>
<tr>
<td>CAREC</td>
<td>Central Asia Regional Economic Cooperation</td>
</tr>
<tr>
<td>CAIS</td>
<td>customs automated information system</td>
</tr>
<tr>
<td>CIC</td>
<td>CenterPoint Intermodal Center</td>
</tr>
<tr>
<td>CMREC</td>
<td>China-Mongolia-Russia Economic Corridor</td>
</tr>
<tr>
<td>COSCO</td>
<td>China Ocean Shipping Company, Limited</td>
</tr>
<tr>
<td>CPMM</td>
<td>corridor performance measurement and monitoring</td>
</tr>
<tr>
<td>CRDD</td>
<td>customer required delivery date</td>
</tr>
<tr>
<td>ETT</td>
<td>Erdenes Tavan Tolgoi JSC</td>
</tr>
<tr>
<td>FTZ</td>
<td>free trade zone</td>
</tr>
<tr>
<td>GDP</td>
<td>gross domestic product</td>
</tr>
<tr>
<td>ICT</td>
<td>information and communication technology</td>
</tr>
<tr>
<td>JICA</td>
<td>Japan International Cooperation Agency</td>
</tr>
<tr>
<td>KOTRA</td>
<td>Korea Trade-Investment Promotion Agency</td>
</tr>
<tr>
<td>LPI</td>
<td>Logistic Performance Index</td>
</tr>
<tr>
<td>LRT</td>
<td>Law on Railway Transport</td>
</tr>
<tr>
<td>MED</td>
<td>Ministry of Economy and Development</td>
</tr>
<tr>
<td>MRTD</td>
<td>Ministry of Road Transport Development</td>
</tr>
<tr>
<td>MTZ</td>
<td>Mongolian Railway Joint Stock Company</td>
</tr>
<tr>
<td>NCTF</td>
<td>National Committee for Trade Facilitation</td>
</tr>
<tr>
<td>NRP</td>
<td>New Recovery Policy</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>OD</td>
<td>origin-destination</td>
</tr>
<tr>
<td>PPP</td>
<td>public-private partnership</td>
</tr>
<tr>
<td>PSP</td>
<td>private sector participation</td>
</tr>
<tr>
<td>SMART</td>
<td>secure, measurable, automated, risk management-based, and technology-driven</td>
</tr>
<tr>
<td>SPS</td>
<td>sanitary and phytosanitary</td>
</tr>
<tr>
<td>TEU</td>
<td>twenty-foot equivalent unit</td>
</tr>
<tr>
<td>TFA</td>
<td>Trade Facilitation Agreement</td>
</tr>
<tr>
<td>TIR</td>
<td>Transport Internationaux Routiers (International Road Transport)</td>
</tr>
<tr>
<td>TRS</td>
<td>Time Release Study</td>
</tr>
<tr>
<td>UB</td>
<td>Ulaanbaatar</td>
</tr>
<tr>
<td>UBMP</td>
<td>Ulaanbaatar Master Plan</td>
</tr>
<tr>
<td>UBTZ</td>
<td>Ulaanbaatar Rail Company</td>
</tr>
<tr>
<td>WAIPA</td>
<td>World Association of Investment Promotion Agencies</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organization</td>
</tr>
<tr>
<td>ZU</td>
<td>Zamiin Uud</td>
</tr>
<tr>
<td>ZUFZ</td>
<td>Zamiin Uud Free Zone</td>
</tr>
<tr>
<td>ZULC</td>
<td>Zamiin-Uud Integrated Logistics Center</td>
</tr>
</tbody>
</table>
Executive Summary

This report, funded by the World Bank, is aimed at strengthening Mongolia’s international trade and logistics. It summarizes the material presented in the previous reports – which covered transport demand, railway operations, border management, and private sector participation. The report focuses on the China-Mongolia-Russia Economic Corridor (CMREC), as the main corridor for non-mining international trade. It addresses logistics services, government policies, and institutional capacity to establish a robust foundation for corridor development, including trade expansion, supply chain development, economic diversification, and environmental well-being.

Key Findings

Mongolia is a resource rich country with strong economic development potential; unfortunately, such potential is hindered by obstacles to economic interaction and integration. Enhancement of the capacity and efficiency of the Central (north-south) Corridor, which extends from Sukhbaatar and Altanbulag (at the Russian border) through Ulaanbaatar to Sainshand, where there are connections to Mongolia’s largest mineral resource sites, and Zamiin Uud (at the Chinese border) is key to economic development. The railway is the backbone of Mongolia’s transport infrastructure and services, carrying the bulk of trade with China and Russia, and through and beyond them to all other trading partners.

Transport and Trade Demand

The Central Corridor’s economic importance lies in its relationship to the three trade components – imports, non-mineral exports, and in-transit trade – that are critical to a healthy economic structure, one that is not overly dependent on mineral exports. Mongolia’s exports are currently dominated by mining products, which do not primarily use the Central Corridor. Approximately 90% of imports (by value and weight) are carried through the Central Corridor. In addition, 64% of non-mineral exports in value terms exit through this corridor. It is also the only rail route for transit trade, which is expected to grow as the demand by Russia for Chinese goods continues to increase.

The Central Rail Corridor is expected to come under increasing stress, particularly the stretch between Zamiin Uud (ZU) and Ulaanbaatar (UB). This calls for improvements at different levels: (i) new and efficient infrastructure and systems for managing trade at the border; (ii) completion of the Bogdkhan Railway Bypass project to avoid going through the capital city; and (iii) construction of a large intermodal freight handling terminal at UB. Rail gauge change will need to be handled as efficiently as possible. In the short term, the use of new technologies (changeable bogies) could bring benefits. Eventually, the doubling of the rail line between ZU and UB will be required. The choice of the gauge must be carefully considered, between standard gauge, which will privilege seamless connections with China, but with operational and financial constraints, and broad gauge, maintaining the need for transloading, but adding flexibility in operations. The

---

1 Mongolian customs data for the first 11 months of 2023.
proposed improvements and investments will only bring results if there is strong leadership, coordination among stakeholders, and transparency.

**Railway Efficiency and Operations**

**Problems identified in relation to railway operation include physical infrastructure and the operating and regulatory environment.** As regards infrastructure, the existing configuration of the line – single-track, inefficient technical design (gradients and curvature), and the need to trans-load wagons due to the difference in gauge between Mongolia and China – has an adverse impact on operations. The rolling stock fleet is aging and insufficient. Inter-operability rules are also unclear and fair competition among operators is difficult to ensure. Last, tariffs are publicly set and are below cost recovery for some commodities. The operating and regulatory framework is also challenging. More than half of Mongolia’s 2,965 km rail network, mostly in the Central Corridor, is owned and operated by Ulaanbaatar Railway Company (UBTZ), a Mongolian-Russian joint venture. There are efficiency and performance issues with UBTZ; although the productivity of UBTZ has increased over the past decade, it remains low. The rest is owned by three additional rail operators, two of which are Mongolian state-owned enterprises. The over-dominance of state-owned enterprises raises concerns.

**Traffic along the corridor is forecast to double by 2030, which means that both the railway line and the transfer nodes will reach capacity.** This situation will constrain Mongolia’s economic development in the short term. It calls for an increase in the efficiency of the existing network, as well as measures to expand it and address the gauge change challenges.

**Trade Facilitation and Border Operations**

Two locations play a critical role in Mongolia’s rail network, related to border and clearance processes for trans-loading of domestic goods: UB and ZU. In UB, most imports are destined for the domestic market and final clearance takes place. At ZU, on the Chinese border, trans-loading takes place and goods destined for other countries may enter Mongolia under a consignment note, which acts as a customs transit document, with customs procedures\(^2\) taking place at the final destination.

**In terms of logistics, traffic at ZU is handled by several facilities, which collectively perform almost the full spectrum of dry port functions.** In all facilities, trans-loading is slow, which results in the immobilization of wagons for longer than necessary. Moreover, information on goods and wagons is not provided to the relevant authorities in advance. Instead of being moved directly from one wagon to another, containers are stored in an intermediate yard, increasing delays and creating a backlog. Lastly, the number of gantry cranes is limited, forcing terminal operators to complement handling capacity with reach stackers.

\(^2\) A transit declaration allows for the movement of goods to their destination without payment of duties and taxes. Usually, a bond or guarantee is put in place to cover potential loss of the duties and taxes. Clearance occurs when goods are cleared for home consumption, i.e., when taxes and duties are fully paid.
In UB, rail traffic is handled by several facilities spread throughout the metropolitan area, requiring the shunting of wagons to different locations. The main operator is Mechanized Loading and Unloading Transport Expedition Unit (ABTEMA), a subsidiary of UBTZ. The others are privately-owned, mostly by logistics operators, sometimes by traders with in-house logistics capabilities. Most of these private facilities have limited capacity. Road access is also problematic due to urban traffic. Options for relocating facilities outside of the UB metropolitan area are under study, with several candidate locations analyzed, but no firm decision has been made. The construction of a large intermodal freight handling terminal at UB is encouraged. The candidate location should minimize the additional railway track required.

**Investment and Private Sector Participation**

Some capacity gains can be unlocked through the more efficient management of the existing network. This could generate savings and contribute, in the short term, to the financing of the maintenance and initial development of the Central Corridor. In the long term, operations on the corridor will remain constrained by the single track, even with the addition of new sections to enable more frequent crossing of trains.

The business and investment framework remains lacking on several fronts. A new Public-Private Partnership (PPP) Law was recently approved with the objective of addressing the shortcomings identified in the previous law on concessions. It aimed to address inadequate guidelines and regulations for awarding contracts, lack of involvement by related administrative bodies, and lack of risk management and allocation methodologies. Practice will show to what extent this law is conducive to more private sector participation (PSP) in the field of infrastructure. There are other systemic constraints on PSP, like the overall transparency of rules, contract enforcement, and fair competition with state-owned enterprises. Issues of particular importance include procurement, for instance, limiting recourse to direct contracting, as well as hiring reputable advisors when considering PPP transactions.

**Proposed Corridor Strategy**

The Central Corridor is critical for the development and diversification of Mongolia's economy, as the main route for its non-mining external trade. The recommended strategy for improving the rail network is sequential. In the short to medium term, it could focus on improving operations (i.e., reducing delays for both goods and wagons) on the line and at critical nodes, while setting the framework for future expansion. In the medium to long term, it could involve prioritizing investments, preferably with the participation of the private sector, to establish a logistics center outside of UB, complete the UB bypass, and lay a double track between ZU and UB.

Financing the investment required for this strategy will require a combination of instruments:

- UBTZ’s internal resources through its return to profitability to finance maintenance and the renewal of rolling stock
- Mobilizing private capital, which requires, as a prerequisite, several reforms before rail can attract private sector investors
• Mobilizing green finance, to fund low emitting industries such as railway

Roadmap for Developing the Central Corridor

The roadmap for developing the Central Corridor considers two timeframes: short to medium term (S/MT), and medium to long term (M/LT).

Policy Reforms

Recommendation 1 (S/MT): Strengthen the railway’s operational and regulatory framework. This recommendation includes guaranteeing fair competition, in particular between state-owned enterprises and the private actors, as well as open access. Tariffs must also be sustainable for operators and better reflect actual costs. Several commodities and passenger transport, are still being subsidized. Tariffs were updated in late 2022, but a more thorough review is needed. In parallel, measures should be adopted to improve UBTZ’s financial and operational performance (such as better planned financial contributions and linking subsidies to key performance indicators).

Recommendation 2 (S/MT): Operationalize the PPP Law through regulatory reforms and address constraints on PSP. Reform in this respect goes beyond the development of the Central Corridor. The new PPP Law should be made implementable through the adoption of the necessary regulations. This requires capacity building within public institutions to identify, assess, structure, procure, and implement PPPs. The impact of rules restricting foreign investors’ access to land over the financing of infrastructure projects should also be measured. Those crosscutting reforms call for close cooperation between the Ministry of Road Transport Development, Ministry of Economic Development, and other key stakeholders.

Node Improvements

Recommendation 3 (S/MT): Improve border processes, internally (within Mongolia) and externally (with China and Russia). This should include developing a single window to coordinate all Mongolia agencies involved in the clearance of goods and improving communication and digitalization with Russia and China Customs for advance trade information.

Recommendation 4 (S/MT and M/LT): Develop multimodal transport and logistics facilities to address physical constraints faced by ZU and UB and involve the private sector. Investment is needed in both locations. In the short to medium term, ZU needs better equipment and facilities (cranes, transshipment and storage capacity, creation of a special economic zone and dry port authority to coordinate internal logistics). In UB, a multitude of privately-owned terminals operate within the city center, which is impractical, uneconomical, and un-ecological. Discussions on creating a new logistics facility outside the city in the medium to long term should be pursued, keeping in mind that it should minimize the additional railway track required. In both cases, the Government of Mongolia should seek to attract private investment – and take advantage of best practices drawn from successful international precedents in railway track expansion.

Recommendation 5 (M/LT): Double the track at certain nodes. A double line may not be a realistic option in the short term. However, doubling of the track on selected segments of the line would unlock additional capacity. This would include the creation of crossing loops to enable
crossing of trains at selected points and could include doubling the ZU – Sainshand section. Another critical section is the finalization of the UB bypass or a similar endeavor.

Recommendation 6 (M/LT): Consider doubling the track at least between ZU and UB. For this, it is critical to involve the private sector in investments and operations. As mineral traffic on the Central Corridor is relatively marginal, mining revenue is unlikely to represent a reliable – or sufficient – source of financing. It also raises the issue of the investment climate for large infrastructure projects – and for PPPs, as the investments needed are likely to be massive. Hence, the importance of the reform component. The main question technically is the gauge of the second track: using the Mongolia gauge or adopting the Chinese standard gauge? Options with respect to doubling the track will need to undergo a detailed feasibility analysis, from a technical, financial, and legal standpoint. A detailed feasibility analysis will be necessary, including to assess the private sector’s readiness to participate.

Rolling Stock

Recommendation 7 (S/MT): Unlock short-term efficiency gains through better management and planning. Improving the exchange of information through fleet management systems (existing or to be developed) would enable rationalizing the use and availability of wagons and locomotives. Another short- to medium-term solution to address delays due to the gauge change would be to purchase multi-gauge wagons for block trains between Tianjin and UB. Organizing block trains directly from Tianjin to UB would also maximize the use of existing assets, but would require coordination with China Railways. Last, establishing a private company to own and lease the container wagons, based on the US wagon hire model or similar, could be explored.

Railway Operations

Recommendation 8: Consider options to improve the performance of railway operations, including concessions for the operations, based on international best practices, such as operations and maintenance by the private sector. This also includes such issues as tariff setting and guaranteeing effective open access and fair competition. Specific initiatives with PSP could also be explored (e.g., for rolling stock, setting-up of private company to own and lease the container wagons to the railway operator). In the long run, structural reforms pertaining to the ownership and operation of the line could be explored (e.g., concessions for the operations).

Recommendation 9: Explore synergies between the development of new value chains needed for the purpose of economic diversification (as per the recommendation of the InfraSAP report of 2020, which identified agriculture and meat among the potential sectors for diversification, even though quite marginal in the short term), and the development of the railway along the corridor.
Chapter 1. Introduction

1.1 This Report

1. This report is the fifth and final report for the World Bank-financed study aimed at strengthening Mongolia’s international trade and logistics. Previous reports covered the railway sector, transport demand assessment, border operations, and private sector participation. This report consolidates and summarizes the material presented in the previous reports. It sets out a development strategy for the China-Mongolia-Russia Economic Corridor (CMEC) focusing on matters concerning transport infrastructure and trade-related facilities, including the provision of dry ports within the corridor. It addresses logistics services, government policies and institutional capacity to establish a robust foundation for subsequent phases of corridor development, including trade expansion, supply chain development, economic diversification, and environmental well-being.

1.2 Mongolian Context

2. As a resource rich country situated in East Asia, near many of the world’s most dynamic national economies, Mongolia’s economic development potential is strong. However, that potential will only be realized if Mongolia overcomes the obstacles to economic interaction and integration posed by having a vast landlocked area, with a relatively small and scattered population. In the foreseeable future, the key to this challenge is the enhancement of the capacity and efficiency of the Central (north-south) Corridor, which extends from Sukhbaatar and Altanbulag at the Russian border in the north, through the capital city Ulaanbaatar, which is home to half of the country’s population, through Sainshand, where there are connections to Mongolia’s largest mineral resource sites, and to Zamiin Uud at the Chinese border.

3. The Mongolian economy is well positioned to experience rapid growth in exports and gross domestic product (GDP). Exports are currently dominated by mining products, the vast majority of which go to China. New rail routes have been built, resulting in the share of this market moved by rail increasing dramatically. These routes generally do not traverse the Central Corridor, instead using dedicated lines between the mines and the Chinese border. The increase in GDP per head resulting from the increased export trade, together with the need for inputs and equipment for a diversifying export sector, is expected to double the quantity of imports\(^3\). Although the growth in mineral exports will not strain the Central Corridor, the anticipated growth in imports will. The Central Railway Corridor currently carries 80% of all imports and virtually all transit traffic.

\(^3\) Forecast based on a conservative estimate of Mongolia’s elasticity of import demand with respect to GDP, drawing on, but reducing, pre-pandemic elasticities.
1.3 Transport and Economic Corridors

4. A transport corridor signifies a predetermined pathway or channel to ensure the secure movement of both passengers and cargo within and between regions, cities, and nations. Transport corridors can manifest in diverse forms, encompassing roadways, expressways, railways, canals, pipelines, air routes, and shipping routes. Transport corridors assume a pivotal role in bolstering economic endeavors, trade activities, and connectivity by enabling the efficient transportation of people and goods across extensive distances. They serve as indispensable components in sustaining supply chains, trade networks, and the overall infrastructural framework of a given region or country. The efficient planning and upkeep of transport corridors is imperative for fostering economic growth, while simultaneously addressing traffic congestion, reducing transportation expenses, and mitigating environmental impacts, among other things.

5. An economic corridor represents a more specialized variant of a transport corridor, typically linked with substantial economic development and investment initiatives. It denotes a distinct path or network of transportation infrastructure that interlinks diverse economic hubs, regions, or nations. The primary objective of an economic corridor is to invigorate economic expansion, trade activities, and overall development by enhancing transportation facilities and connectivity across a distinct geographical area.

6. Economic corridors achieve this objective by streamlining the movement of both goods and people, thereby curbing transportation expenses, while concurrently fortifying connectivity. International economic corridors are distinguished by their emphasis on trade and commerce, and effectively invigorate trade and economic pursuits along their path. This is achieved through the implementation of trade agreements and policies that facilitate the flow of goods and services across national boundaries.

7. Economic corridors often serve as catalysts for industrial and urban development. They give rise to the establishment of industrial zones, logistics centers, and urban settlements along the corridor’s trajectory, thereby attracting investment and generating employment opportunities. Another salient characteristic is regional integration, as many such corridors transcend national borders, bringing mutual economic advantages. This promotes regional cooperation and integration, with multiple countries collaborating for mutual benefit. Governments, international organizations, and private sector entities frequently invest in the construction and maintenance of economic corridors, recognizing them as pivotal in stimulating economic growth and overall development.
1.4 Corridor Strategy

8. A corridor strategy encompasses a range of key elements that are vital to the successful development and implementation of the transport and economic corridor. These elements help shape the vision, objectives, and action plan for the corridor’s sustainable growth and effectiveness.

9. Transport corridors crossing borders require specific strategic elements to facilitate their smooth operation and ensure the efficient movement of people and goods across international boundaries. These strategies aim to address challenges related to customs, infrastructure, regulation, and coordination between multiple countries. Some key issues to address include:

- Customs and trade facilitation
- Coordinated development and maintenance of essential infrastructure with countries across the border
- Harmonization and alignment of standards and regulations across countries
- Real-time information sharing and coordination among border control agencies
- Cross-border agreements and treaties that outline the rights and responsibilities of each country along the corridor
- Risk assessment and management plans for potential challenges such as natural disasters, security threats, or accidents.

1.5 Mongolia’s Central Corridor

10. Mongolia’s Central Corridor functions as both a transport corridor and an economic corridor. As a transport corridor, it serves Russia, Mongolia, and China providing transport services linking these countries to each other and beyond. As an economic corridor, access to the transport services links development along the corridor, helping overcome distance to provide aggregation benefits and access to markets.

11. This corridor comprises the central Mongolian rail and road routes of the CMREC, through a trilateral agreement between China, Mongolia, and Russia that was formally initiated in 2016. The CMREC encompasses other planned transport and energy linkages among the three countries, including proposed road links across the eastern and western sections of Mongolia. However, the greatest focus on trade expansion has been the Central Corridor from Zamiin Uud to Sukhbaatar.

12. This Central Corridor stretches from Mongolia’s northern border to its southern border and includes Ulaanbaatar, the nation’s capital. Ulaanbaatar is home to over 50% of the country’s total population and is the nation’s hub for economic, social, humanitarian, cultural, industrial, and service activities.
13. The alignment of CMREC broadly corresponds to the north-south railway line stretching from Sukhaatar to Zamiin Uud (ZU) (as depicted in Figure 1). The corridor also includes the primary north-south road, as well as the ancillary railway and road networks that run adjacent to the main railways and roads, such as the linkage between Erdenet and Darkhan. The CMREC extends northward to Ulan-Ude in Russia and south-east to Tianjin in China. It also aligns with the path of the Asian Highway 3 (AH3) and the TransAsian Railway (TAR) north section.

**Figure 1: CMREC – Mongolia Railway Corridors**


14. Of these three rail routes, only the Central Corridor is fully operational. It was already in existence before the CMREC agreement was signed and was the route followed by the original Trans Mongolian Railway, which connected northern China with the Trans-Siberian Railway. Only the northern portion of the Eastern Rail Corridor is operational and serves primarily to ship the products of mines in eastern Mongolia to Russia. A southern extension of that corridor to the Bichigt Border Crossing Point (BCP) at the Chinese border is still at the planning stage, as is the entire Western Corridor.
Figure 2: CMREC – Mongolia Road Corridors

Source: Mongolia Ministry of Foreign Affairs 2016, op. cit.

15. The CMREC is the key conduit for truck freight shipments between the three countries. The Western Road Corridor, part of Asian Highway 4 (AH4), has only recently been improved enough to serve as a route for large trucks. The Eastern Corridor, particularly the southern section, is still a patchwork of small roads with limited trade capacity.

16. The CMREC establishes vital connections with numerous significant towns, transit hubs, and BCPs, including:

- Altanbulag, a road BCP that forms a link with Russia
- Sukhbaatar, the final town in Mongolia before the railway line extends into Russia
- Darkhan, where a feeder railway links with the primary railway originating from the major mining town of Erdenet
- Ulaanbaatar, the capital city, where the original railway line traverses the city center; a bypass has been proposed to alleviate congestion and promote the development of new urban areas
- Sainshand, a burgeoning major railway junction that connects both the north-south main railway line and the east-west route leading to significant mining areas like Oyu Tolgoi and Tavan Tolgoi

---

4 The new western route from Urumqi in China to Novosibirsk in Russia, transiting Mongolia was launched in September 2023 (see https://www.reuters.com/article/china-russia-mongolia-idUSL4N3AY3GO/).
• Zamiin Uud, a pivotal border town and BCP that interfaces with Erenhot in China; Erenhot, akin to Zamiin Uud, serves as a major border town on the Chinese side and is also a prominent BCP.

17. The importance of the Central Corridor to Mongolia’s economy is particularly great because it is central to the three trade components that are critical to a healthy economic structure, one that is not overly dependent on mineral exports, namely: imports, non-mineral exports, and in-transit trade. Approximately 90% of Mongolia’s imports (by value and by weight) enter the country along this corridor. The percentage of non-mineral exports that exit through this corridor is also high: 64% in value terms, and 45% in tonnage\(^5\). The share of transit trade is more difficult to calculate, but the Central Corridor is the only rail route for that trade and, as the composition of Russian imports of Chinese goods has shifted dramatically to vehicles and other heavy equipment, which are no longer available to Russia from Europe, dependence on rail is expected to grow.

\(^5\) Mongolian customs data for the first 11 months of 2023.
Chapter 2. Transport and Trade Demand

2.1 Background

18. Investment in infrastructure to carry Mongolia’s mineral resources to China has ensured that the Mongolian economy is well positioned to experience rapid growth in exports and, thus, in GDP throughout the remainder of this decade. Many of these investments have been discussed for more than a decade, but are only now being realized under the New Recovery Policy (NRP) approved by Mongolia’s Parliament in December, 2021, and launched in January, 2022, in response to the sharp slowdown in growth during the COVID-19 pandemic. The NRP set ambitious targets of more than doubling exports and nearly doubling Mongolian per capita GDP by 2030, and identified six priority pillars of the policy, two of which are Border Port Recovery and Industrial Recovery.

19. The rapid growth of exports has the potential to produce major and sustained improvements in the lives of the Mongolian people. However, it also carries widely recognized risks. Over-reliance on commodity exports has led to serious problems in many developing countries, including: Dutch disease (causal relationship between an increase in the economic development of one export sector and a decline in other sectors, usually due to appreciation of the national currency), widening income gaps, the emergence of an enclave economy due to the capital-intensive nature of large mining operations, environmental damage, corruption, and exposure to the high volatility of global commodity markets. Managing these risks is beyond the scope of this project, as it mainly entails establishing sound governance and macroeconomic management. There is, however, an important role for trade infrastructure and logistics development policy in managing these risks.

20. The diversification of exports is one widely recognized way of reducing mineral export dependence. However, practically speaking, the planned magnitude of growth in mining exports in Mongolia makes it inconceivable that other existing export products can grow their share of total exports to a large enough portion to significantly mitigate mineral export dependency. In addition, there are large obstacles to building globally competitive export sectors that source their raw materials from a nomadic herding population, which is the alternative group of exports that receive the most attention. Successful experiences in integrating nomads into global economic supply chains are almost impossible to find. When one factors in the additional challenge of Mongolia’s vast land area and scattered population, it is not clear that there is an economic case for heavily focusing diversification efforts on the meat, leather, wool, and cashmere sectors. However, this is not to say that efforts to develop those sectors are not worthwhile, simply that they are not likely to provide a solution to dependency on mining exports.

---

6 See the government presentations at the 2022 Mongolia Economic Forum, which may be found here: https://bcmongolia.org/en/news/o.html.
21. An alternative approach would be to use the earnings from expanded mining exports to create conditions for the growth of a modern urban economy, including urban-based export sectors, reinforcing the overall vitality of the Mongolian economic and its ability to manage some of the downsides of large mineral exports. Over 55% of Mongolia’s population reside in the three largest northern cities of Ulaanbaatar (with 50% of the population), Erdenet, and Darkhan. Such a policy would also sustainably increase the fiscal resources available for addressing the social challenges involved in maintaining acceptable social services and living standards for Mongolia’s rural population. One key to developing Mongolia’s urban economy will be providing access to imported technology, equipment, and hard and soft inputs at the lowest price possible to allow the urban economy to develop in a market-driven way. This approach in no way excludes efforts to develop the animal product sector as well; meat and high-quality cashmere exports also require the same access to imported inputs to be globally competitive.

22. At present government policy is heavily focused on promoting quick mineral export growth, while not paying sufficient attention to the modernization of the Central Corridor to allow for rapid accompanying growth in imports and the development of new non-mineral exports. We project that Mongolian imports will double in value by 2030. However, the specific bifurcated pattern of Mongolia’s trade must be borne in mind. The infrastructure that is being rapidly put in place to facilitate the planned growth in mineral exports comprises new dedicated rail lines from mines to the Chinese border and improved BCPs. This new infrastructure only has a minimal effect on imports, the bulk of which will, for the foreseeable future, still rely on the badly-aged rail infrastructure in the Central Corridor. The Central Corridor is also the key channel for the transportation of non-mineral exports, development of which is a key challenge for Mongolia.

23. The Central Corridor is also the key route for the burgeoning transit trade between China and Russia, including a particularly rapid increase in Chinese exports of construction machinery, trucks, and passenger vehicles. According to the Ministry of Road Transport Development (MRTD) statistical bulletin, in the first 11 months of 2023, trade between China and Russia that transited Mongolia increased by 47% compared to the same period in 2022, reaching more than 4.22 million tons of goods, and in 2024 is certain to surpass the previous annual peak of 4.28 million tons in 2021. This trade is heavily concentrated on the Central Rail Corridor.

24. Transit trade is a major potential growth pole for Mongolia, both in the short term due to the increase in China-Russia trade and in the long term as a route for Asian exports to Europe. However, the main constraints remain the use of Russian gauge for the new rail lines built to connect Mongolia’s coal deposits with China: it imposes the need for transfers, adding unnecessary costs and delays at the border.

---


25. Over the longer term when rail freight from Asia transiting Mongolia and Russia to Europe is restored, the potential for further benefits from expanding transit trade is noteworthy. However Mongolia’s Central Corridor faces stiff competition for that traffic, from rail routes across Kazakhstan and Central Asia and from sea freight. A recent World Bank report *Middle Trade and Transport Corridor*\(^9\) analyzed the prospects for the key overland corridor that transits Kazakhstan and points out the substantial investment that will be needed to achieve possible growth in traffic in this decade. The report also concludes that even with such investments the key role of that corridor will be in expanding regional trade, not inter-continental. This makes clear the opportunities and challenges that Mongolia must assess carefully in considering investments targeting expanded transit trade.

26. The Central Rail Corridor is plagued by numerous infrastructure and logistical inefficiencies, problems that are not receiving the attention that they urgently require at present, as the government is prioritizing the quick gains from expanding mineral exports to China. High transport and logistical costs along the Central Corridor are undoubtedly one obstacle to sustainable growth and development. The World Bank’s Mongolia Infrastructure Sector Assessment Program (InfraSAP)\(^10\) report presents a clear and useful analysis of many of these problems, and proposes steps to alleviate them. This report updates and expands those recommendations, particularly through a concrete review of logistics along the Central Corridor.

27. Inefficiencies in import transport and logistics have several causes. The severe long term lack of investment in the central rail line is one major source of inefficiency: rail shipment is slow and costly. Mongolia’s dependence on imports through the bustling Chinese port of Tianjin, frequently leading to long delays in their delivery, is another. The reduction in the number of block trains running between Tianjin and the Erenhot-Zamiin Uud Border Crossing Point (ZU BCP) is part of that problem. This reduction is likely to be, at least in part, due to the delays at Zamiin Uud, which has extended the circuit time for rail wagons.

28. There are also delays in the processing of imports at the ZU BCP, largely due to the change in rail gauge, which requires the transfer of containers to Russian gauge wagons. There are further costly delays in the delivery of goods to their end-users, even after they have entered Mongolia, most of all in Ulaanbaatar, where import handling takes place in a scattered set of relatively small freight terminals, many of them located in the heavily congested downtown area.

29. Inefficiencies in freight handling in Ulaanbaatar are compounded by the failure to construct a rail line that bypasses Ulaanbaatar between its north and south, for Central Corridor traffic that neither originates in, nor is destined for, Ulaanbaatar. At present all such traffic, including transit

---


trade, must pass through the slow and congested rail lines in downtown Ulaanbaatar. Plans to construct the Bogdkhan Railway Bypass to solve this problem are currently on hold.

30. Improvement in the efficiency of Central Corridor infrastructure and logistics is, thus, a central challenge for Mongolia. The key role of the railway is discussed in the next chapter, while improvements to border infrastructure and processes are discussed in Chapter 4.

2.2 Analysis of Mineral Exports by Destination, Mine, and BCP

31. Mongolia’s rich endowment of mineral resources has been the central driver of economic trends in the country for the last 20 years. The following map shows the major mines that are currently producing exportable products and the rail links to them that exist, are under construction, or are planned for construction in the coming years.

Figure 3: Map of Mongolia’s Largest Mines and Links to Export BCPs

32. The 2022 output of these mines, their export routes, and the BCPs through which their products are shipped are presented in Table 1.
<table>
<thead>
<tr>
<th>Port</th>
<th>Mine</th>
<th>Volume (metric tons)</th>
<th>Type of Cargo</th>
<th>Type of Transport</th>
<th>Exporters</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZU</td>
<td>Erdenet</td>
<td>703,300</td>
<td>Copper concentrate, Molybdenum concentrate</td>
<td>Railway</td>
<td>Erdenet Mine</td>
</tr>
<tr>
<td>ZU</td>
<td>Erdenet</td>
<td>10,000</td>
<td>Cathode copper</td>
<td>Railway</td>
<td>Erdenin, Achit Ikht</td>
</tr>
<tr>
<td>ZU</td>
<td>Darkhan</td>
<td>4,700,000</td>
<td>Iron ore</td>
<td>Railway</td>
<td>Darkhan metallurgical plant</td>
</tr>
<tr>
<td>ZU</td>
<td>Choir, Bor Undur</td>
<td>387,700</td>
<td>Fluorspar</td>
<td>Railway</td>
<td>Bor Undur Mine</td>
</tr>
<tr>
<td>ZU</td>
<td>Tömörтиин Ovoo</td>
<td>141,200</td>
<td>Zinc concentrate</td>
<td>Railway</td>
<td>Monrossvetmet</td>
</tr>
<tr>
<td>Bulgan</td>
<td>Khushuut</td>
<td>2,245,120</td>
<td>Coal</td>
<td>Road</td>
<td>MOENCO, Tefis Mining</td>
</tr>
<tr>
<td>Burgastai</td>
<td>Altai Khuder</td>
<td>866,282</td>
<td>Iron ore</td>
<td>Road</td>
<td>Altai Khuder LLC</td>
</tr>
<tr>
<td>Shiveekhuren</td>
<td>Nariin Sukhait</td>
<td>5,366,925</td>
<td>Coal</td>
<td>Road (rail under construction)</td>
<td>MAK, Usukh Zoos, Southgobi Sands</td>
</tr>
<tr>
<td>Erentsav</td>
<td>Tömörтиин Ovoo</td>
<td>38,222.7</td>
<td>Zinc concentrate</td>
<td>Road</td>
<td>Tsairt Mineral LLC</td>
</tr>
<tr>
<td>Gashuun Sukhait</td>
<td>Tavantolgoi</td>
<td>18,074,366</td>
<td>Coal</td>
<td>Road in 2022, rail completed in 2023</td>
<td>Erdenes Tavan Tolgoi</td>
</tr>
<tr>
<td>Gashuun Sukhait</td>
<td>Tavantolgoi</td>
<td>2,660,000</td>
<td>Coal</td>
<td></td>
<td>Tavantolgoi JSC</td>
</tr>
<tr>
<td>Port</td>
<td>Mine</td>
<td>Volume (metric tons)</td>
<td>Type of Cargo</td>
<td>Type of Transport</td>
<td>Exporters</td>
</tr>
<tr>
<td>--------------</td>
<td>----------</td>
<td>----------------------</td>
<td>---------------</td>
<td>-------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Gashuun Sukhait</td>
<td>Tavantolgoi</td>
<td>4,130,000</td>
<td>Coal</td>
<td></td>
<td>Energy Resources LLC</td>
</tr>
<tr>
<td>Gashuun Sukhait</td>
<td>Oyutolgoi</td>
<td>750,000</td>
<td>Copper concentrate</td>
<td>Road</td>
<td>Oyutolgoi JSC</td>
</tr>
<tr>
<td>Hangi</td>
<td>Ailbayan</td>
<td>3,000,286 (total of all three mines)</td>
<td>Coal</td>
<td>Road</td>
<td></td>
</tr>
<tr>
<td>Hangi</td>
<td>Mandakh</td>
<td></td>
<td>Coal</td>
<td>Road</td>
<td></td>
</tr>
<tr>
<td>Hangi</td>
<td>Tavantolgoi</td>
<td></td>
<td>Coal</td>
<td>Road in 2022, rail completed in 2023</td>
<td></td>
</tr>
<tr>
<td>Hangi</td>
<td>Boroo</td>
<td>44,494.5</td>
<td>Iron ore</td>
<td>Road</td>
<td>Bold Tumur Eruu Gol mine</td>
</tr>
<tr>
<td>Hangi</td>
<td>Choir</td>
<td>6,051.4</td>
<td>Fluorspar</td>
<td>Road</td>
<td>Small mines</td>
</tr>
<tr>
<td>Bichigt</td>
<td>Khuut</td>
<td>63,841</td>
<td>Coal</td>
<td>Road</td>
<td>Buman Olz, Erdeni Bosgo LLC</td>
</tr>
<tr>
<td>Bayankhoshuu</td>
<td>Tamsag</td>
<td>346,013.7</td>
<td>Oil</td>
<td>Road</td>
<td></td>
</tr>
<tr>
<td>Sukhbaatar</td>
<td>Bor Undur</td>
<td>178,930.7</td>
<td>Fluorspar and feldspar</td>
<td>Rail</td>
<td>Monrossvetmet</td>
</tr>
</tbody>
</table>

Source: MRTD, 2022 data

33. Several important characteristics of Mongolia’s mineral exports can be seen in Table 1. The first, as is show below in Table 2, out of a total of 41.7 million tons of mineral exports in 2022 listed here\(^{11}\), only 6.1 million tons (14% of the total) were shipped out via the Central Corridor: copper from Erdenet and some of the zinc from Tömörön Ovoo through ZU to China and fluorspar and feldspar from Bor Undur to China and Russia. The remaining 86% was shipped through other BCPs, primarily Gashuunsukhait, Shiveekhuren, Bulgan, and Khangi on the Chinese border.

---

\(^{11}\) Remaining mineral exports exist, but are negligible.
Table 2: Mineral Exports by Rail Corridor in 2022

<table>
<thead>
<tr>
<th>Port</th>
<th>Total Exports (tons)</th>
<th>Share of Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zamiin Uud</td>
<td>5,942,200</td>
<td>13.59%</td>
</tr>
<tr>
<td>Sukhbaatar</td>
<td>178,931</td>
<td>0.41%</td>
</tr>
<tr>
<td><strong>Total Central Corridor</strong></td>
<td><strong>6,121,131</strong></td>
<td><strong>14.00%</strong></td>
</tr>
<tr>
<td>Gashuunsukhait</td>
<td>25,652,589</td>
<td>58.68%</td>
</tr>
<tr>
<td>Shiveekhuren</td>
<td>5,366,925</td>
<td>12.28%</td>
</tr>
<tr>
<td>Khangi</td>
<td>3,050,832</td>
<td>6.98%</td>
</tr>
<tr>
<td>Bulgan</td>
<td>2,245,120</td>
<td>5.14%</td>
</tr>
<tr>
<td>Others</td>
<td>1,497,831</td>
<td>2.92%</td>
</tr>
<tr>
<td><strong>Total Exports Outside Central Corridor</strong></td>
<td><strong>37,813,297</strong></td>
<td><strong>86.00%</strong></td>
</tr>
</tbody>
</table>

*Source: Mongolian Customs Authority, 2022 data*

34. Second, at this time, nearly all (99%) of Mongolia’s overland mineral exports are shipped to China. This reflects China’s strong gravitational pull for Mongolian minerals. The main mineral product that is not sold to China is gold, which is transported by air to Europe. Overland mineral export routes basically all point to China now.

35. However, it should be noted that this is not a complete account of the resources that the exploitation and export of which will be contributing to Mongolian economic growth in the coming years. There are additional petroleum, coal, gold, copper, and other deposits that are in varying stages of development. The Ovoot coking coal deposit in Khuvsgul Province is particularly noteworthy, because of its potential size, which is estimated as second only to Tavantolgoi\(^\text{12}\), and because it is located in Mongolia’s northwestern region and its products will be exported via Erdenet and the Central Economic Corridor. If Ovoot is fully developed, it will create major new income and demand for Central Corridor operations.

36. There is also a perennial discussion about the development of Mongolia’s rare earth resources, a discussion which received new prominence during the October, 2022 visit to Mongolia of German Chancellor Scholz\(^\text{13}\) and the February 2023 visit of the Mongolian Prime Minister to

---


South Korea\textsuperscript{14}, as well as the signing in late June 2023 of a US-Mongolia memorandum of understanding on cooperation in the development of critical minerals\textsuperscript{15}. As a country with a vast area and sparse population, economically viable development of all these resources poses numerous challenges, most of all in the transport and logistics sectors.

2.3 Modes of Mineral Export

37. **Coal**: Container transportation terminals have been established in Gashuunsukhait and Shiveekhuren ports. The Chinese authorities have informed Mongolian counterparts that they wish to buy coal and other mineral products in containers, rather than bags or other packaging. In the future, there will be a tendency to receive bulk cargo in containers. Therefore, in the future, the demand for open top containers will increase. A project for automated guided vehicles (AGVs) – driverless and automated transportation from the container terminal of Gashuunsukhait and Shiveekhuren ports to the Chinese border port – is being implemented. Coal is also shipped by truck from Khushuut mine to Bulgan BCP, where it crosses the border to Takeshenken in Xinjiang Uyghur Autonomous Region of China.

38. **Iron ore**: Mongolia transports 5 to 7 million tons of iron ore annually from Selenge, Khentii, Erdenet, and Central provinces through the port of Zamiin Uud. Iron ore is transferred to Erenhot and supplied to the Bugat metallurgical plant of UMZO in China’s Inner Mongolia Autonomous Region.

39. **Copper**: Erdenet's copper is transported by UBTZ in large packages by rail to Salkhit, where the wagons transfer to the Central Rail Corridor and are exported through Zamiin Uud. Copper concentrate from the much larger Oyu Tolgoi mine is being transported by road to Gashuunsukhait BCP in big packages, where after crossing the border it is loaded onto Chinese trains.

40. **Zinc**: Zinc is transported by road in big packages to Sainshand from the Tömörtilin Ovoo Zinc Mine in Sukhbaatar Province, where it is transferred to the Central Rail Corridor, and exported through Zamiin Uud port. A portion is transported by road to Erentsav Port and exported to Russia.

41. **Flourspar**: Fluorspar is mined in Khentii and Dornogovi provinces, transported by railway, and exported in bulk through Zamiin Uud Port to China and through Sukhbaatar Port to Russia.

42. **Gold**: Is exported by air.


43. The following map presents the most recent update on NRP plans for new rail connections for exports of Mongolian mineral products.

**Figure 4: Plans for New Rail Connections from Key Mines to BCPs**

These connections will play a central role in expanding mineral exports in Mongolia. But they are only half the picture; there is a need to create BCP rail connections and facilities to allow for the smooth export of products. This is another high priority at present, which was reemphasized during the visit of the Mongolian Prime Minister, L. Oyun-erdene, to Beijing in June, 2023\(^6\). A Ministry of Economy and Development (MED) presentation in 2022\(^17\) included the following map with details regarding planned increases in BCP capacity in the coming seven years.

---

\(^6\) There have been extensive reports in Chinese and Mongolian media. Here is one in English: South China Morning Post. 2023. “China, Mongolia to Discuss Technology, Railway Connections and Green Development as Prime Minister Begins 6-day Trip.” South China Morning Post, June 26, 2023. https://finance.yahoo.com/news/china-mongolia-discuss-technology-railway-093000056.html

\(^{17}\) Ministry of Economy and Development, Presentation on Port Recovery Plans under the NRP, December 2022
These data make it clear how expanding mining exports – most importantly, coal exports – to China is the centerpiece of Mongolia’s current NRP economic growth plan. The NRP sets out ambitious goals for capacity expansion in the BCPs that are directly linked to Mongolia’s major coal mines: Khangi, Gashuunsukhait, Shiveekhuren, and Bulgan. However, as noted above, Zamiin Uud, the BCP that plays the central role in imports and transit trade, is slated for much slower growth and investment, a gap in policy that could have serious negative effects on Mongolia’s long-term development.

2.4 Analysis of Trends in Non-mineral Exports

The low share of non-mineral exports of total trade has been a constant feature of Mongolia’s balance of payments for the last decade, i.e., since the start of Mongolia’s mining boom in 2010. National Statistical Office data on the export of key commodities in the years 2016 to 2019, before COVID-related border restrictions reduced trade flows, make this very clear. Exports of mineral commodities and precious metals were consistently between 85–90% of the total, by value. Exports of textiles and textile articles, including cashmere, never exceeded 6.5% of the total and live animals and meat never exceeded 1.5%. Raw and processed hides were an insignificant 0.2% of the total.

---

in 2019 and never exceeded 0.6%. The dominance of mineral exports will only increase in the coming years, due to the new mine-to-border infrastructure described above.

47. This pattern is a dramatic change from the first years of Mongolia’s transition to a market economy. Between 1999 and 2003, the share of mineral products plus precious metals in total exports averaged 34%, and the share of precious metals, almost entirely gold, averaged roughly 18%\(^\text{19}\). In those years, the share of Mongolian exports that went to China ranged from between 40–50%\(^\text{20}\). Total exports in 2003 were US$615.9 million, versus US$12.5 billion in 2022. In the last 20 years, mining has completely transformed Mongolia’s economy and trade.

48. To put this transformation in context, the 20-fold increase in exports and the 8.5-fold increase in imports that accompanied it are significantly larger in magnitude than the change that took place in China during those two decades. Chinese exports increased 8.2-fold and imports 6.6-fold\(^\text{21}\).

49. The World Bank InfraSAP\(^\text{22}\) report analyzes in detail a number of infrastructure and logistical obstacles to the diversification of Mongolia’s exports, focusing on prospects for the animal product sector, but also touching on steel and a few other sectors. The cross-cutting challenge common to all of the key animal products is Mongolia’s large area and scattered herding population. There has been a consistent tendency since Mongolia’s turn to a market economy for observers to casually remark on the putative economic potential of the country’s large number of livestock, estimated at a record high of 71.1 million as at the end of 2022\(^\text{23}\), as a source of export earnings.

50. There have been numerous attempts by donors and private businesses to establish global brands for Mongolia’s products. These efforts have met with limited success. Building export industries that source raw materials from a nomadic-based sector has proven to be extremely difficult around the globe, including in Mongolia. Mongolia’s wool and cashmere industries face the additional challenge of competition from Chinese buyers for their raw products; many herders are located considerably closer to Chinese manufacturers than to Mongolian ones, and the Chinese cashmere and wool sectors have long been highly competitive global players.


\(^{20}\) Ibid, Table 13.2, p. 201.


\(^{22}\) World Bank. 2020, op. cit.

2.5 Forecasting Central Corridor Freight Demand to 2030

51. In this section, the projected trends in the three main components of the Central Corridor freight demand are examine separately, namely: exports, imports, and transit trade.

52. Table 3, from our project rail sector assessment, shows pre-COVID-19 trends in trade transport, as well as the changes in patterns after the pandemic broke out\(^{24}\).

Table 3: Mongolia Trade Traffic With China and Russia 2014–2021

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cargo volume (in thousand tons)</td>
<td>21,119</td>
<td>19,151</td>
<td>19,989</td>
<td>22,765</td>
<td>25,763</td>
<td>28,143</td>
<td>30,000</td>
<td>31,261</td>
</tr>
<tr>
<td>Import</td>
<td>2,289</td>
<td>2,188</td>
<td>1,994</td>
<td>2,303</td>
<td>2,798</td>
<td>2,938</td>
<td>3,051</td>
<td>3,358 0</td>
</tr>
<tr>
<td>From China</td>
<td>971</td>
<td>807</td>
<td>583</td>
<td>619</td>
<td>760</td>
<td>844</td>
<td>874</td>
<td>1,093 6</td>
</tr>
<tr>
<td>From Russia</td>
<td>1,318</td>
<td>1,381</td>
<td>1,411</td>
<td>1,684</td>
<td>2,039</td>
<td>2,093 8</td>
<td>2,177</td>
<td>2,264 4</td>
</tr>
<tr>
<td>Export</td>
<td>6,191</td>
<td>5,638</td>
<td>7,095</td>
<td>7,887</td>
<td>9,272</td>
<td>10,219</td>
<td>11,454</td>
<td>10,992</td>
</tr>
<tr>
<td>To China</td>
<td>5,965</td>
<td>5,370</td>
<td>6,912</td>
<td>7,687</td>
<td>9,059</td>
<td>10,021</td>
<td>11,264</td>
<td>10,760</td>
</tr>
<tr>
<td>To Russia</td>
<td>226</td>
<td>268</td>
<td>183</td>
<td>200</td>
<td>214</td>
<td>198</td>
<td>190</td>
<td>233</td>
</tr>
<tr>
<td>Transit</td>
<td>2,065</td>
<td>2,094</td>
<td>2,362</td>
<td>3,091</td>
<td>3,366</td>
<td>3,896</td>
<td>4,284</td>
<td>4,241</td>
</tr>
<tr>
<td>From China to Russia</td>
<td>329</td>
<td>368</td>
<td>378</td>
<td>575</td>
<td>566</td>
<td>609</td>
<td>804</td>
<td>1,172</td>
</tr>
<tr>
<td>From Russia to China</td>
<td>1,736</td>
<td>1,726</td>
<td>1,985</td>
<td>2,516</td>
<td>2,800</td>
<td>3,286</td>
<td>3,480</td>
<td>3,069</td>
</tr>
<tr>
<td>Cargo turnover (in million tons/km)</td>
<td>12,474</td>
<td>11,463</td>
<td>12,371</td>
<td>13,493</td>
<td>15,315</td>
<td>17,384</td>
<td>18,972</td>
<td>18,345</td>
</tr>
<tr>
<td>Import</td>
<td>1,063</td>
<td>1,026</td>
<td>932</td>
<td>1,171</td>
<td>1,406</td>
<td>1,509</td>
<td>1,470</td>
<td>1,554</td>
</tr>
<tr>
<td>From China</td>
<td>527</td>
<td>464</td>
<td>361</td>
<td>415</td>
<td>496</td>
<td>543</td>
<td>540</td>
<td>627</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>From Russia</td>
<td>536</td>
<td>562</td>
<td>572</td>
<td>756</td>
<td>910</td>
<td>966</td>
<td>930</td>
<td>927</td>
</tr>
<tr>
<td>Export</td>
<td>5,586</td>
<td>5,252</td>
<td>6,524</td>
<td>6,418</td>
<td>7,307</td>
<td>8,398</td>
<td>9,437</td>
<td>8,718</td>
</tr>
<tr>
<td>To China</td>
<td>5,439</td>
<td>5,077</td>
<td>6,403</td>
<td>6,282</td>
<td>7,166</td>
<td>8,274</td>
<td>9,314</td>
<td>8,574</td>
</tr>
<tr>
<td>To Russia</td>
<td>146</td>
<td>175</td>
<td>121</td>
<td>135</td>
<td>141</td>
<td>123</td>
<td>123</td>
<td>143</td>
</tr>
<tr>
<td>Transit</td>
<td>2,292</td>
<td>2,324</td>
<td>2,622</td>
<td>3,431</td>
<td>3,736</td>
<td>4,324</td>
<td>4,755</td>
<td>4,708</td>
</tr>
<tr>
<td>From China to Russia</td>
<td>366</td>
<td>408</td>
<td>419</td>
<td>638</td>
<td>628</td>
<td>676</td>
<td>892</td>
<td>1,301</td>
</tr>
<tr>
<td>From Russia to China</td>
<td>1,927</td>
<td>1,916</td>
<td>2,203</td>
<td>2,793</td>
<td>3,108</td>
<td>3,648</td>
<td>3,863</td>
<td>3,407</td>
</tr>
</tbody>
</table>


53. Prior to the COVID-19 disruption, the share of rail freight in exports, imports, and transit trade were as shown in Figure 6.

**Figure 6: Rail Freight Share of International Trade from 2014 to 2021 – Imports, Exports and Transit**


54. The rail share of exports is certain to increase sharply in the coming years, as Tavaantolgoi and Naruun Sukhait coal mines, which will provide the bulk of Mongolia’s planned increase in exports, shift from their currently exclusive use of road transport to rail freight for their exports, using the new railway lines being built to connect with the Chinese border. These new lines are being built in Russian gauge, necessitating unloading and reloading onto Chinese wagons at the border.
55. In terms of tons, increased mineral exports on these routes and, as analyzed earlier, to a lesser extent along the Central Corridor, will be the largest driver of the growth in exports in Mongolia. At the same time, increases in non-mineral exports, so important for Mongolia’s sustainable development and growth, will also depend on the Central Corridor, because it provides the most direct link between the northern regions and the Chinese border. As can be seen from the planned rail route expansions that were discussed earlier in this paper, there are no plans to build links further inland and north from the new lines to Gashuunskhait, Shiveekhuren, and Khangi; these are intended only to increase the volume and reduce the cost of mineral exports.

56. In relation to transit, there are reports\textsuperscript{25} that one result of the surge in Chinese exports to Russia has been growth in the number of Russian trucks that carry this freight from the ZU BCP through Mongolia and into Russia at Altanbulag. This is a short-term workaround for the rail freight backlog at the border and to overcome UBTZ capacity constraints, but it has worsened the backlog at the ZU BCP for truck traffic and has also given rise to tensions regarding the proper fees that Russian trucks should pay to the Mongolian Government for this service. The 100% share of rail in transit freight may, therefore, decline slightly, even as the overall volume of transit trade, including by rail, grows due to Russia’s increasing reliance on China as a source of imports.

57. Regarding the share of imports transported by rail, there is currently no indication that the high share of rail freight for import transport is going to decline from its current roughly 80% level. Further increases are more likely as the volume of imports increases. The central position of the three northern cities of Ulaanbaatar (especially), Darkhan, and Erdenet in the Mongolian economy, all three of which are well linked to the Central Corridor, gives rail transport a strong competitive advantage for imports.

58. Our demand forecast exercise draws on a Central Corridor origin-destination (OD) table that was released in 2022 by an Asian Development Bank consulting team, in their Feasibility Assessment for the Bogdkhan Railway Bypass Investment Project, which was provided to the project by MRTD\textsuperscript{26}. The ADB consultants obtained 2030 OD forecasts from UBTZ, via MRTD, and then undertook two steps to produce their own forecast. First they derived a 2020 OD table from the UBTZ forecast, based on which they then produced their own 2030 forecast. They provide a useful, although estimated, snapshot of freight traffic along the Central Corridor as at 2020 and a 2030 scenario.

59. The largest difference between the UBTZ and ADB 2030 forecasts is that the MRTD forecast anticipates a large increase in volume of freight from Erdenet to Zamiin Uud by 2030, presumably based on strong assumptions regarding the Ovoot coking coal mine in Khuvsgul, namely: (i) that it reaches full production capacity by then; (ii) that a new rail line is completed connecting the mine to Erdenet; and (iii) that UBTZ has the capacity to transport an additional roughly 20 million tons of coking coal per year. At present there is little indication of progress at this mine, although it seems

\textsuperscript{25} Conversations by project team with counterparts in the Federation of Mongolian Freight Forwarders and other firms.

to have considerable potential. The ADB team sharply reduced that projection based on the low priority that is currently attached to construction of this new rail line. Their forecast assumes the addition of four million tons of Ovoot coal per annum, an amount that could be accommodated by current UBTZ capacity and by constructing a road from Ovoot to Erdenet for trucking coal.

60. This is an OD forecasting exercise for UBTZ only and does not take into account the planned increase in traffic on the new railway lines connecting major mines with the Chinese border. As such it is directly relevant to the Central Corridor only. Table 4 shows how the forecasts were produced. The resulting forecast volumes are shown in Table 5, from a 2020 base of 30 million tons.

### Table 4: Rail Freight Growth Rates

<table>
<thead>
<tr>
<th></th>
<th>2020–2030</th>
<th>2030–2040</th>
<th>2040–2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic</td>
<td>6.0% pa</td>
<td>5.0% pa</td>
<td>4.0% pa</td>
</tr>
<tr>
<td>Imports</td>
<td>8.0% pa</td>
<td>6.5% pa</td>
<td>5.0% pa</td>
</tr>
<tr>
<td>Exports</td>
<td>Erdenet-China add 4 million tons in 2030</td>
<td>No change (from UBTZ)</td>
<td>No change (from UBTZ)</td>
</tr>
<tr>
<td>Transit</td>
<td>2030 values are double 2020 values</td>
<td>2.3% pa</td>
<td>2.3% pa</td>
</tr>
</tbody>
</table>

Source: ADB 2022

### Table 5: Rail Freight Forecast

<table>
<thead>
<tr>
<th></th>
<th>2030</th>
<th>2040</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tons (million)</td>
<td>49.5</td>
<td>69.9</td>
<td>101.0</td>
</tr>
<tr>
<td>Tons per km (million)</td>
<td>31,953</td>
<td>39,974</td>
<td>51,537</td>
</tr>
<tr>
<td>Average haul per km</td>
<td>645</td>
<td>572</td>
<td>510</td>
</tr>
</tbody>
</table>

Source: ADB 2022

61. This import growth estimate is likely to be too low. In the four pre-COVID-19 years the annual compounded growth rate for imports was 12.7%, while annual GDP growth rate (total, not per capita) was 6.6% per annum\(^{27}\), indicating that the elasticity of import demand with respect to GDP growth is still high in Mongolia.

62. The government’s goal is to increase GDP to US$8,300 per capita by 2030, a 7.8% per annum growth in per capita GDP for the rest of the decade, equivalent to a 9.3% per annum growth

---

\(^{27}\) Author’s calculations based on data from National Statistical Office of Mongolia yearbooks (see https://www.1212.mn/en/statistic/file-library/annual).
rate in total GDP, assuming a continued 1.5% annual increase in population. This projected 7.8% growth rate is high, but not unrealistic given the plans for rapid expansion of mineral exports in the coming years. Underground production from phase two of the Oyu Tolgoi mine commenced in 2023, and the mine is expected to become the fourth largest copper mine in the world by 2028, with expected production of 500,000 tons per year. Completion of rail lines and BCP connections at Gashuunsukhait/Gantsmod and Khangi/Mandal will allow large increases in the export of Tavantolgoi coal. In addition, Naruun Sukhait coal exports will also expand through Shiveekhuren/Sekhe.

63. For our analysis we assume a more conservative rate than the government’s, based on 6.8% growth in per capita GDP for the rest of the decade, which will lead to GDP per capita of $7,731 and total GDP of $32.073 billion in 2030. This is an 89.2% increase in GDP by 2030.

64. Our forecast is based on import demand elasticity of GDP growth of 1.1, lower than the historic pattern, but also factoring in the government’s recognition that a significant portion of the proceeds from mineral export-driven growth needs to be set aside in a Sovereign Wealth Fund or similar. This still points to a 108.1% increase in imports from 2020 to 2030, consistent with past trends in every respect. This would produce a large trade surplus and accumulation of official reserves. To summarize, our forecasts for 2030 are shown in Table 6.

### Table 6: Forecasts for GDP, Imports and Exports in 2030

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2020</th>
<th>2030</th>
<th>Total increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP per capita</td>
<td>US$4,294</td>
<td>US$7,732</td>
<td>80.0%</td>
</tr>
<tr>
<td>Total GDP</td>
<td>US$15.8 billion</td>
<td>US$32.1 billion</td>
<td>103.2%</td>
</tr>
<tr>
<td>Imports</td>
<td>US$6.1 billion (2019)</td>
<td>US$12.7 billion</td>
<td>108.1%</td>
</tr>
<tr>
<td>Exports (government’s target)</td>
<td>US$7.6 billion</td>
<td>US$20 billion</td>
<td>163.2%</td>
</tr>
</tbody>
</table>

Source: Author’s calculations, building on the NRP policy documents.

65. As discussed above, this more than doubling in imports will only occur if the transport and logistical capacity of the Central Corridor is able to handle it. Based on current conditions, this will present major challenges, which are not receiving the necessary level of attention. Exports are forecast to nearly triple by 2030, but the large majority of that increase will be shipped through the BCPs directly connected to mines, not through ZU. Infrastructure planning is keeping pace with these plans: almost all of exports will be shipped by the state-owned Mongolian Railway Joint Stock Company (MTZ), the state-owned Erdenes Tavantolgoi Railway, a subsidiary of Erdenes Tavan Tolgoi JSC (ETT), and Bold Tumur Eruu Gol Company (BTEG). However, at present over 65% of

---

Mongolian imports come in through ZU, a figure that understates the central role ZU plays, because most of the remaining imports are fuel and electricity coming in from Russia, not containerized goods using other BCPs. As things stand, the large majority of this increase in imports will need to be handled along the problem-ridden Tianjin-Erenhot-ZU-Ulaanbaatar (UB) chain and carried by UBTZ’s aging rolling stock. As discussed in Chapter 4, the Central Rail Corridor is far from ready for such a surge in demand.

66. The OD tables and forecasts provide useful overall guidance for consideration of new investments in the coming period. They also provide important insights into the looming import transport and logistics challenges for Mongolia, given the inevitable central role that Ulaanbaatar will play in the non-mining Mongolian economy and the discrepancy between the heavy investments in dedicated mining export infrastructure and the relatively modest plans for improvements on the Central Corridor. Although the Central Corridor has a small role to play in expansions in mineral exports in the short term, there may be a need to use the Central Corridor for mineral exports in the future. Increased exports through Gashuunsukhait/Gantsmod and Shiveekhuren/Sekhe will lead to increased demand for imports, which will have to be routed through ZU.

67. An alternative – or complementary – option would be the development of the Bichigt BCP as a new entry point for Mongolian imports, which could be routed through the Chinese port of Jinzhou, which is far less congested than Tianjin. If Bichigt is further developed in this way it could also become the only potentially significant alternative route for the expansion of non-mineral exports, easing pressure on the Central Corridor and on the heavily congested Erenhot-Tianjin line. These plans are under discussion, but are still quite uncertain and, if the decision is made to proceed, the time frame for launch is likely to be 5 to 10 years.

2.6 Implications of Traffic Demand Forecasts at Zamiin Uud and Altanbulag Central Corridor BCPs

68. Although, as discussed above, Zamiin Uud BCP handles a relatively small percentage of Mongolian mineral exports, those mineral products are still the dominant proportion of exports that pass through this port, as shown in Table 7.

Table 7: Zamiin Uud Exports – First 10 Months of 2023

<table>
<thead>
<tr>
<th>Type of Export</th>
<th>Tons</th>
<th>% of total</th>
<th>Value ($000)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral</td>
<td>9,576,540</td>
<td>97.3%</td>
<td>2,232,015</td>
<td>71.4%</td>
</tr>
<tr>
<td>Non-mineral</td>
<td>263,096</td>
<td>2.7%</td>
<td>894,863</td>
<td>28.6%</td>
</tr>
<tr>
<td>Total</td>
<td>9,839,636</td>
<td></td>
<td>3,126,878</td>
<td></td>
</tr>
</tbody>
</table>

Source: Based on data Mongolian Customs Authority data; this time period is used to capture post-COVID-19 trends.
69. What distinguishes Zamiin Uud from other BCPs, however, is the large volume of non-mineral imports that enter Mongolia at this crossing (Table 8).

**Table 8: Exports and Imports of Leading BCPs – First 10 months of 2023**

<table>
<thead>
<tr>
<th>Port</th>
<th>Exports (US$ million)</th>
<th>Exports (tons 000)</th>
<th>Imports (US$ million)</th>
<th>Imports (tons 000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zamiin Uud</td>
<td>3,126.88</td>
<td>9,840</td>
<td>4,163</td>
<td>2,453</td>
</tr>
<tr>
<td>Gashuunsukhait</td>
<td>6,271</td>
<td>33,754</td>
<td>541</td>
<td>443</td>
</tr>
<tr>
<td>Shiveekhuren</td>
<td>17,255</td>
<td>16,536</td>
<td>114</td>
<td>57</td>
</tr>
<tr>
<td>Bulgan</td>
<td>433</td>
<td>2,558</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>Khangi</td>
<td>643</td>
<td>4,597</td>
<td>45</td>
<td>76</td>
</tr>
</tbody>
</table>

Source: Based on data obtained from the Mongolian Customs Authority.

70. We see that the other four BCPs all have a massive surplus of exports over imports in value and an even greater surplus in terms of weight. They are not entry ports for any meaningful quantity of products, because they are not linked to key internal markets in the northern urban centers. Zamiin Uud’s unique role as a source of imports from China and countries other than Russia is reflected in the surplus of imports over exports in terms of value, and the 1:4 ratio of import weight to export, which reflects large amounts of smaller imported goods. However, the fact that imports in ZU are vastly higher than the sum of the others reflects how central a role ZU plays in non-mineral trade.

71. The only other Mongolian BCP that has a similar pattern is where the Central Corridor reaches Russia. Mongolian Customs Authority data combine the road BCP of Altanbulag and the rail BCP of Sukhbaatar.

**Table 9: Exports and Imports of Sukhbaatar/Altanbulag**

<table>
<thead>
<tr>
<th></th>
<th>Exports (US$ million)</th>
<th>Exports (tons 000)</th>
<th>Imports (US$ million)</th>
<th>Imports (tons 000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sukhbaatar-Altanbulag</td>
<td>189</td>
<td>176</td>
<td>2,653</td>
<td>2,644</td>
</tr>
<tr>
<td>Excluding petroleum products</td>
<td>1,244</td>
<td></td>
<td>830</td>
<td></td>
</tr>
</tbody>
</table>

Source: Based on data obtained from the Mongolian Customs Authority.

72. It should be noted that imports of Russian petroleum products are recorded at these BCPs and have a large impact on this data. The development of the new oil refinery at Sainshand could lead to a reduction in this trade. However, even when they are excluded, we see that imports dominate the trade at the main Russian border ports, even more than at Zamiin Uud. There is an
important difference between these two key import entry points in terms of the composition of the imports. To put it simply, imports at the Russian border are largely still low-tech legacy products from the socialist era29. Imports at Zamiin Uud comprise many key modern products for Mongolia’s new economy.

73. That difference aside, the Sukhbaatar/Altanbulag and Zamiin Uud data all highlight the overriding importance of the Central Corridor in Mongolian imports.

74. Summing up, there is still some uncertainty about how exactly the three key components of Mongolian trade through Zamiin Uud (i.e., non-mineral exports, imports, and transit trade) will develop, but there is little uncertainty about the projected sharp increase in freight demand for all of these. Transit trade, particularly Chinese exports to Russia, seems quite likely to continue to grow in the coming years, as the importance of those products to the Russian economy will further deepen under almost any scenario in Russian relations with the West.

75. These projections indicate that the Central Rail Corridor will come under increasing stress in the coming years, particularly the stretch between ZU and Ulaanbaatar. New and efficient infrastructure and systems for managing transit trade at the border will be needed to complement the completion of the Bogdkhan Railway Bypass and the construction of a large intermodal freight handling terminal at Ulaanbaatar. Rail gauge change will need to be handled as efficiently as possible, and the eventual construction of a standard gauge rail line between Zamiin Uud and Ulaanbaatar must be carefully considered. All of these and other improvements in logistics will require overcoming some internal resistance and the creation of more transparent governance in the Central Corridor.

---

29 The same products that the author saw in Mongolia when he first visited in 1991.
Chapter 3. Railway Efficiency and Operations

3.1 Structure of Sector

76. Mongolia’s railway is the key component of its trade and transport infrastructure and services, and the Central Rail Corridor is the backbone of the Mongolian rail system. This central railway line is owned by Ulaanbaatar Railway Company (UBTZ), a 50:50 joint venture between Mongolia and Russia established in 1949.

77. The 1,820 km of UBTZ infrastructure includes 1,520 mm broad (Russian) gauge lines in two main parts:

- The main line, Sukhbaatar-Zamiin Uud, connecting the northern (Russian Federation) and southern (People’s Republic of China) borders of Mongolia (1,110 km)

- The eastern line, Ereentsav-Choibalsan, connecting Dornod Province to the Russian Federation (410 km)

78. UBTZ also operates seven branch lines connecting with the main line, including lines connecting the older mining centers of Erdenet (copper, 164 km), Baganuur (coal, 95 km), and Bor-Undur (fluorspar, 60 km), to Zuunbayan (50 km), the site of Mongolia’s first oilfield and refinery. The need to construct transport links to export Mongolian natural resources predates the market reforms that started in Mongolia in 1990 and the mining boom that started in the 2000s.

79. As market reforms and a reorientation in trade away from the former Comecon trading bloc took hold after Mongolia’s 1990 democratic revolution, the need for major reforms and expansion of the rail sector became apparent. To cope with this situation, in 2007, the State Great Khural (the Parliament) of Mongolia issued a Law on Railway Transport (LRT) to promote the institutional, tariff structure, and regulatory reform of its railway, including the establishment of legal conditions for the entry of new railway operators. At the time this was seen as an important step forward, as it clarified the policy making, policy implementation, operational coordination, and regulatory roles of key government bodies and paved the way for the entry of new rail operators.

80. In 2010, the Parliament further approved the State Policy on Railway Transportation for the purpose of establishing a unified railway network with diverse ownership, including open access provisions. This policy called for the construction of more than 5,600 km of new railway lines in three phases by attracting multiple sources of funding, especially from the private sector, into the railway sector. However, these goals were largely not realized; in fact, most of the projects were never launched, in large part due to the inability to attract private sector investment, despite the rapid economic growth that Mongolia enjoyed from 2010 to 2013.
81. In addition to UBTZ, there are now three companies working as infrastructure owners and carriers in Mongolia: Bold Tumur Eruu Gol Company (BTEG), a private mining company, and two state-owned enterprises, the Mongolian Railway Joint Stock Company (MTZ) and Erdenes Tavan Tolgoi JSC (ETT). By the end of 2022, the total length of railway infrastructure held by the newcomers was 1,100 km, accounting for about 40% of the total railway network, all connecting mining operations to their markets. In 2021, BTEG and MTZ accounted for 13.79% of total railway locomotives, 50.80% of total railway wagons, and 13.79% of the traffic volume.

82. From 2010 to 2021, the share of rail freight of the total railway plus road market was between 70% and 80%. Rail almost completely dominated the transit market, and its share of import transport increased from less than 60% in 2014 to 76.9% in 2021. At the same time, mainly due to the rapid development of roads in Mongolia during the recent decade, as well as the rapid growth in the number of privately-owned vehicles, and delays in constructing rail lines to carry the rapidly growing volume of Mongolian mineral products, the rail share of export freight has declined steadily in terms of value: the railway share of export cargo was roughly only 20% during the period from 2014 to 2019. However, this trend is now being rapidly and sharply reversed, due to the construction of new lines to transport coal and other mineral products to China, replacing the previous reliance on road transport for these products. (see Figure 6).

83. The central role of the Zamiin Uud border station in Mongolian trade can be seen from 2021 data, when ZU received and delivered more than 70% of the total number of wagons passing through Mongolia’s borders.

84. In December 2021, the Mongolian Parliament approved the New Recovery Policy, which aims to double Mongolian GDP by 2030. The improvement and expansion of railway transport is recognized as a precondition for this. Unlike many past programs, concrete progress has been quickly achieved, with the completion of three new rail lines connecting major Mongolian mines to the Chinese border, all owned by the Mongolian Railway Company (MTZ), a 100% Mongolian owned state enterprise. The accomplishment of these longstanding goals is a major achievement.

85. At the same time, several key challenges remain, particularly on the UBTZ Central Rail Corridor. Based on analysis of the current use, physical and financial conditions, efficiency, and governance of Mongolia’s rail sector, the current capacity of Mongolia’s rail system cannot meet the ever-growing demand in terms of both quantity and quality and has become a major obstacle to the expansion of Mongolia’s foreign trade. Changes in laws and government institutions have not always been reflected in the sectoral culture, which still shows the heavy influence of its planned economy origins. At the same time, the investment environment in the sector lacks transparency and free and fair competition and is, therefore, not conducive to private sector participation.
3.2 Physical Condition of Central Railway Corridor

86. Reflecting longstanding inadequate investment, key indicators of the design of the main line, such as railway curve radius and track gradient, fall short of good international standards, resulting in serious constraints on speed and safety. In 2020, the total length of the main line was 1,238.2 km, with the following characteristics:

- **Curvature:** The share of routing length with radius less than 350m was 15.32%, while that of 351m<R≤650m was 4.96%, altogether accounting for 20.28% of the total main line, greatly limiting train speed.

- **Gradient:** A total of 26% of the routing length had a gradient of 8.1–15‰, and another 7.4 kilometers of routing length had a gradient of more than 15.1‰. What is even more noteworthy is that the maximum uphill rate is as high as 43.5‰. So much high gradient reduces the average gross ton miles per train hour unless a double locomotive is applied, which sharply increases operating costs.

87. Branch line technical indicators are even poorer than those of the mainline. Besides the poor technical standards of rail line alignment, it is also reported that 40% of the infrastructure is overdue for major repairs (over 18 years old), due to lack of investment.

88. The status of UBTZ rolling stock is another reflection of the longstanding lack of investment. As of 2021, the MRTD Transport Statistics Yearbook reported that 41% of locomotives and 94% of wagons were 25 or more years old.

89. Furthermore, the single-track main rail line leads to costly delays in transport, as trains have to stop at sidings and wait for a train from the opposite direction to pass before continuing. Current capacity limitations on the single track line constrain Mongolia’s ability to increase freight transportation. To increase railway transportation capacity and efficiency it will be necessary to continue expanding the rail network incrementally, then, in the future, determine if double tracking is warranted throughout the line or if it will be enough to only implement targeted improvements at key bottlenecks, combined with enhanced maintenance practices, and upgrade the rolling stock. This will require substantial additional investment.

---

30 As explained here, curves in the rail line require trains to slow down; the more curves and the sharper they are, the more inefficient the transport will be.

31 Gross ton miles per hour is a standard indicator of freight transport performance, measuring the ton-miles of freight carried per hour. If even a short section of track on a particular route has a high gradient the train engine must have the additional power needed for that section.

32 Extracted from PowerPoint presentation by UBTZ. 2022. *Brief Introduction of the UBTZ JSC*, Presented to newly appointed Minister of MRTD, Mr. Byambatsogt at UBTZ offices on September 2, 2022.

90. The transport capacity of several of the main sections of UBTZ’s main line is almost saturated. The ADB Bogd Khan Feasibility Study found that the capacity of the line is 30 million tons per year, and that this had been reached in 2020. Without substantial investment in upgrading the rail line and rolling stock, UBTZ, or any other rail operator, will be unable to handle the growth in traffic that the government’s NRP will cause.

3.3 Investment Needs for UBTZ’s Capacity Enhancement – Short- to Medium-term

91. In 2015, UBTZ developed a three-phase expansion and technical modernization plan, almost none of which has occurred due to a lack of financing. Although outdated by now, this plan provides useful insights into the priority challenges for the Central Rail Corridor. The end goal of each phase of this plan was:

- **Phase 1**: The annual carrying capacity of the main track would be increased to 34 million tons, and the passing capacity increased to 22 pairs of trains. The operation speed of freight trains would increase by 0.8% and the technical speed by 2.6%; the technical speed of passenger trains would increase by 6.1%.

- **Phase 2**: The annual carrying capacity of the main track would be increased to 46 million tons, and the passing capacity increased to 28 pairs of trains. The operation speed of freight trains would increase by 2.2% and the technical speed by 5.4%; the technical speed of passenger trains would increase by 10.3%, and the wagon turnaround time would speed up by 3.8%.

- **Phase 3**: The annual carrying capacity of the main track would be increased to 53.6 million tons, and the passing capacity increased to 31.1 pairs of trains. The operation speed of freight trains would increase by 2.1%, technical speed by 5.3%, and wagon turnaround time by 4.0%.

Table 10: Planned Expansion of Stations and Intersections, Technical Modernization of Inter-tracks in Phase I

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Size</th>
<th>Implementation Period</th>
<th>Cost (US$ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic ban system/on the main road</td>
<td>1,081 km</td>
<td>2017–2018</td>
<td>70</td>
</tr>
<tr>
<td>Build</td>
<td>1 unit</td>
<td>2018</td>
<td>4.43</td>
</tr>
</tbody>
</table>

---

34 Asian Development Bank 2022, *op. cit.*
35 The problems to be solved are extracted from PowerPoint presentation: UBTZ. 2015. Location and Specifications of UBTZ Stations and Crossing.
Table 11: Planned Expansion of Stations and Intersections, Technical Modernization of Inter-tracks in Phase II

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Size</th>
<th>Implementation Period</th>
<th>Cost (US$ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build a two-way track on the main central line</td>
<td>150 km</td>
<td>2021–2024</td>
<td>463.5</td>
</tr>
<tr>
<td>Make the main central a double track</td>
<td>48 km</td>
<td>2024–2025</td>
<td>144.0</td>
</tr>
<tr>
<td>Bogdkhan Bypass Railway</td>
<td>170 km</td>
<td>2022–2025</td>
<td>680.0</td>
</tr>
<tr>
<td>Construction of additional stack tracks for receiving and delivering; updating of electricity centralization system</td>
<td>8 units</td>
<td>2021–2025</td>
<td>6.9</td>
</tr>
<tr>
<td>Expansion of the parking track of the division station; modernization of the electricity centralization system</td>
<td>4 units</td>
<td>2017–2020</td>
<td>23.0</td>
</tr>
<tr>
<td>Expansion of the parking track at three stations in Salhit-Erdenet section</td>
<td>3 units</td>
<td>2021–2023</td>
<td>7.5</td>
</tr>
<tr>
<td>Construction of bypass track between Zamiin Uud-1 and Zamiin Uud-2 stations</td>
<td>4.7 km</td>
<td>2021</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td></td>
<td></td>
<td><strong>1,325.4</strong></td>
</tr>
</tbody>
</table>

Source: Translated and elaborated from PowerPoint presentation: UBTZ. 2015. Location and Specifications of UBTZ Stations and Crossing.

92. The estimated cost in 2015 of the above two phases was US$1.46 billion dollars. These costs are likely to be seriously underestimated. For example, the World Bank’s evaluation of the cost of a full double-track electrified line was estimated at US$7–11 billion\(^{36}\). This does not include the cost of modernizing the rolling stock, which has been estimated at US$1.6 billion\(^{37}\). It is reported

---


that the governments of China, Mongolia, and Russia are considering a feasibility study on upgrading the entire Mongolian main line, although the total investment is unknown.

3.4 UBTZ’s Financial Situation

93. UBTZ’s financial situation is not strong enough to raise sufficient funds to meet these investment needs at present. Except for in 2014, we estimate that UBTZ’s railway business was modestly profitable from 2010 to 2021, of which 93% came from freight transport. In 2021, 85% of the profit was collected from international trade transport\(^{38}\). However, we note that public financial information from UBTZ is incomplete and untransparent, and may not be prepared consistently with Generally Accepted Accounting Practices. An ADB team undertook a careful study of reported retained earnings by UBTZ from 2014–2018\(^{39}\), and estimated that the profit/revenue ratio averaged 0.7% for those five years, far too low to finance even a small portion of the needed capital investment. The underlying problem is the regulatory regime that UBTZ faces. According to Article 7 of LRT, “the railway organization shall determine the fees and tariffs for railway transport services related to legitimate monopolies and market-dominant works and services in accordance with this law and the Law on Prohibition of Unfair Competition.” In practice tariff setting is politicized and, as noted in the next paragraph, the government does not compensate UBTZ for losses incurred when tariffs are set below a level that would allow an adequate return on investment.

94. The tariff structure of UBTZ is composed of freight tariff by cargo category and passenger tariff by domestic or international passenger. There are three types of freight tariff: transit, domestic, and export, and the domestic freight tariff is further divided into 16 categories. A standard cross-subsidy tariff system is used to balance the commercial and social role of the railway. Domestic passenger transport is heavily subsidized by freight, while there are also internal cross subsidies between different categories of freight, aimed at lowering the cost to the shippers of coal to domestic combined heat and power plants so that electricity and heat prices to consumers are subsidized. This cross-subsidization undermines the profitability of UBTZ. Unless the government takes direct responsibility for the fiscal cost of these public service obligations, or the tariff structure is revised to allow a reasonable return on investment in spite of the cross-subsidization, the attractiveness of private investment in rail sector modernization is undermined.

3.5 Improvement of Operational and Financial Performance of Railway

95. Since the promulgation of the LRT in 2007, the railway sector in Mongolia has undergone a lot of changes. Accordingly, there is a need to assess the reforms needed to the state-owned enterprise structure, tariffs, and regulatory framework, as well as to identify potential sources of

\(^{38}\) PowerPoint presentation by UBTZ. 2022. Brief Introduction of the UBTZ JSC, Presented to newly appointed Minister of MRTD, Mr. S. Byambatsogt at UBTZ offices on September 2, 2022.

\(^{39}\) Ibid.
public financing and private sector participation for the financing and operation of the railway. As a sector of great economic, social, and strategic importance, railway sector oversight involves a large number of key government bodies. These include the MRTD, which is directly responsible for rail sector management, including representing the Mongolian 50% ownership rights in UBTZ; the Ministry of Economy and Development, which is responsible for medium and long-term investment planning; the Ministry of Finance, which is responsible for budget decisions regarding subsidization; and the Ministry of Mining and Heavy Industry, which has a large voice in critical decisions regarding operations of lines shipping mineral products. The Ministry of Foreign Affairs also plays a role in shaping the important international dimensions of rail sector policies. Effective coordination among these bodies is challenging, making it difficult to sustain policies consistent with the goal of rail sector development.

**Institutional Reform**

96. The 2007 LRT opened a new chapter for railway institutional reform. Two key stumbling blocks in this reform have been ownership reform and governance reform, most importantly, transparency in the state-owned enterprises that dominate the rail sector in Mongolia.

97. Although ownership diversification in new railway construction has seen new operators – albeit mostly public sector operators – with the creation of MTZ, ETT’s rail subsidiary Tavantolgoi Railway, and BTEG, the problematic 50:50 joint venture ownership structure of UBTZ, a legacy of the pre-market economy era in Mongolia, still awaits resolution. As a result, this arrangement continues to be an obstacle to new investment, upgrading, and expansion in the vitally important Central Rail Corridor. It has also posed problems for the construction of the Bogdkhan Railway Bypass. As railway reform progresses the monopoly position of UBTZ will be increasingly constrained, both by effective competition and solid regulation. However, without ownership reform to make UBTZ a more market-oriented entity that responds to effective regulation and market pressure, the joint venture’s dominant position in non-mineral trade, and its significant share of mineral trade, will continue to weaken Mongolian trade competitiveness. The recent step-up in attention to the China-Mongolia-Russia Economic Corridor in response to the deepening of Russia-China economic ties in the face of European sanctions on Russia offers an opportunity for the three states to find a mutually acceptable solution to UBTZ’s ownership that will be conducive to healthy corridor development. This could create the necessary conditions for the enormous task of upgrading the double-track of UBTZ’s existing 1,110 km main line.

98. Governance issues at ETT and its subsidiary Tavantolgoi Railway, including a lack of transparency regarding the offtake agreements by which financing was arranged for construction by private firms of the Tavantolgoi-Gashuunsukhait and Zuunbayan-Khangi railway lines, have received a great deal of public scrutiny. The offtake agreements had previously been classified as state secrets, but have now been made public. In October 2022, the government dismissed the ETT CEO and several other senior executives at the state-owned enterprise and imposed a six-month
special regime to manage the company\textsuperscript{40}. In December 2022, a six-month special management regime was also declared for Tavantolgoi Railway. In December, the ETT CEO was one of a number of officials reportedly placed under arrest on corruption-related charges. In January 2023, there was also a corruption scandal at UBTZ, albeit not reaching the top management level.

99. The underlying problem here is the governance of state-owned enterprises and the lack of transparency in contracting, not the unquestionable need to pursue greater private sector participation in the rail sector.

100. The likely return on investment in construction of the Tavantolgoi-Gasuunsukhait and Zuunbayan-Khangi railway lines is unclear without a careful assessment of the terms of their financing. Difficulty in establishing arms-length and transparent regulation of large state-owned enterprises is one obstacle to financing and building a more efficient railway network in Mongolia. This applies to UBTZ and MTZ, the management for both of which are appointed by MRTD, which is also responsible for regulatory functions. It also applies to ETT’s rail subsidiary, which is linked to the Ministry of Mining and Heavy Industry. Governance problems at ETT, thus, have implications for the whole rail sector, and the ongoing investigation into ETT and its transport infrastructure contracts offers some promise of movement in overcoming this difficulty.

\textbf{Regulatory Reform}

101. The establishment of the Unified Center for Train Traffic Coordination under the LRT was a meaningful step towards railway regulatory reform in Mongolia. According to Article 14 of the LRT, this Unified Center has seven major traffic coordination functions and powers. However, the effective full exercise of these functions is difficult, due to UBTZ’s strong market power, information asymmetry, and lack of evaluation and regulation, especially in the field of infrastructure tariff setting, standards for interoperability across carriers, and network access. While UBTZ’s operations are subject to Mongolian law, the 50:50 joint venture ownership structure, with the Russian side representing the authorities of one of Mongolia’s powerful large neighbors, constrains the speed and effectiveness of regulation. Most importantly, there are now 876.4 km of new railways: Dornogovi-Khangi (owned and operated by BTEG’s transport subsidiary), Tavantolgoi-Gasuhun Sukhait (owned by ETT and MTZ and operated by Tavantolgoi Railway), and Tavantolgoi-Zuunbayan (owned and operated by MTZ). As legal entities with many forms of ownership have been created in the railway industry, and the number of operators (carriers) is growing dramatically, there is an urgent need to deal with network connectivity between UBTZ and the newcomers and the unfair competition issue.

102. To address these issues, the Minister of Road Transport Development and Member of Parliament revised the LRT and submitted it to the Parliament on October 1, 2023. The main proposed amendments to the law are:

- Clarification of basic relations related to railway transportation and making them more rational, and cessation of corruption and conflicts of interest
- Improvement of legal environment of railway infrastructure, ownership, and operation of rolling stock
- Improvement of the use and maintenance of infrastructure and rolling stock, and increase in investment and transportation efficiency
- Introduction of measures to ensure traffic safety, enforce laws, and eliminate violations, and clarification of some unregulated relations
- Encouragement of the application of advanced technology

### 3.6 Policy Choices

103. Governance weaknesses and lack of transparency in all three state-owned railway operators have emerged as important economic and political challenges in Mongolia. The current attention on governance reforms in all operators, most crucially ETT and its Tavantolgoi Railway subsidiary, is a promising first step toward creating conditions for a more competitive rail sector. However, the challenges are great. Government interference in railway operations has been an ongoing problem for decades; the line between the government's proper role of setting policy and regulation, on the one hand, and direct intervention in commercial decision making such as the appointment of key personnel, procurement of services, and sale of products has never been clearly drawn. Furthermore, while potentially beneficial in theory, the direct links between state-owned mining enterprises and rail line construction and operation are deeply problematic in an economy where independent regulation is relatively weak. Preconditions for attracting new capital from any source other than the government budget include the creation of a commercial orientation, with payment from the government budget for fulfillment of public service obligations, as well as a supportive enabling environment in which fair competition between state-owned enterprises and new private operators is ensured. This will be deeply challenging.

104. In our view, to promote the sustainable development of railways, the basic principles of railway policy for Mongolia are: the separation of government from enterprise, introduction of

---

competition, diversification of ownership, restructuring of industry structure, and strengthening of regulation. The focus should be on a balanced combination of the following:

- **Clarifying the role of public and private entities** in the fields of railway construction, investment, and operation: A mechanism and decision system should be established for identifying social and commercial railway construction and operation projects, especially compensation for public service obligations (PSOs), i.e., the obligation to operate certain services at a financial loss, most notably passenger services and the shipment of coal to state-owned heat and power generating plants. In addition, for investment, the government and the railways should consider the introduction of multi-annual investment contracts to structure the state’s contribution to infrastructure investment and the conditions that railways must follow in order to receive this public contribution.

- **The introduction of effective competition**, as far as possible, and the adoption of open access with clear terms of user access, avoiding wasteful competition at the same time: This is critically important as the number of operators increases. Although the railway law allows operations by one carrier on the infrastructure of another, the necessary regulations, and conditions, including for tariff setting, are not yet in place to implement an open access policy, which would offer great benefits.

- **Trading off the degree of integration and separation on railway restructuring models**: Transforming the organization structure of UBTZ from a monolith into a holding company with passenger business and freight business separated from its infrastructure could be an option.

- **Balancing the relationship of regulation and markets** and strengthening the scientific nature and independence of regulator appropriately

- **Government coordination** among different transport modes for inter-modality and multimodality

### 3.7 Role of Technological Innovation in Improving Operation and Efficiency of Border Stations

105. To accommodate railway gauge differences between countries, it is common practice to build a border station on each side of the border, along with several transshipment lines of two gauges, loading/unloading equipment, and a logistic facility. Meanwhile, the safety and environmental protection equipment and facilities should also be considered. This requires a huge amount of investment and maintenance costs. The process of transit transport and transshipment not only adds time and cost to shipments, but it may also cause loss of goods and serious pollution.
106. The Zamiin Uud and Erenhot border stations have adopted this traditional transshipment mode for several decades. In terms of border-crossing time, it take 24–36 hours for the transshipment of one bulk cargo train, compared with the standard time of 2–4 hours for a container block train at other border crossings.

107. It is reported that Mongolia is building a 7 km line and a border station with transshipment facility from Gashuunsukhait to Gantsmod, which will require an approximate investment of US$100 million. The feasibility study for the Chinese transshipment station is also underway.

108. Apart from this traditional model, there is also a practice of using changeable bogie wagons to solve the gauge difference problem. Existing information shows that the test runs of changeable bogie wagon train between Poland (1,435mm) and Latvia (1,520mm), Finland (1,524mm) and Sweden (1,435mm), Spain (1,668mm) and France (1,435mm) have been quite successful. For example, the transshipment time for a container train was reduced from 3 hours to 10 minutes between the Finland and Sweden border, while the time for a bulk cargo train can be reduced from 6 hours to 6–10 minutes. The technology of changeable bogie wagon has been developed, and manufacturers in Germany (Siemens), Poland (SUW2000), and Spain (Talgo) have mastered this technology. It is said that the China Railway Rolling Stock Corporation (CRRC) is also working on similar technology.

109. It is estimated that both the manufacturing and operational costs of this technology are about 30% higher than that of conventional wagons, however, the benefits accruing from reduced transshipment related facility and equipment investment and operation costs, as well as time saving for cargo and rolling stock, could be much higher. Moreover, the adoption of this technology may also reduce environmental pollution and accidents during the transshipment process.

110. A preliminary study by the Chinese Academy of Engineering indicates that, according to the traffic forecast between the ports of Erenhot and Zamiin Uud from 2023 to 2025, there will be very good economic and financial benefits if this technology innovation is applied, along with an appropriate bilateral transport business model.

111. In view of this, we suggest that the operational and economic possibility to adopt the changeable bogie wagon technology for the export of mining products to China in the new railway border stations between Mongolia and China (Gashuunsukhait-Gantsmod, Khangi-Mandal) should be seriously studied, and a detailed cost-benefit analysis carried out.

---

42 Huawu, He. 2022. Thoughts on Changing the Transshipment of Bulk Train into a Through Transport at Railway Border Station. Chinese Academy of Engineering.
Chapter 4. Trade Facilitations and Border Operations

4.1 Landscape of International Trade

112. Mongolia is a small and open economy and has one of the most liberal trade regimes among countries with similar transition economies. As with all landlocked developing countries, trade is Mongolia’s lifeline. Mongolia’s international trade pattern is concentrated in commodities and merchandise, reflecting its natural endowment, economic and geographical features. Figure 7 shows the ratio of total trade to GDP over the past 25 years, which has been above 100% in almost all years, averaging 120%. This is roughly the same level as Switzerland and Georgia, for example. Figure 8 shows that the performance of Mongolia’s trade in the last 10 years was generally encouraging, with exports overtaking imports, albeit with fluctuations driven largely by volatile primary commodity prices and the changing economic conditions of its main trade partners, as well as the impact of COVID19-related obstacles to trade from 2020 to 2022.

Figure 7: Mongolia Total Trade over GDP (%, 1997–2021)

Source: Macrotrends, 2023
113. China is by far Mongolia’s largest trading partner, comprising 85% of Mongolia’s total exports, with the next 10 countries combined accounting for 14.2%, and the remaining countries less than 1% (Figure 9). Mongolia’s sources of imports are much more diversified; China still has the largest share at 33%, but Russia is a close second at 27.6% and the rest of the world provides nearly 40% of the total (Figure 10). Over 80% of Mongolia’s exports are minerals and related products, followed by textiles, which are less than 5%. Overdependence on mineral exports poses a number of risks to Mongolia’s sustainable and inclusive economic growth, and the importance of promoting the development of other export products has been widely recognized. Mongolia’s import pattern is more diversified, reflecting the needs of Mongolian consumers and producers. The trade of intermediate products has constituted a significant share in recent years, followed by consumer products. Rail is the dominant means of transport and roads tend to be used for shorter distances and border trade.
4.2 Border Management and Trade Facilitation

114. Mongolia has benefited from an open trade regime, having been a World Trade Organization (WTO) member since 1997, and is signatory to the WTO Trade Facilitation Agreement (TFA) since 2016. As a landlocked country, Mongolia depends on efficient customs transit for its trade with third countries, and, as noted above, is looking to expand its role as a transit route for Asia-Europe trade. To achieve these ends, Mongolia has actively participated in TFA negotiations and has streamlined and simplified procedures and regulations at its borders. Mongolia has implemented close to 80%
of the trade facilitating measures prescribed by the TFA as of 2022\textsuperscript{43}. However some of the remaining unfulfilled commitments are quite important, in particular the long overdue achievement of a single window “enabling traders to submit documentation and/or data requirements for importation, exportation, or transit of goods through a single entry point to the participating authorities or agencies.”\textsuperscript{44}

115. Another key WTA commitment, establishment of a National Committee for Trade Facilitation (NCTF), has not yet achieved its planned purpose of fostering better inter-agency and stakeholder coordination in trade facilitation matters. While Mongolia has an NCTF, under the Ministry of Foreign Affairs, interviews conducted for this project found that it has not served as a useful platform for more effective and inclusive policy making. It has not met regularly and has primarily been a body for information sharing, rather than policy formulation. Private sector stakeholders were particularly outspoken about their view that the NCTF did not give them an opportunity to provide inputs into important trade matters affecting their businesses.

116. The establishment of a digital single window and a revamping of the NCTF’s membership and operating procedures, in accord with Mongolia’s FTA commitments, will provide a significant further boost to Mongolia’s capability in trade facilitation. Figure 11 provides an update of the implementation status of the TFA.

**Figure 11: Mongolia Status of TFA Implementation Commitments**

<table>
<thead>
<tr>
<th>Measures due for implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 Measures due for implementation in 2017–2022</td>
</tr>
<tr>
<td>2  Measures due for implementation in 2023–2024</td>
</tr>
<tr>
<td>3  Measures due for implementation in 2025–2027</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14 Measures notified in Category C with donors not identified</th>
<th>Date of Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article and Content</td>
<td></td>
</tr>
<tr>
<td>1.1 Publication</td>
<td>31 December 2021</td>
</tr>
<tr>
<td>1.2 Information available through Internet</td>
<td>31 December 2021</td>
</tr>
<tr>
<td>3  Advance rulings</td>
<td>31 December 2024</td>
</tr>
<tr>
<td>7.1 Pre-arrival processing</td>
<td>31 December 2021</td>
</tr>
<tr>
<td>7.4 Risk management</td>
<td>31 December 2021</td>
</tr>
<tr>
<td>7.5 Post-clearance audit</td>
<td>30 June 2024</td>
</tr>
<tr>
<td>7.6 Average release times</td>
<td>31 December 2021</td>
</tr>
<tr>
<td>7.7 Authorized operators</td>
<td>31 December 2021</td>
</tr>
<tr>
<td>7.8 Expedited shipments</td>
<td>31 December 2022</td>
</tr>
<tr>
<td>7.9 Perishable goods</td>
<td>31 December 2021</td>
</tr>
<tr>
<td>8  Border agency cooperation</td>
<td>30 June 2025</td>
</tr>
<tr>
<td>10.3 Use of international standards</td>
<td>31 January 2025</td>
</tr>
<tr>
<td>10.4 Single window</td>
<td>31 December 2025</td>
</tr>
<tr>
<td>10.6 Use of customs brokers</td>
<td>31 December 2020</td>
</tr>
</tbody>
</table>


\textsuperscript{44}WTO 2022, *op cit.*
117. Mongolia has a number of current donor-funded projects with trade facilitation related investment and operations, many of which are under the auspices of the Central Asia Regional Economic Cooperation (CAREC) program. This includes, for example, the Asian Development Bank’s Regional Improvement of Border Services (RIBS) and Mongolia Upgrade of Sanitary and Phytosanitary (SPS) for Trade (MUST) projects, which aim to modernize customs facilities at border crossing points and SPS laboratories.

118. The government’s trade promotion and facilitation agenda involves the work of a wide range of bodies, and coordination is a perennial challenge. The Ministry of Foreign Affairs has long been responsible for developing and monitoring the overall implementation of trade policy, with these responsibilities resting with Ministry’s Department of Foreign Trade and Economic Cooperation. This department oversees Mongolia’s cooperation with trade-related multilateral organizations such as the WTO and the United Nations Conference on Trade and Development (UNCTAD), as well as with international financial institutions such as the International Monetary Fund (IMF), World Bank, ADB, and others. It also oversees Mongolia’s participation in bilateral cooperation efforts. In addition to the Ministry of Foreign Affairs, several other government ministries and agencies are responsible for different aspects of trade policy, trade facilitation, and foreign investment, such as oversight of free trade economic zones, border and port operations, and so forth. These include the Ministry of Economy and Development, Ministry of Finance (and Customs), Ministry of Food, Agriculture and Light Industry, and Ministry of Justice and Internal Affairs.

119. The need for effective coordination is also evident at the border itself, where multiple agencies are working. As part of its New Recovery Policy, the Government of Mongolia has created a new position of Minister of Border Port Revitalization, with overall responsibility for coordinating border port management. A new administrative agency, the Border Port Administration, was set up in November 2022 to take over and consolidate border port development and management related functions and responsibilities, which were previously scattered among various border and trade control agencies. This agency has taken over responsibility for the ZU BCP. The detailed terms of reference of the Minister and the agency have not yet been made available. The Border Port Administration will need a lot of support to accomplish its purpose, including from organizations at the central and local government levels. There is a need to maximize the synergies between transport and trade facilitation measures and continue to prioritize the development of transport corridors. As mentioned above, the NCTF, if its decision-making power is strengthened and operational procedures clarified and reinforced, could play a useful role in the coordination of this.

120. Customs, by almost every measure, is at the forefront of trade facilitation. The legal framework, information and communication technology (ICT) capabilities, global standards and best practices, and support received from international organizations and documents have allowed Mongolia Customs to improve its management and operational efficiency over the years. Other agencies may not be as advanced as the Customs office, as far as trade facilitation is concerned.
These include the SPS regime, which is not yet fully harmonized with international standards; the Immigration Service, which still lacks world class integrated information systems; and the General Authority for Border Protection, which has a military internal culture that needs to strike the right balance between the protection of borders and the facilitation of smooth cross-border flows of trade and people, including in relation to the operation of free trade zones. Although border health services did an excellent job of protecting the public during the COVID-19 pandemic, in the aftermath of the pandemic it needs to adapt to a more normal operational environment with improved risk management.

121. As a landlocked country, Mongolia’s economic development requires the prioritization of trade facilitation through efficient border operations and the improvement of logistics, including building modern dry ports in order to achieve better economic diversification and participation in global supply chains. Consistent with such a strategy, Mongolia has long been seeking to strengthen its partnerships with its immediate neighbors, and beyond.

122. The recent World Bank’s InfraSAP report highlights a number of challenges in diversifying Mongolian exports, including, in particular, that inefficiencies in cross-border trade at Zamiin Uud are an obstacle to such diversification. The focus of trade and trade facilitation issues is usually on the borders, although issues beyond borders are increasingly being recognized as equally important. The Government of Mongolia and trade control agencies are well versed in the trade facilitation agenda, but there is still a lot of room to improve implementation.

123. On the policy front, the New Recovery Policy identifies port revival as one of the six main priority areas, highlighting the importance of trade facilitation. On the operational front, among the 37 BCPs, ZU is arguably the most important, as it channels nearly 65% of the country’s import freight. This is partly due to Mongolia’s structure of trade, in which the major export commodities are minerals and the major imports are industrial and consumer goods, and partly because ZU is situated along the Trans-Siberian Railway, which connects Tianjin Port in China with the capital city of Ulaanbaatar and other urban centers.

124. Figure 12 shows import and export trends via ZU BCP in recent years. In terms of quantity, exports have registered a much larger tonnage than imports, given that mineral exports are largely in bulk. In terms of value, imports and exports were relatively balanced, with perennial surplus on the import side, reflecting the importance of ZU as a point of entry for imports to the country. In fact, more than 99% of the volume of exports, thus the transport capacity, is made up of minerals and related products, due to the voluminous nature of such primary commodities. This could potentially cause bottlenecks at ZU BCP, as it crowds out the capacity for other export items. In terms of value of exports, the composition is not so overwhelmingly skewed toward minerals, as in the case of volume. Wool and fabric, as well as meat and fruit, also make up a significant share, as they are higher in value by nature.

---

45 World Bank. 2020, op. cit.
125. For imports, in terms of tonnage, ZU BCP is very important for construction materials, automobiles, machinery, and consumer products. In dollar terms, automobiles and machinery are higher ranked, given their high value nature, and construction materials are not in the top ten. Some high-end consumer goods, particularly household products, are ranked higher. Both volume-wise and value-wise, the import patterns at ZU BCP reflect the housing boom Mongolia has been experiencing.

126. The unexpected halt of border operations due to the COVID-19 pandemic did create chaos for Mongolia’s trade, particularly at the ZU BCP. Mongolia’s export of non-mining products to China was halted for over a year. The bottleneck due to the Drop and Pull Transport mechanism at the ZU and Erenhot BCPs and reduction of the grace period for returning empty containers created large financial difficulties for many Mongolian traders.

127. The recent completion of the ZU BCP upgrade project, financed by grants and loans from the Government of China, is a major development in improving operations at this vital border crossing. ZU’s new BCP layout has taken the need for future smart borders into consideration by efficiently allocating key control and service functions for the movement of both cargo and people, providing enough lanes for vehicle and foot traffic, and installing various smart digital devices (such as radio-frequency identification sensors, a vehicle and container tracking system, and scanning technology), so as to enable it to perform contactless inspection and other smart gate functions. The fully integrated traffic lanes (including green lines and potential intelligent queues and green windows), parking areas, weighing stations, inspection bays, warehouses, and services facilities have been logically laid out to allow streamlined inspections. The new BCP also has modern services facilities for electronic equipment, water and wastewater, lighting, and heating, etc., to provide the most secure and comfortable travel experience for customers and working conditions.
for officers and employees at border control agencies, including border guards, immigration and customs officers, SPS staff, and public health personnel. However, when the BCP is fully functional, testing, calibration, and gradual improvement will be needed to achieve truly seamless operations, particularly with regard to the soft side of smoothly coordinating border management and cooperation with Chinese counterparts.

128. Other challenges still remain if the upgraded ZU BCP is to fulfill its potential as a world class BCP, applying modern technologies under the secure, measurable, automated, risk management-based, and technology-driven (SMART)\textsuperscript{46} border principles. However, challenges remain. These include the need to raise the containerization level, develop multi-model transport, reduce the physical inspection ratio, implement one-stop multi-agency inspection, expand the application of cross-border cooperation initiatives, such as a joint uniform cargo manifest and pre-arrival declaration, and improve risk management.

129. Delays in the implementing a single electronic window are both a serious constraint on logistical efficiency and a reflection of the difficulty in achieving effective inter-agency coordination. Rounds of analytical and preparatory work have been put into the development of a single window, including a review of the policy and legislative frameworks, stakeholders, and institutional setup, as well as an overview of trade control functions and the ICT environment. However, the breadth and depth of the application of ICT for trade facilitation has been uneven across different agencies and between policies and capacities. The Mongolian Customs Authority has gained sufficient capability through rounds of ICT improvements, but the capacity of other agencies might still be lacking. Overall cross-agency leadership is needed to generate consensus and initiate the last push for the single window to become a reality, which will hopefully provide a unifying platform for efficient and integrated trade facilitation.

4.3 Transport and Logistics

130. The transport sector has been focused on infrastructure development and maintenance, as well as operations, with considerably less attention to logistics. Its contribution to trade, although important, is often seen as secondary and indirect. There is a need to maximize the synergies between transport and trade facilitation measures and continue to prioritize the development of transport corridors. The MRTD, with its lead role in transport infrastructure development, should recognize the linkages between logistical improvements and its mission by establishing a Logistics Policy Division.

131. Efficient border operations must also include efficient logistics operations behind the border. The ZU Integrated Logistics Center (ZULC) plays many important roles, including trade control

\textsuperscript{46} See, for example, Mikuriya, K. “SMART Borders: A Few Words About the Theme of the Year.” WCO News 88, February 21, 2019. \url{https://mag.wcoomd.org/magazine/wco-news-88/smart-borders-a-few-words-about-the-theme-of-the-year/}
functions. There have been capacity limitations, partly due to hardware constraints and partly due to procedural impediments. The expansion of facilities and streamlining of procedures will allow ZULC to contribute more to overall border operations and trade expansion.

132. The logistics sector has a crucial role to play in ensuring the timeliness and cost-effectiveness of shipments. The logistics of domestic or international trade are primarily administered and monitored from Ulaanbaatar. Most imported containerized freight originates in China and the Russian Federation. Imports from other countries are mainly routed through the port of Tianjin. After crossing the border, primarily at ZU, they are dispatched to their destinations in Ulaanbaatar, Erdenet, and Darkhan or other places along the Trans Mongolian Railway line. Logistics for exports are serving the mines in various locations in the country and transportation takes place through the nearest BCPs.

133. The containerization level has been increasing over time, although unevenly for different modes of transport and for imports and exports, reflecting the needs of different types of cargo. Although, broadly, there is still room for improvement, particularly considering the development of multimodal transport. Figure 13 shows the level of containerization by trucks and trains using ZU BCP from 2012–2021. Overall, import by train has a much higher containerization level, compared to export by train, although the latter is picking up, as the bulk of exports is comprised of minerals. Trucks have much lower containerization ratio, even showing some decline in recent years.

**Figure 13: Ratio of Containerization by Transport Mode and for Imports and Exports through ZU BCP**

![Graph showing containerization ratio](image_url)

*Source: Based on data obtained from the Mongolian Customs Authority*

134. Being landlocked and situated between the Russian Federation and China, Mongolia acts as a land bridge between the two countries and beyond and provides passage to goods moving between the two countries. Given the importance of transit trade for Mongolia, there is a lot of room for improving the current means of managing, promoting, and utilizing Mongolia’s advantageous geographic location. There is a need to expand and upgrade both hardware and software capacity to efficiently manage transit trade at the border. Software needs include better statistics and
tracking, and the application of paperless customs transit systems in order to reduce time and costs, expedite transit operations, and avoid a problem highlighted in Chapter 3 of this report on the trade and transport demand, that is, the crowding out of imports into Mongolia by transit cargo.

135. The fact that Mongolia is landlocked means that all of its trade with third countries needs to be transited through either China or Russia. Despite Mongolia’s accession to the Transport Internationaux Routiers (TIR) Convention in 2004, the usefulness of the TIR Convention has been limited, partly due to high cost and inconvenience of the system and partly because China only managed to accede to the Convention in January 2017. For rail transport, the customs transit is currently managed under the Smart and Secure Trade Lines (SSTL) between China and European countries. Tianjin Port plays an important role in Mongolia’s trade with third countries, with 90% of trade transported by railway using Tianjin Port. A Mongolian-China joint venture planned to invest in a logistics park in the Free Trade Port Zone of Tianjin. However, the immediate impact of this initiative in alleviating the bottleneck at the Tianjin Port for Mongolian transit trade is unclear.

4.5 Result Management

136. Result monitoring and management are important for Mongolia’s continued efforts in trade facilitation. While the World Bank’s Logistic Performance Index (LPI) has given some high-level quantification, particularly when compare with peers, the Corridor Performance Measurement and Monitoring (CPMM) and Time Release Study (TRS) results are useful to pin down bottlenecks at BCP locations and for individual trade control procedures. Persistent, piece-by-piece efforts will eventually yield results.

137. Progress to date has not yet translated into improved performance measures for Mongolia’s trade facilitation efforts. Despite the initiatives mentioned above, as Table 12 shows, Mongolia is ranked 130 out of 160 countries, which is not as good as one of its peers, namely Kazakhstan, which is ranked at number 71. As Figure 14 shows, among the 6 dimensions forming the LPI score card and the resulting LPI, Mongolia was particularly weak in tracking and tracing, infrastructure, customs, and logistics competence.

---

Table 12: LPI Ranking of Mongolia Compared with Kazakhstan

<table>
<thead>
<tr>
<th>County</th>
<th>Year</th>
<th>LPI Ranking</th>
<th>LPI Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kazakhstan</td>
<td>2018</td>
<td>71</td>
<td>2.81</td>
</tr>
<tr>
<td>Mongolia</td>
<td>2018</td>
<td>130</td>
<td>2.37</td>
</tr>
</tbody>
</table>

Source: World Bank 2018

Figure 14: Key LPI Dimensions for Mongolia Compared with Kazakhstan


138. The ADB’s CPMM results show that BCP processing activities such as customs inspection were reasonably fast, taking an average of 1.8 hours in Zamiin Uud, but there are major bottlenecks in the trade clearance procedures, such as waiting for an available wagon, waiting for a priority train to pass, and marshaling, etc.
Table 13: Waiting Time and Cost when Crossing the Border by Activity

<table>
<thead>
<tr>
<th>Rail Transport</th>
<th>Duration (hrs)</th>
<th>Cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Existing MCN</td>
<td>Entering MCN</td>
</tr>
<tr>
<td>A. Load Cargoos</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>B. Unload Cargoos</td>
<td>11.8</td>
<td>8.7</td>
</tr>
<tr>
<td>C. Fix Cargo Shift</td>
<td>12.7</td>
<td>10.3</td>
</tr>
<tr>
<td>D. Remove Excess Cargo</td>
<td>0.1</td>
<td>0.6</td>
</tr>
<tr>
<td>E. Transload at Gauge Change Point</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>F. Pick-up and Delivery</td>
<td>1.9</td>
<td>1.9</td>
</tr>
<tr>
<td>G. Replace/Repair Inoperable Wagon</td>
<td>3.0</td>
<td>2.9</td>
</tr>
<tr>
<td>H. Emergency Repair</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>I. Train Classification</td>
<td>0.9</td>
<td>0.8</td>
</tr>
<tr>
<td>J. Document Errors</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>K. Skype Transit Documents</td>
<td>0.9</td>
<td>0.8</td>
</tr>
<tr>
<td>L. Customs Inspection</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>M. Technical Inspection</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>N. Commercial Inspection</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>O. Sanitary/Phy-sanity Control</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>P. Materials Transfer</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Q. Wait/Handling equipment</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>R. No wagons available</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>S. Restrictions on entry</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>T. Noncompliance</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>U. Waiting for priority train to pass</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>V. For Other Reasons</td>
<td>1.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>


Note: Sum of individual activities does not equal the total hours presented in the previous figure, as these are individually averaged. Cost is standardized per twenty-foot equivalent unit (TEU).

139. The most recent TRS conducted by Mongolian Customs Authority supported by the International Finance Corporation (IFC) indicated that the time-consuming parts of the processing were the repetitive and slow physical document transfers between trade control agencies and transport operators due to lack of a single electronic window for processing cargo information by all border agencies. Considerable efficiencies would be gained by increasing paperless information sharing, including the documentation of cargo weight and tonnage calculations, which at present are physically transferred in paper form the BCP to inland terminals, frequently taking hours or even days.

4.6 Conclusion

140. The re-opening of the Erenhot BCP after the pandemic is a milestone in Mongolian trade facilitation. Lessons learned from the unexpected halt of border operations during the pandemic, which created chaos for Mongolia’s trade, particularly at the ZU BCP, are important, particularly in relation to disaster risk management and system resiliency. At the same time, when trade resumes to pre-pandemic levels or more, the pressure will mount, bottlenecks will be more intolerable, and institutional barriers will become more painful. The government, private sector, and all stakeholders need to refocus and work hard to deliver results in trade facilitation and contribute to the country’s sustainable economic growth.
141. Moving forward, well planned infrastructure development targeting the weakest links, seamless institutional coordination, both within and across borders, conducive policy and legal environment for private sector participation, and, of course, effective trade facilitation measures, including those aimed at maximizing synergies with other ZU BCP functionalities, are necessary conditions for success.

142. The ZU Integrated Logistics Center to the north of ZU BCP plays many important roles logistically and allows trade control functions to be carried out there as well. There have been capacity limitations, partly due to hardware constraints and partly due to procedural impediments. The expansion of facilities and streamlining of procedures will allow the Center to contribute more to overall border operations and trade expansion.

143. Given the importance of transit trade for Mongolia, there is a lot of room for improving the current means of managing, promoting, and utilizing Mongolia’s unique geographic advantages as a major transit country. There is a need to expand and upgrade hardware capacities to increase throughputs, so that transit cargo does not crowd out exports and imports. On the software side, better statistics and tracking and the application of paperless customs transit systems can reduce time and costs and expedite transit operations.

144. The breadth and depth of the application of ICT for trade facilitation has been uneven across different agencies and between policies and capacities. The Mongolian Customs Authority has gained sufficient capability through rounds of ICT improvements, but the capacity of other agencies might still be lacking. Overall, cross-agency leadership is needed to generate consensus and initiate the last push for the single window to become a reality, which hopefully will provide a unifying platform for efficient and integrated trade facilitation.

145. Result monitoring and management are important for Mongolia’s continued efforts in trade facilitation. While LPIs have given some high-level quantification, particularly when compared to peers, the CPMM and TRS results are useful to pin down the bottlenecks at BCP locations and for individual procedures. Although Mongolia still has a lot of room to improve overall performance and there are many bottlenecks, persistent, piece-by-piece efforts will eventually yield results.

146. Although many pandemic related measures appeared to have been reactive, lessons learned seem to confirm that the pursuance of the trade facilitation measures that Mongolia has been working on is consistent with the requirement for crisis management. Fortunately, the pandemic situation has eased and China has re-opened. Mongolia now has every reason to welcome the future. But, at the same time, when trade resumes to pre-pandemic levels or more, the pressure will mount, bottlenecks will be more intolerable, and institutional barriers will become more painful. The government, private sector, and all stakeholders will need to refocus and work hard to deliver results in trade facilitation and contribute to the country’s sustainable economic growth.
Chapter 5. Prospects for Private Sector Participation in Corridor Development

5.1 Background

147. Mongolia’s private sector has developed greatly over the decades since the launch of market-based reforms in 1990. Many key economic sectors, such as finance, construction, and manufacturing, are dominated by private sector enterprises, and the critical extractives sector is also heavily populated by foreign and domestic private businesses, with the key exception of the giant Erdenes Tavantolgoi, which is a state-owned enterprise. However, private sector participation (PSP) in infrastructure has been limited and has only had a marginal impact on the core transport and energy sectors, despite the passage of a Concessions Law in 2010 and a new Private Sector Participation Law in 2023. Even after more than 30 years of transition to a market economy, there often seems to be an expectation in the government and among much of the population that state-owned infrastructure is more likely to pursue the common good, while the private sector pursues the narrow interests of its owners. While understandable in a country where modern infrastructure was first introduced under a socialist system, this attitude has contributed to major underinvestment in infrastructure that is urgently needed for sustainable economic and social development.

148. The pattern in recent decades has been that private sector firms have succeeded in creating openings for themselves in new technology infrastructure, such as mobile phones, the Internet, and alternative energy, but that they have had little success in sectors where state-owned firms have well-established dominant roles, such as transport infrastructure and large power generation. Efforts to attract private sector investment and ownership in power generation through the construction of a new Combined Heat and Power Plant #5 fell apart after years of preparation51, initially due to the government’s failure to provide credible guarantees to the investors regarding price regulation of electricity and heat52, and then due to the decision of the newly elected government in 2017 to abandon the project. This occurred despite the creation in 2001 of a nominally independent power regulatory body, following the successful unbundling of the generation, transmission, and distribution functions of the vertically integrated power enterprise inherited from the centrally-planned economy.

149. Most recently, the reliance on build and transfer contracts with private sector firms in the construction of the new Tavantolgoi Railway lines to the Chinese border has also generated problems for PSP, rather than serving as a positive example, due to revelations of corruption surrounding the offtake agreements that had been used to finance these contracts. A similar

52 Private conversations between the author and Mongolian officials involved in the discussion.
contract for the long awaited Bogd Khan Railway Bypass has been cancelled, leaving that project hanging. Instead of transparent financing of the contracts by budget organizations, the state-owned mining enterprise Erdenes Tavan Tolgoi financed the contracts with pledges of coal offtakes from its production. The relevant contracts were all classified as official secrets and shielded from public scrutiny when they were negotiated and signed, even after serious questions about their terms were raised publicly. Mongolia’s small size and the large economic role of the extractives sector have given rise to the perception (and reality) of lack of transparency and open competition, which are key preconditions for PSP in infrastructure. While the government and state-owned enterprise officials were at the center of this scandal, it has further strengthened the public’s attitude that PSP tends to be associated with corruption.

150. This research, therefore, looks at two different aspects of prospects for public-private partnerships (PPPs) in infrastructure and dry ports in Mongolia. First is the legal framework itself. Second is the overall environment for PPP more broadly and specifically in infrastructure.

5.2 Legal Framework for PSP in Infrastructure and Dry Ports

151. On December 9, 2022, the Mongolian Parliament enacted a Law on Public-Private Partnership. This law sets out the primary legal framework for private sector participation in infrastructure development and operation in Mongolia, including for dry ports. It effectively replaces the 2010 Law on Concession, which had made some, but not universal, provision for the participation of the private sector in infrastructure development and operation. Criticism of the 2010 law centered around a lack of clear mechanisms for ensuring that proper transparent and competitive practices were followed in awarding and enforcing contracts. The suggestions regarding the central issue of risk allocation in PPP contracts were also deemed insufficiently clear.

152. The new PPP Law took effect on January 1, 2024, after a delay to allow for the drafting of the necessary implementing regulations. The government’s public statements when the law took effect emphasized their intention to use it to attract private sector investment in infrastructure. Deputy Finance Minister G. Tuvendorj stated:

To improve Mongolia’s economic competitiveness in the world, many projects aimed at improving and accelerating the development of infrastructure such as power plants, roads, railways, and public transport are included in Mongolia’s medium-term development policy document ‘New Revival Policy.’ It requires improving the business environment and state capacity through approving new laws and revising or amending laws. In this context the Law on Public-Private Partnership was approved.53

153. We have reviewed the law, both from the perspective of international experience and through consultations with Mongolian private sector representatives. Overall, the law is consistent

with international practice. However, there are a few areas in which amendments would be helpful in the next revision:

- The PPP Law explicitly relates to public infrastructure and public services and for there to be cooperation between the public and private sectors in developing public infrastructure and public services. The reservation concerning the overall objective of the law is that it also explicitly covers implementation of proper budget management. While in principle these two goals need not be in conflict, in an economy where the equality of rights of private and public parties to contracts is a new concept, the balance between the development of infrastructure and the implementation of proper budget management could lead to problems, given the decisive role of the Ministry of Finance under the law. There is a risk that, through implementation of the law, the Ministry of Finance could place higher priority on the objective of budget management, to the detriment of the private investor. The government should consider a simple clarifying amendment to the law to expressly state the equality of the objectives, to avoid either becoming the dominant objective of the law (and particularly diminishing the status of private sector participation principles).

- The law provides for the participation of the private sector in the development and operation of infrastructure and dry ports, including their construction and services. However, the involvement of the government, through supervision and as a potential source of pressure through monitoring, could bring about a situation where PPPs are not seen as attractive to the private sector. In the context of Mongolia, which has an infrastructure sector dominated by state-owned enterprises and subject to government direction, and relatively little experience with arms-length regulation of enterprises by the government, the private sector and potential investors will need to be satisfied about the way that these principles are applied in practice, notwithstanding the general principle that private sector participation is welcome in relation to public infrastructure and public services.

- Relatedly, there is no principle concerning distortion in the market. Distortion may occur by reason of the size or location of an infrastructure project or the form of services that are provided under a PPP. Excessive dominance could lead to a near-monopolistic situation. In these circumstances, the determination of the financing model (see Article 14 of the law) and the methodology for subsequent determination of prices, user fees, etc. need to be specified clearly, so as to avoid uncertainty for potential investors and also avoid decisions that are detrimental to end users. The lack of the principle of avoiding unfair competition may be seen as less than optimally attractive for future PPPs. It is recommended that the presentation of PPP principles in the law be amended to included reference to consistency with the law on competition.

154. Chapter 5 of the PPP Law sets out a number of roles and functions in relation to overall management of PPPs, including risk management. It is important to note that the relevant state partner has the function of monitoring the activities of the private sector partner in relation to
implementation and acts as auditor, as specified in the PPP agreement and relevant by station. This provision suggests that the state partner is exercising rights greater than would usually be expected in a commercial relationship between two equal parties. The way in which these functions are discharged may influence the attractiveness of PPPs. It would be appropriate for the state partner to discharge these powers, based on good practice and respecting the core principle of commercial partnership, without exercising undue state supervision. In a country in which there is a tradition of strong and, at times, arbitrary state oversight of businesses there is a need to clearly delineate the rights and responsibilities of both parties.

155. Chapter 5 also makes provision for guarantees for PPP projects. These can be in two forms:

- A guarantee to fund the partnership budget if the partnership agreement conditions are not (substantially) adhered to
- A guarantee to purchase the goods, work, and services created during the implementation of the partnership project and their use for public needs

156. The first is effectively a financial guarantee that the project will continue in the event of the violation by a party of its obligations under the PPP agreement. The second relates to a guarantee by the government to purchase goods and services that are provided through the PPP agreement. The funding guarantee is subject to the criteria set out in Article 31 of the PPP Law and the law on debt management, to ensure that the government’s risk exposure in the project is not excessive.

157. As a private sector partner, a critical aspect of raising investment and financing for a project is to provide a third party with a guarantee of the implementation of the project. First, the private sector partner must be able to demonstrate that it can implement the project, based on its own resources and responsibilities under normal risk scenarios. Government guarantees are typically also required, but their scope needs to be clearly defined. Therefore, within the framework of the legislation, it is appropriate to define in the legislation that only the contract and related project documents are required to establish proof of implementation of the project for the purpose of serving as a guarantee. To further confirm this, Article 31 of the PPP Law would benefit from amendment to address, separately, the issue of government guarantee for government debt and guarantees issued pursuant to the PPP contract, including agreements entered into by the state partner.

158. In several other critical areas, the lack of detail in the absence of implementing regulations raises uncertainty about how effective the law would be. As noted above, those implementing regulations have only now been finalized, and the law only became effective as of January 1, 2024, more than a year after its passage. We have not had a chance to review the regulations, but noted in July that in their absence there were still several questions regarding the law.

159. One key question relates to Article 45 of the PPP Law, which specifies that user fees and any other charges that are to be incurred by public infrastructure, or due to the provision of public services, are to be specified in the PPP agreement. This extends to the obligations of both parties
and covers the initial setting of user fees and the methodology for their subsequent review. However, the law does not provide any further details regarding the appropriate methodology (and use of data or expertise to apply the methodology), creating a risk that arbitrary or inappropriate user fees may be determined. This may result in infrastructure user charges that are excessive or exploitative and, thus, drive excessive profits and impact on the long-term commercial viability of the infrastructure through reduced usage. It could also result in user charges being set below a realistic level needed to provide a commercial rate of return to the PPP partner, commensurate with the level of infrastructure funding and financing cost. Hence, implementing regulations should address the issue of the development of a methodology for setting predictable user fees and other costs for the private sector partner. The methodology should be based on actual experience and understanding of the sector in Mongolia and practices elsewhere.

### 5.3 Institutional Environment for PSP in Infrastructure and Dry Ports

160. The existing legal framework for PSP is good, as far as it goes, and the recommendations presented above for the new PPP Law will further improve it. In general, the laws governing foreign and other private investment are consistent with appropriate international standards. Overall, the Mongolian laws are fair to foreign investors, with little differentiation in terms.

161. There are two major exceptions to this statement. First, foreign investors establishing a venture in Mongolia must invest at least US$100,000, while there is no legal minimum for Mongolian investors. However, this is not likely to be an issue in infrastructure PPP. Second, foreign investors are not permitted to purchase real estate in the form of land; the right to do so is restricted to citizens of Mongolia. Even the use rights that foreign investors can obtain for the land used by their projects lasts for only five years, with one five-year renewal allowed. There is no similar restriction on Mongolian investors.

162. Land ownership rights are sensitive in Mongolia, and given Mongolia’s strategic concerns as a low population country sandwiched between two giant neighbors, there is an understandable reluctance to simply allow foreign ownership without restrictions. At the same time, the current ban on land ownership by foreigners has at times resulted in workarounds by investors, such as the creation of disguised ownership structures that avoid classification as a foreign-invested enterprise. Such arrangements are highly risky, including the risk that the background foreign investor would prevail in any legal proceedings that arise regarding its contract, and, hence, this practice is not widespread. These workarounds are unlikely to be a feature of the more transparent and robust arrangements required for PSP in dry ports through the vehicle of the PPP Law (which additionally requires evidenced ownership disclosure and facilitation of the land holding for the PPP). However, close attention is needed to ensure that lack of land rights neither poses an obstacle to foreign private investment in infrastructure, nor results in the sort of inappropriate workarounds described above.
163. There are also specific issues in a number of other laws that negatively affect foreign investors, including the Investment Law, the Customs Administration Law and the Labor Law. For the establishment of dry ports, it would be useful to amend the Customs Administration Law to confirm the special status of dry ports.

164. When these legal lacunae are eliminated, there will still be underlying problems in the legal environment, with unpredictability in law and contract enforcement, and a lack of transparency in the operations of state-owned enterprises, which creates uncertainty for potential private investors.

165. The ability of private firms to compete with state-owned enterprises on a level playing field is a major concern expressed by private sector representatives. In the rail sector, for example, regulatory authority, including tariff setting, is directly under the Ministry of Roads and Transport Development. The Ministry also appoints the management of the state-owned Mongolian Railway Joint Stock Company (MTZ) and represents the Mongolian side in the oversight and management of the joint venture that owns the Central Rail Corridor, UBTZ. This raises the possibility of a direct conflict of interest should a private firm have a dispute with either of these state-owned enterprises. Another major rail operator, Tavantolgoi Railway LLC, is also state-owned and under the control of the powerful state-owned mining enterprise Erdenes Tavantolgoi (ETT), which, as noted above, organized the contracts for the construction of new rail lines from its coal mine to the Chinese border. As a result, investors have the view that state-owned enterprises are crowding out private sector firms seeking to enter the infrastructure sector, and that the regulatory framework for competition is opaque and favors state-owned enterprises.

166. The US Embassy 2023 Mongolia Investment Climate Statement touches directly on the issue of unequal treatment of state-owned enterprises and more efficient private sector firms:

Businesses have observed that government regulators favor SOEs [state-owned enterprises], such as streamlining processes for environmental permits or ignoring health and safety issues at SOEs. Private sector businesses state that SOEs competing in the domestic market often engage in discriminatory treatment in their purchase and sale of goods or services. Private sector mining companies also report that the government of Mongolia provides preferential access to ports and state-managed shipping infrastructure to Mongolian SOEs minerals exports. Mongolian SOEs do not adhere to the OECD Corporate Governance Guidelines for SOEs. Although legally required to follow the same international best practices on disclosure, accounting, and reporting used by private companies, SOEs tend to follow these rules only when seeking international investment and financing. Many international best practices are not institutionalized in Mongolian law, and SOEs tend to follow existing Mongolian rules. At the same time, foreign-invested firms follow the international rules, causing inconsistencies in corporate governance, management, disclosure, minority-shareholder rights, and finance.

167. Contract enforcement concerns were also highlighted in that statement:

*Investors state that judges frequently avoid controversial decisions in business disputes, preferring to delay judgment for as long as possible – sometimes years. If a decision is made, businesses face similarly long delays enforcing court orders. In some instances, cases have taken so long that by the time an enforcement is executed, the counterparty has liquidated assets and vanished. Investors note similarly long delays with respect to inspection agencies, such as the Tax Dispute Settlement Resolution Council, as well as with other agency dispute resolution panels, especially those related to mineral licenses and health matters.*

168. Similar concerns were reported regarding the regulatory regime, with arbitrary decision-making, particularly at sub-national levels:

*Businesses also note unpredictable, nontransparent regulatory burdens at the local – province and county – levels. They note inconsistent application of regulations and statutes among central, provincial, and municipal jurisdictions and a lack of expertise among local inspectors. Regional tax, health, and safety inspectors are cited as particularly problematic.*

169. One deeply harmful type of uncertainty regards the stability of government policy, especially following elections. The example of the plan for a PPP-financed Combined Heat and Power Plant #5, cited earlier in this report, was dropped in 2017 after years of preparation following a change in government. The long saga of Rio Tinto’s investment in the large Oyu Tolgoi copper and gold mine included more than one occasion on which newly elected governments refused to accept contracts that had been entered into by their predecessors and demanded that new contracts be negotiated. Without in any way offering judgment on any specific contracts or decisions, potential long-term investors in any project require the assurance that the contracts they sign with one government will be honored by future governments.

170. Frequent changes in government structure and allocation of responsibilities for infrastructure and investment matters further exacerbate the perception of policy instability. To cite a recent example, Mongolia’s Ministry of Economy and Development has been responsible since January, 2023 for the core function of the promotion of foreign direct investment (FDI), and has created the Investment and Trade Agency of Mongolia, with an impressive website and set of services. However, given the short time that this agency has been operating, it is still unclear how strong its capacity to assume all the proposed duties, including the planned opening of a One-Stop-Shop for investors, actually is. For credibility in the eyes of potential investors, such an agency needs to establish a track record of useful services over an extended period.

171. A related issue is the frequent turnover in government staff, reaching down to the section chief or expert level, especially, again, following elections or other changes of government. At the

---

55 Ibid.
56 Ibid.
58 https://investmongolia.gov.mn/
very least, this turnover leads to delays in moving ahead with agreed plans and projects, and often creates uncertainty about their continuation. Moreover, this directly affects a critical issue that will be essential for the successful, implementation of the PPP Law – perhaps measured in the long term by the volume and quality of successfully concluded and implement PPPs – namely, the capacity of the government institutions (at various levels of government) to be able to discharge their roles, fulfil their duties, and exercise the powers that are variously accorded to them in the PPP Law effectively and efficiently. Institutional capacity is a widespread problem (contributed to by many of the factors highlighted in section 5.1). Such capacity cannot be increased instantly. Capacity is particularly challenging in a country like Mongolia with a small population and, consequently, a very small cadre of suitable skilled and experienced specialists.

172. Building on previous and ongoing support to institutional capacity development, and in partnership with interested institutions and stakeholders, further support to the Government of Mongolia, that supports both the building of the application, assessment, monitoring and evaluation environment, and understanding of the commerciality of dry ports, is a critical element in supporting a successful PPP Law and, by extension, PSP in dry ports. There is currently a lot of activity in this area and, hence, support should complement and be coordinated with ongoing efforts.

5.4 International Examples of PSP

173. Private sector participation in the operation of BCPs and dry ports in the form of stevedoring companies, contract service operators or contract management is common and could provide options for the operation of a dry port at Zamiin Uud. The proposed dry port in Ulaanbaatar takes this concept further, with the private sector operators at the port providing additional services to create a major transport and logistics hub that would involve warehousing and freight distribution/consolidation and possible also light manufacturing and assembly. Although there are no exact international examples similar to the conditions in landlocked Ulaanbaatar, there are inland dry port cases in the United States and Europe that can offer guidance to what would be possible.

174. Some common problems were identified during the examination of international examples, which could be relevant and useful for dry port development in Ulaanbaatar. Most urban areas face a similar set of issues in relation to economic development and attracting investment from industry, agriculture, and logistics entities or shippers. There is increased freight demand in densely populated areas, which brings congestion, safety, and environmental issues. However, the examples found prove that these issues can be overcome with public-private collaboration.

175. The following subsections describe experiences from the United States inland dry port hub at Will County, in the state of Illinois, near Chicago, at the CenterPoint Intermodal Center (CIC) Elwood-Joliet, and in Europe, the logistics clusters in the regional area of Aragon and the city of Zaragoza, in Spain59. These examples show that the development of the inland integrated logistics

---

centers (well-connected clusters of multimodal, logistics, light assembly, manufacturing, agriculture processing, and supporting services) started in the last 15–20 years and have only recently shown rapid growth.

CenterPoint Intermodal Center (CIC), Elwood-Joliet, Will County, Illinois

176. The CIC transport hub and dry port is on land that was formerly a military facility, Joliet Arsenal, which has had basic railway connections since the 1860s and highways since the 1950–60s. The Joliet Arsenal Development Authority was established with the responsibility of transferring the land to civilian uses and, in 2002, the 2,550 acres of land were transformed into an intermodal facility. This inland port is 40 miles southwest of Chicago, one of the largest metropolitan areas in the United States, and just off the major interstate highway I-55. It contains two Class 1 railheads and now has 10 million square feet of distribution space in one logistics cluster.

177. In 2010, CenterPoint Properties, a real estate developer specializing in intermodal freight transport facilities, opened the Global IV, a 3,600 acre intermodal facility in Joliet, Illinois, adjacent to the facility of Union Pacific (UP), a national railway company. In 2014, the Railport Logistics Center, a 1,500 acre intermodal facility, was opened near the Burlington Northern Santa Fe (BNSF) rail line in Wilmington, Illinois. In 2015/16 Amazon, another anchor investor, opened three major warehouse and fulfilment centers in Joliet and Romeoville, with a fourth under construction nearby. In 2017, CSX, another regional rail line, proposed a new intermodal rail facility.

178. The CIC freight development timeline shows the importance of several factors in achieving these impressive outcomes:

- A foundation of adequate rail and road infrastructure
- Organization and oversight by a public entity, the Will County Center for Economic Development
- Leadership by an experienced private sector real estate developer
- The participation of several major business entities to anchor the land use for renting and tax revenue

179. CIC is now 6,500 acres in size and continuing to grow, serving as Chicago’s inland port hub and North America’s largest inland intermodal facility. Building on success to date, this collaborative public-private effort has now produced the Will County Community Friendly Freight Mobility Plan (Freight Plan to 2040), published with a consulting firm in September 2017. The Freight Plan sets out a series of recommendations encompassing all modes of transport and aimed at:

- Improving freight mobility and access
- Embracing new trends such as e-commerce
- Growing the local economy and skilled workforce
• Enhancing the quality of life for Will County residents
• Compliance with federal rules to ensure eligibility for national transport infrastructure funds

180. The economic impact on the metropolitan region of CIC has been immense. In 2015, CIC’s 18 intermodal terminal facilities handled 15.4 million TEU shipping containers, just behind the West Coast seaport of Los Angeles/Long Beach, with a total of over US$65 billion worth of goods. This also accounted for US$623 billion in freight value, 97% of gross regional product, 80% of gross state product, and 3.5% of the entire GDP of the USA. Freight growth is equally as immense: freight volumes in Will County could reach nearly 600 million tons, valued at about US$1.2 trillion, by 2040. This growth is projected to be concentrated in the truck and rail modes, which combined could handle 83% of the freight by weight in Will County in 2040, totaling nearly half a billion tons of cargo. This is instructive for Ulaanbaatar, as CIC freight involves agriculture and industry.

181. The Freight Plan to 2040 involves substantial inputs from both the local public authority and from all business stakeholders. A Freight Advisory Council was formed, with Freight Industry and Workforce Outreach meetings with industries to understand their operations and workforce needs, and a Truck Driver Outreach to understand their operations and safety concerns in turning trucks, etc. There was also Public Outreach to obtain citizen input, with over 20 municipalities holding numerous public hearings and meetings. At present, 57% of all private sector jobs in Will County are freight dependent, totaling over 122,000 jobs. The transportation, delivery and logistics (TDL) workforce is vital to the greater municipal area of Will County and will continue to grow. Employment in the transportation and warehouse industry has grown 138% since 2005 and is expected to continue growing, with a projected 33% growth in industry jobs by 2026.

**PLAZA Logistics Park, Regional Aragon Logistics Cluster, Zaragoza, Spain**

182. The PLAZA logistics park in Zaragoza, Spain draws on the road, rail and air transport infrastructure in that area. It serves as a model for many countries of the role that multimodal logistical handling can play in fostering economic development and has many characteristics applicable to Ulaanbaatar. The strategic location of Zaragoza in the Aragon region of Spain, for Europe and global markets, has parallels with Ulaanbaatar’s central place in the rapidly expanding CMREC. The PLAZA logistics park development has also demonstrated the importance of government leadership in overcoming conflicting regional and city responsibilities.

183. The PLAZA logistics park is part of a larger Aragon logistics cluster. The Aragon regional government built other specialized logistics parks nearby, including 700,000 square meters dedicated to logistics activities based on highway connections, as well as:

• PLFraga, at the midpoint between Zaragoza and Barcelona and a transport relay point for motor carriers for northwest Spain
• Mercazaragoza, an agri-food logistics park specializing in the distribution of wholesale fresh fruits and vegetables, as well as a slaughterhouse for meat
• PTR, specializing in recycling and new industrial opportunities such as energy regeneration
• CTZ, with 20 companies in transport and logistics
• TMZ, an inland port with direct rail connections to Barcelona seaport

184. The opening of PLAZA in 2000 increased the flow of freight traffic over rail, roads, and air facilities by investing in improvements in existing roads and rail infrastructure to accommodate the growth. An agreement secured at the government level with Inditex, the parent company of Zara, the apparel multinational retailer, also led other companies to establish facilities in PLAZA. Here the government of Aragon envisioned the project, designed the concept, developed the funding mechanisms, appropriated the land, built the infrastructure, and secured the Zara anchor tenant – and other companies and logistics parks followed in the region. The main tenant before the PLAZA was General Motors and the government did not want to become dependent on one employer and industry.

185. To reach this level of success, government bureaucracy for permits and land use approvals was overcome by the regional government of Aragon. Also, overlapping government jurisdictions caused problems, so, in 1999, Aragon created a special law for what it called ‘supra-municipal’ projects, under which the regional government took priority for urban planning and could speed up decision making for the PLAZA project. The city of Zaragoza has some approval control and a 20% equity stake in PLAZA, but does not have day-to-day oversight and, therefore, cannot be an obstacle.

5.5 Summary

186. This chapter has outlined a number of ways in which the legal environment for private sector participation in infrastructure in Mongolia has improved. At the same time, some serious concerns regarding stability of policy, transparency, the consistency of laws, and contract enforcement were highlighted.

187. Transport and logistics sector development, including the expansion of the Central Corridor rail capacity and the possible creation of dry ports, particularly in Ulaanbaatar where a large investment will be required, are an opportunity for the Government of Mongolia to move beyond past problems and demonstrate genuine commitment to win-win PSP in key infrastructure sectors, based on fair competition and transparency. The seriousness of the problems that will need to be overcome should not be underestimated, however.

188. Moving forward, dry ports could provide an incubator type environment for improved customs trade facilitation processes (a need that has been widely recognized, but for which no systematic steps have been taken), which could be more widely adopted throughout all border
processes in Mongolia. Engagement with the private sector in informing the design of the improvements would be a crucial element and would support the goal of improved private sector participation in dry ports.
Chapter 6. Proposed Corridor Strategy and Development of Dry Ports

6.1 Corridor Efficiency and Main Bottlenecks

189. As has been shown in previous chapters, even at current traffic levels there are logistical challenges at every stage of the import process. Mongolia’s rail system does not have the capacity to meet the ever-growing demand. This has become a central obstacle to the expansion of Mongolia’s foreign trade. Increasing the corridor capacity and reducing delays due to the change in rail gauge between Mongolia and China are critical for Mongolia’s continuing development.

Railway Operation

190. Technical indicators for the Central Corridor reveal many areas where investment and upgrading are urgently needed, most particularly the proportion of wooden sleepers (‘ties’), the weight of the rails, and the age of the locomotives and rolling stock.

191. On average, it takes over 90 days for containers to reach Mongolia from Tianjin Port, posing a significant challenge for Mongolian transport and brokerage companies. This extended transit time contributes to higher prices for imported goods. One of the key issues is the inadequate container handling capacity at Erenhot station where the railway capacity falls short of that required. Trains arriving from various Chinese rail stations often experience delays as they wait to off-load at Erenhot. Furthermore, China’s Tianjin Port terminal has faced temporary closures due to its inability to handle the heavy workload, leading to additional expenses associated with diverting cargo to other domestic ports.

192. Mongolia receives approximately 130 TEUs along with 80 vehicles each day. However, the number of trains traveling from China’s Tianjin Port to Mongolia has seen a significant reduction, with an average of roughly 3–4 trains being loaded each week. As of December 15, 2023, an estimated 3,200 containers containing imported cargo were awaiting unloading at the Tianjin Port.

193. A shortage of flat wagons in China has contributed to a container congestion issue at Tianjin Port, creating difficulties for Mongolia in handling containerized cargo. In addition, Mongolia’s transport and logistics sector has increasingly relied on the rental of wagons and containers from foreign firms. The transit capacity for Mongolia’s imports in Asia-Europe transit transport is restricted. The absence of an internationally standardized dry port has allowed outdated equipment in the existing terminals, limited capacity, and inadequate space. As a result, these terminals are congested with loaded containers, making it difficult to manage the return of empty containers.

194. In Mongolia, the standard-gauge capacity at the Zamiin Uud railway station falls short of the requirements for receiving trains from China, as it consists of only one standard gauge track and
two Russian gauge tracks. Additionally, railway operations in the region lack automation. There is a shortage of available locomotives and railway tracks at the Zamiin Uud station and the standard gauge transfer area in the Zamiin Uud Regional Logistics Center is inadequately sized.

Document Flow

195. Essential documents, such as bills of lading for rail-transferred goods from China’s Tianjin Port to Mongolia remain non-digitized, and the quality of Chinese translations is often lacking. Notably, there is no online transmission of customs pre-clearance documents for cargo originating from Tianjin and destined for Mongolia. Chinese customs authorities, in particular at the Tianjin and Erenhot ports, frequently face extended cargo selection and inspection times, resulting in delays and added expense.

196. The absence of electronic data exchanges among border customs authorities prevents the possibility of conducting pre-arrival customs clearance for Mongolia, as cargo departs from Chinese seaports en route to Mongolia. Furthermore, the lack of digitization in transportation and customs payments, including customs, banking, insurance, and electronic signatures, leads to numerous individuals involved in transportation and intermediary activities queuing at Ulaanbaatar station, resulting in prolonged waiting times.

197. In 2014, Mongolia and China established an intergovernmental agreement regarding ‘Mongolia’s access to and from the sea via Chinese territory.’ At the highest diplomatic level, the two countries collectively decided to employ seven specific ports – including Tianjin, Qinghuangdao, Huanghua, Jizhou, Yingkou, Dalian, and Dandong – for Mongolian trade. However, the agreement faced challenges in implementation, due to a lack of timely consensus at middle and lower administrative levels regarding the methods and mechanisms. Consequently, the provision within the international railway cooperation organization clause, which promised “a 50% discount on the unified entry tariff for goods and products transported through the People's Republic of China,” remained unexecuted. Furthermore, China’s state-owned company COSCO demonstrates a preference for leasing containers to Mongolian shipping and brokerage companies, thereby limiting fair competition for third-country shipping companies seeking container usage and allowing COSCO to impose inordinately difficult conditions on rentals.

198. On the Russian side, the implementation of the Global Navigation Tracking System at Naushki Station in July 2021 has effectively monitored transit cargo, ensuring the smooth flow of rail transit cargo through Mongolia. However, road transport through Russian territory has often encountered interruptions by law enforcement. The limited capacity of the Naushki Port in Russia has resulted in prolonged wait times for cargo at the border. At the Russian ports of Kyahkta and Naushki, bureaucratic processes within the customs authorities have created delays in customs clearance, control, and inspection. These procedures remain manual and non-computerized, resulting in increased costs for cargo loading and unloading. The mandatory translation of
documents accompanying transit cargo from Mongolia to Europe has led to further time losses and additional expense.

**Terminals**

199. Warehouse management practices in Ulaanbaatar remain underdeveloped. Although a platform exists for receiving full-sized trains, it lacks parking space and sufficient deck storage areas. Most terminals throughout Mongolia lack train platforms and platform storage. Even when equipped with overhead cranes, these facilities often use outdated and worn-out equipment. Furthermore, the ports of Sukhbaatar and Altanbulag suffer from inadequate road and railway connections, which hampers the development of effective multimodal transport. The UBTZ railway line lacks electrification, and its constraints persist due to the absence of double track. Expanding the entry and exit points of the railway line within Ulaanbaatar city is impeded by physical limitations.

200. Operating rail within Ulaanbaatar city is an expensive and time-consuming endeavor. The costs associated with loading and unloading are high, and the required time is extensive. Many terminals within Ulaanbaatar lack extended platforms for accommodating full-size trains, and there is a shortage of warehouses. Manual unloading processes are prevalent, with bulk cargo typically lacking palletization. There is a scarcity of available loaders. When goods are transported from Ulaanbaatar city terminals via heavy-duty vehicles for distribution within the city, it results in road damage, air pollution, and increased noise pollution. There is insufficient railway network capacity at key stations like Amgalan, Tolgoi, and Ulaanbaatar within the city. Trains seeking loading have to undergo numerous maneuvers to access the terminals, leading to additional time and increased costs. The development of air, road, and railway transport connections, as well as multimodal transport options, remains lacking in Ulaanbaatar. Specialized warehousing facilities are also underdeveloped.

201. The efficiency of the transit trade is also impaired by the fact that the UBTZ central rail line passes through the center of Ulaanbaatar, causing delays and congestion for transit and for all other UB-routed exports and imports. The topography around UB is particularly unfavorable and, along with the passage through heavily populated areas, leads to particularly slow train speeds. This also applies to freight that accesses the Central Corridor north of Ulaanbaatar and is shipped south to the Chinese border, most notably copper from the large Erdenet operation. The Bogdkhan Railway Bypass has been planned for some time to allow such freight to circumvent Ulaanbaatar and would markedly improve the efficiency of transit and other shipments, but it is currently on hold after extensive preparations.

**Border Operations and Management**

202. Improving border operations is also important for the efficient operation of the corridor. Improvements at ZU are required to streamline the process of transloading between railway gauges,
improve risk management, reduce the physical inspection ratio, implement a one-stop multi-agency inspection/single window, and expand the application of cross-border cooperation initiatives such as a joint uniform cargo manifest and pre-arrival declaration.

203. As highlighted above, the logistical constraints on the development of the Central Corridor do not only occur at the border. In fact logistical problems exist along the entire supply chain of Mongolian trade\textsuperscript{60}. The government’s ability to overcome these constraints is, in turn, hindered by the lack of a clear coordination mechanism for setting, implementing, and monitoring measures to improve logistics. Multiple agencies are working at the borders, and more are behind the borders. In order to provide the overall coordination of services and improve efficiency, the government has created the Border Port Administration to oversee integrated border development and management. This new agency will need a lot of support from all, including the central and local governments, to reach its full potential. The transport sector, both rail and road, should pay equal attention to logistics and trade promotion, as well as infrastructure. There is a need to maximize synergies between transport and trade facilitation measures and continue to prioritize development on transport corridors.

204. Another serious gap at the policy level is in the area of investment promotion and private sector participation in policy making. The National Committee on Trade Facilitation (NCTF), whose establishment is an obligation under the WTO’s Trade Facilitation Agreement, was created and meets occasionally, but it plays a small role in policy formulation and private sector participants have advised that they feel it does not provide the platform that it is meant to. The NCTF should be strengthened, and should allow all relevant parties to play practical and contributing roles. Furthermore, Mongolia does not have a national trade ministry or trade development agency. The recently established InvestMongolia agency is in theory both an investment and a trade promotion agency, but its website is entirely focused on foreign direct investment (FDI) promotion, and makes no mention of helping companies that are encountering problems in conducting trade with Mongolia. For an economy as open as Mongolia’s, in a landlocked country in which foreign trade is so important, the lack of a strong trade facilitation body at the national level is a striking gap.

205. Relatedly, it is unclear which central body is responsible for devising, implementing, and monitoring the logistical improvements that are needed to make the New Recovery Policy a sustainable success. The MED is responsible for the long-term investment strategy, and the Ministry of Finance for budgeting, while sector ministries such as the Ministry of Food, Agriculture and Light Industry and Ministry of Mining and Heavy Industry oversee policy for their specific sectors. At present MRTD is responsible for all managing transport infrastructure issues, and the Border Port Administration oversees the complex web of agencies engage in border trade movement. Trade logistics cut across all of these areas, but there is no coordination. One potential solution would be to have MRTD set up a new division focused exclusively on logistics and let MRTD become the

\textsuperscript{60} See, e.g., the World Bank Project Appraisal Document for its Mongolia Transport Connectivity and Logistics Improvement Project, which identifies a number of logistical challenges in building a competitive meat export sector.
champion within the government for crafting and monitoring the urgently needed improvements in that sphere.

### 6.2 Establishment of One or More Dry Ports

206. The designation of one or more locations on the logistics chain as dry ports has been under consideration for many years, in the belief that this might improve the flow of Mongolian imports and exports. Mongolia ratified the Intergovernmental Agreement on Dry Ports of the United Nations Development Cooperation Treaty Organization (IADP) in 2016 and declared Altanbulag, Ulaanbaatar, Sainshand, and Zamiin Uud as dry ports.

207. No specific legal entity or structure needs to be in place in order to establish a dry port. The definition of a dry port in the agreement does not set dry ports apart from other border crossing points. The issues and procedures arising from membership of WTO and ratification of the TFA apply equally to dry ports and other border crossing points. The defining features of a dry port, distinct from other ports, are therefore rather malleable. A simple definition would be that a dry port is a location that carries out all the functions of a sea port, other than docking a water-transversing vessel. However, a review of dry ports around the world quickly demonstrates that their functions are quite varied and depend on the specific needs of the country and location that they serve.

208. The Economic and Social Commission for Asia and the Pacific (ESCAP) defines the typical features of a dry port. These are not mandatory, but act as a guide to the appropriate functions and facilities. These include:

> …the handling, storage and regulatory inspection of goods moving in international trade and the execution of applicable customs control and formalities. Additional functions of dry ports may include, but are not limited to:

- **a)** Receipt and dispatch;
- **b)** Consolidation and distribution;
- **c)** Warehousing;
- **d)** Trans-shipment.\(^6^\)

209. Designation of a location as a dry port, thus, does not require any additional or different legislation, regulation, facilities or services, but may be of assistance in negotiating arrangements with foreign dry ports and, in particular, assisting in the flow of information that will enable the port to operate efficiently.

---

6.3 Functions and Requirements of Key Corridor Nodes

210. In view of the conclusions of the previous section, we have reviewed the key BCPs and population centers in the Central Corridor to understand the requirements of each location and the appropriateness of their designation as a dry port.

Altanbulag

211. Altanbulag is a small town located in the Selenge Province near the border with Russia. The Altanbulag Border Port maintains a 24/7 road connection with Russia’s Khiagt Border Port, serving as a vital transportation link. Each day, this crucial border crossing facilitates the transit of approximately 500 to 700 road vehicles and accommodates the passage of 5,000 to 7,000 individuals. There is no rail connection. The existing infrastructure covers a total area of 31,320 square meters, featuring cement concrete roads inclusive of pedestrian walkways, as well as 24,790 square meters dedicated to gravel and green areas. Notably, the primary road surface consists of precast reinforced concrete slabs; however, these concrete slabs have shown signs of significant wear and tear. They exhibit damage, irregular coloration, and an overall deteriorated appearance.

212. As part of a project funded by the Asian Development Bank, several essential enhancements are in progress at the Altanbulag Border Port. These improvements encompass the expansion and revitalization of port facilities, the development of paved roads and expanded parking facilities, upgrades to customs equipment, the expansion and modernization of the Customs Automated Information System (CAIS), and the introduction of a foreign trade electronic one-stop service. The implementation of these project components is expected to yield substantial results. Anticipated outcomes include a threefold increase in the number of passengers entering the Altanbulag Port and a fourfold increase in the number of cargo and passenger vehicles using the port’s services. These changes are poised to have a significant and positive impact on Mongolia’s foreign trade and overall economic development. The volume of vehicles and passengers processed at the Altanbulag border crossing is shown as Table 14.

Table 14: Vehicles and Passengers Passing through Altanbulag Border Port

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport number of instruments</td>
<td>Total</td>
<td>245.3</td>
<td>282.1</td>
<td>237.2</td>
<td>201.3</td>
<td>196.7</td>
<td>42.4</td>
</tr>
<tr>
<td>Entered</td>
<td></td>
<td>121.1</td>
<td>139.0</td>
<td>117.7</td>
<td>100.6</td>
<td>98.5</td>
<td>21.4</td>
</tr>
<tr>
<td>Out</td>
<td></td>
<td>124.2</td>
<td>143.0</td>
<td>119.4</td>
<td>100.7</td>
<td>98.1</td>
<td>21.0</td>
</tr>
<tr>
<td>Passengers number</td>
<td>Total</td>
<td>798.8</td>
<td>929.6</td>
<td>726.1</td>
<td>680.7</td>
<td>651.0</td>
<td>99.7</td>
</tr>
<tr>
<td>Entered</td>
<td></td>
<td>400.9</td>
<td>467.7</td>
<td>366.0</td>
<td>344.4</td>
<td>330.8</td>
<td>51.8</td>
</tr>
<tr>
<td>Out</td>
<td></td>
<td>397.9</td>
<td>461.9</td>
<td>360.0</td>
<td>336.2</td>
<td>320.1</td>
<td>47.8</td>
</tr>
</tbody>
</table>

Source: Statistical database of the National Statistics Committee of Mongolia, www.1212.mn
213. The impact of the curfew during the epidemic is evident in the significant reduction in the number of vehicles and passengers using the border port. In 2019, 233 enterprises submitted customs declarations for export cargo valued at US$3.9 million, amounting to 2,000 tons passing through the Altanbulag Port. In contrast, by 2021, this figure had declined to 98 enterprises, with customs declarations for export cargo totaling US$2.3 million and 1,900 tons. Details regarding export and import cargo processed at the Altanbulag Border Port are shown in Table 15.

**Table 15: Altanbulag Export and Import Indicators, as % of Total for Four CMREC Nodes**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Exports¹</th>
<th>Altanbulag</th>
<th>% of Total</th>
<th>Imports²</th>
<th>Altanbulag</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of declarations</td>
<td>3,114</td>
<td>233</td>
<td>0.75</td>
<td>62,669</td>
<td>4,068</td>
<td>6.49</td>
</tr>
<tr>
<td>2019 Volume (thousand tons)</td>
<td>5,546.7</td>
<td>2.0</td>
<td>0.01</td>
<td>4,371.8</td>
<td>87.4</td>
<td>0.14</td>
</tr>
<tr>
<td>Value (US$ million)</td>
<td>1,729.4</td>
<td>3.9</td>
<td>0.01</td>
<td>5,296.3</td>
<td>210</td>
<td>0.34</td>
</tr>
<tr>
<td>Number of declarations</td>
<td>2,223</td>
<td>76</td>
<td>0.24</td>
<td>57,544</td>
<td>1,482</td>
<td>2.36</td>
</tr>
<tr>
<td>2020 Volume (thousand tons)</td>
<td>5,478.7</td>
<td>2.8</td>
<td>0.01</td>
<td>4,616</td>
<td>29.1</td>
<td>0.05</td>
</tr>
<tr>
<td>Value (US$ million)</td>
<td>1,358.8</td>
<td>3.5</td>
<td>0.01</td>
<td>4,715.2</td>
<td>71.8</td>
<td>0.11</td>
</tr>
<tr>
<td>Number of declarations</td>
<td>2,452</td>
<td>98</td>
<td>0.31</td>
<td>60,007</td>
<td>2,650</td>
<td>4.23</td>
</tr>
<tr>
<td>2021 Volume (thousand tons)</td>
<td>6,675.6</td>
<td>1.9</td>
<td>0.01</td>
<td>4,465.4</td>
<td>60.6</td>
<td>0.1</td>
</tr>
<tr>
<td>Value (US$ million)</td>
<td>2,273.8</td>
<td>2.3</td>
<td>0.01</td>
<td>5,854.4</td>
<td>164.4</td>
<td>0.26</td>
</tr>
</tbody>
</table>

*Note:* ¹ Total exports for CMREC; ² Total imports for CMREC

*Source:* General customs statistics data from the General Department of Customs, 2021 (see [www.custom.mn](http://www.custom.mn)).

214. The data shows clearly that Altanbulag’s role as a gateway for imports from Russia, while still a small share of national total imports, is far greater than its role in export trade. The data also reflects the nature of the goods that were traded; the share of total national customs declarations has been consistently much higher than the share of imports themselves by value, and even more by volume. Imports by vehicle tend to be dominated by essential items such as food, feed, finished products, small machinery, equipment, and accessories from the European Union and Russia. This is a reflection of Altanbulag Port’s importance for the country, serving as Mongolia’s sole road border crossing for trade with Russia, handling both incoming ready-made goods and outgoing exports. Current volumes are constrained by capacity limitations due to the relatively basic infrastructure at the BCP, and considerable potential for increase has been noted, including in the recent Korea Trade-Investment Promotion Agency (KOTRA)-financed Altanbulag Transport and Logistics Terminal feasibility study discussed below.

215. The cargo receiving and dispatch area at Altanbulag spans 31,320 square meters. However, there is a noticeable absence of designated zones for customs clearance, loading, transshipment, and container storage. Regrettably, Altanbulag lacks direct rail connectivity and relies solely on road links to the Khiagt Port in Russia. This port does not feature a customs control zone enclosed by
fences and barriers, and there is a distinct absence of warehouses. Customs inspections are conducted outdoors beneath a sheltered area, and port administration falls under the jurisdiction of the Customs Department in Selenge Province. Containers carrying imported cargo arriving from Russia via road through the port often experience wait times of 2–3 hours, dependent on border and customs clearance procedures, inspections, and professional assessments. Unfortunately, there is no dedicated space for container stacking.

216. Altanbulag also lacks the infrastructure for railway and road collaboration, and the warehousing industry remains underdeveloped. In the vicinity of the port, there are no major cities with any form of transportation connectivity to seaports; they are all situated deep inland, far from the capital. Collaboration between Altanbulag Port and Altanbulag Free Zone is limited, and there is a lack of returning cargo for containers entering Altanbulag Port.

217. Significant investments are required to develop and enhance multiple aspects of Altanbulag, including its road network, warehouses, X-ray equipment, port management office, terminal, container yard, rail connection, cargo shipping, and service facilities. These improvements encompass amenities such as restrooms, canteens, restaurants, truck parking lots, and facilities for container and automobile repairs. Moreover, the maintenance of cement concrete roads is essential to ensure optimal operations. Altanbulag, thanks to its direct border connection with Russia, stands as a crucial gateway to Russian and European markets. The port regularly witnesses the passage of container trucks from Europe. The government’s supportive policies provide a conducive environment for the development of Altanbulag Port in conjunction with the Altanbulag Free Zone. Notably, agencies responsible for border protection, customs, immigration, Ulaanbaatar Railway, Mongolian Railway, and road organizations demonstrate relatively effective coordination.

218. KOTRA, under its Knowledge Sharing Program, has recently funded an in-depth feasibility study for the creation of an Altanbulag Transport and Logistics Center to address the shortcomings identified above\(^\text{62}\). The conclusion of the analysis is that, based on standard economic analysis, under realistic demand forecasts, the economic feasibility of the project is uncertain. However, the report recommends proceeding with the project for two main reasons: its additional environmental, social, and secondary economic benefits (such as employment generation), and the urgency of improving this important node in the Central Corridor, in the context of the Government of Mongolia’s overall active national policies aimed at accelerating the country’s development.

**Sükhbaatar**

219. Sükhbaatar is the BCP for rail traffic using the Central Rail Corridor to and from Russia. Sükhbaatar city is the capital of Selenge Province in northern Mongolia, on the Orkhon river. As of late 2007, the city population was 19,224. While this BCP has strategic importance for cross-border

trade and economic development, as it is a rail-only BCP complementary to Altanbulag, there is no intermodal freight handling – all customs processing occurs in Ulaanbaatar. This being the case, the need for facilities here is minimal.

Ulaanbaatar

220. Ulaanbaatar, Mongolia’s capital, stands as the nation’s pivotal hub for economic, social, humanitarian, cultural, industrial, and service activities. However, it currently lacks a comprehensive logistics terminal that meets modern international standards and requirements. Cargo transportation and logistics operations are dispersed across three distinct stations, namely: Amgalan, Ulaanbaatar, and Tolgoit. This fragmented system contributes to inefficiencies, resulting in the undue escalation of switching, hauling, and wagon occupation costs. While Ulaanbaatar Port has these freight handling facilities, it predominantly serves an essential role in facilitating import cargo. In the Mongolian economy, the majority of raw materials for mining and minerals are primarily extracted in rural regions and transported from there without undergoing primary processing.

221. The current situation and challenges faced by logistics centers in Ulaanbaatar can be summarized as follows:

- The flow of consumer goods from China and Russia directly via rail and AH-3 to various distribution facilities is scattered across Ulaanbaatar city.
- Users are burdened with high costs due to deteriorating distribution facilities and declining productivity.
- Container and wagon operations take place in the city center, an unsuitable location.
- Handling hazardous substances (such as raw materials and volatile chemicals) in densely populated areas poses risks and leads to adverse impacts like air pollution, dust, and noise.
- Logistics companies have limited capacity for individual delivery and terminal processing, with low quantities and severe seasonal disparities, resulting in suboptimal operations.

222. Consequently, there is a pressing need to establish a modern regional distribution center and facilities to consolidate the existing distribution facilities in the city center. The distribution center is expected to achieve the following objectives:

- Consolidate distribution facilities in Ulaanbaatar’s central area, upgrading infrastructure to meet new demands.
- Modernize facilities to enhance productivity.
- Respond to the increasing demand for industrial products and consumer goods. Reduce traffic congestion and mitigate adverse environmental impacts in central Ulaanbaatar.
Reduce traffic congestion and mitigate adverse environmental impacts in central Ulaanbaatar.

In Ulaanbaatar, there are 10 terminals collectively providing a generous total of 21,494 square meters of bonded warehouses and 709,656 square meters of open space. These areas cater to a wide range of cargo-related activities, including reception, storage, transshipment, cargo handling, customs bonded warehousing, and the establishment of customs-related facilities such as control zones, container stacking zones, customs clearance, inspection zones, cargo weighing areas, and parking lots. Among these terminals, Table 16 illustrates that the Mechanized Loading and Unloading Transport Expedition Unit (ABTEMA) of Ulaanbaatar Railways (UBTZ) boasts the most extensive area, while Mongolia Express LLC occupies the smallest space.

Furthermore, out of the 10 terminals, only 5 are equipped with customs bonded warehouses. Among these, Tuushin and Mongol Express companies have the largest capacity bonded warehouses, while ABTEMA and Material Impex maintain the longest railway sidings. Additionally, ABTEMA and Material Impex have the most extensive network of branches. The terminals under the ownership of ABTEMA, Mongolian Express, Tuushin, and Material Impex are characterized by their robust capacity, enabling them to accommodate full-sized trains, efficiently manage container processing, and provide secure storage for cargo within customs-bonded warehouses. These capabilities make it possible for them to fulfill the requisites expected of dry ports.

Table 16: Capacity of Ulaanbaatar City Terminals

<table>
<thead>
<tr>
<th>No</th>
<th>Enterprise</th>
<th>Area (m²)</th>
<th>Volume of Customs-Bonded Warehouse (m²)</th>
<th>Railway Length (m)</th>
<th>Number of Forks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ABTEMA</td>
<td>63,870</td>
<td>1,023</td>
<td>8,112</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Tuushin LLC</td>
<td>35,000</td>
<td>8,778</td>
<td>703</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Progress Trans LLC</td>
<td>22,652</td>
<td>0</td>
<td>369</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Erin Trans LLC</td>
<td>19,000</td>
<td>0</td>
<td>1,200</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Interdecision LLC</td>
<td>16,600</td>
<td>2,415</td>
<td>877</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>Material Impex LLC</td>
<td>15,210</td>
<td>0</td>
<td>2,500</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Technical Import LLC</td>
<td>14,600</td>
<td>3,526</td>
<td>462</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Amgalan Logistics LLC</td>
<td>8,000</td>
<td>0</td>
<td>500</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Mongolian Trans LLC</td>
<td>4,285</td>
<td>0</td>
<td>1,000</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>Mongolian Express LLC</td>
<td>3,100</td>
<td>4,600</td>
<td>260</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>70,9656</td>
<td>21,494</td>
<td>16,266</td>
<td>38</td>
</tr>
</tbody>
</table>

Source: Compiled from information provided by the Tuushin transport and brokerage company
Within these terminals, a diverse array of cargo types undergo processing, with customs control and inspections conducted using Russian-manufactured cranes manufactured in 1990: KS50-42B, boasting a 50-ton capacity, and KKS-33 cranes, with a 32-ton capacity. It is worth noting that while these terminals collectively possess an estimated capacity of around 3,640 containers (per day, presumably), none of them have the rail infrastructure necessary to accommodate full trains. Consequently, significant delays often arise when gathering cargo and containers from the 10 terminals in Ulaanbaatar. Multiple transshipments are required as trains enter these terminals, and operational hours are limited, as terminals do not function during the night. Further exacerbating the situation, the unloading of wagons is a time-consuming process, due to a shortage of labor, and the customs control area suffers from spatial constraints.

To address these challenges with a cohesive approach, there have been ongoing discussions about establishing a unified transport and logistics center for Ulaanbaatar city. However, as of now, no substantial progress has been achieved in this regard. For additional details regarding export and import cargo passing through the port of Ulaanbaatar, see Table 17.

**Table 17: Ulaanbaatar Export and Import Indicators, as % of Total for Four CMREC Nodes**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Exports&lt;sup&gt;a&lt;/sup&gt;</th>
<th>UB</th>
<th>%</th>
<th>Imports&lt;sup&gt;b&lt;/sup&gt;</th>
<th>UB</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of declarations</td>
<td>3,114</td>
<td>1,368</td>
<td>43.9</td>
<td>62,669</td>
<td>42,006</td>
<td>67.0</td>
</tr>
<tr>
<td>2019 Volume (thousand tons)</td>
<td>5,546.7</td>
<td>388.4</td>
<td>7.0</td>
<td>4,371.8</td>
<td>2,641.3</td>
<td>60.4</td>
</tr>
<tr>
<td>Value (US$ million)</td>
<td>1,729.4</td>
<td>570.0</td>
<td>33.0</td>
<td>5,296.3</td>
<td>3,532.6</td>
<td>66.7</td>
</tr>
<tr>
<td>Number of declarations</td>
<td>2,223</td>
<td>1,124</td>
<td>50.6</td>
<td>57,544</td>
<td>42,473</td>
<td>73.8</td>
</tr>
<tr>
<td>2020 Volume (thousand tons)</td>
<td>5,478.7</td>
<td>413.5</td>
<td>7.5</td>
<td>4,616.0</td>
<td>2,694.6</td>
<td>58.4</td>
</tr>
<tr>
<td>Value (US$ million)</td>
<td>1,358.8</td>
<td>451.7</td>
<td>33.2</td>
<td>4,715.2</td>
<td>3,262.0</td>
<td>69.2</td>
</tr>
<tr>
<td>Number of declaration</td>
<td>2,452</td>
<td>1,213</td>
<td>49.5</td>
<td>60,007</td>
<td>4,2424</td>
<td>70.7</td>
</tr>
<tr>
<td>2021 Volume (thousand tons)</td>
<td>6,675.6</td>
<td>435.8</td>
<td>6.5</td>
<td>4,465.4</td>
<td>2,790.2</td>
<td>62.5</td>
</tr>
<tr>
<td>Value (US$ million)</td>
<td>2,273.8</td>
<td>744.0</td>
<td>32.7</td>
<td>5,854.4</td>
<td>4,003.2</td>
<td>68.4</td>
</tr>
</tbody>
</table>

*Note:* <sup>a</sup> Total exports for CMREC; <sup>b</sup> Total imports for CMREC

Source: General customs statistics data from the General Department of Customs, 2021 (see [www.custom.mn](http://www.custom.mn)).

In 2019, 1,368 companies submitted customs declarations for exporting cargo valued at US$570 million, encompassing a total weight of 388,400 tons at Ulaanbaatar Port. However, by 2021, the number of enterprises engaging in export declarations dropped to 1,213, yet the export volume increased to 435,800 tons, totaling US$744.0 million in value. Comparatively, 2020 witnessed a notable 30% surge in export value and a 12% growth in cargo weight, compared to 2019, despite an 11.3% decrease in the number of enterprises filing customs declarations. In 2019, a staggering 42,006 enterprises submitted customs declarations for the import of 2.6 million tons of cargo into Ulaanbaatar Port, valued at US$3.5 billion. By 2021, the number of enterprises...
participating in import declarations increased to 42,424, with 2.7 million tons of cargo imported, resulting in a total value of US$4.0 billion. Put differently, Ulaanbaatar Port sees a higher influx of imports compared to exports. This trend is primarily driven by substantial imports of food, various goods, products, vehicles, and equipment. The imported cargo serves a crucial role in fulfilling the needs of the capital city’s population.

228. Ulaanbaatar Port is equipped with container and container storage areas for both receiving and dispatching cargo, yet these facilities are currently operating at insufficient capacity. The port also features designated customs control zones, customs inspection areas, and customs bonded warehouses, although the existing infrastructure falls short of meeting the demand. Furthermore, the port accommodates warehouses with elevated decks for loading and unloading goods from flat wagons; however, it is worth noting that not all of these terminals meet the necessary requirements. While some terminals offer banking services, the majority lack essential amenities like restaurants and lounges. Critical infrastructure, such as container and refrigerator repair shops, cargo weighing scales, and X-ray equipment for customs inspections, is notably absent. An X-ray device is only available at the branch road of Mongolian Trans LLC. Although all terminals have parking areas, these too are insufficient. It is only at the Amgalan-logistik company’s terminal where containers are handled using a 50-ton reach stacker.

229. Except for the terminals managed by ABTEMA and Material Impex LLC, the accommodation of full-size trains is not feasible at Ulaanbaatar Port. The typical duration of container TEU occupancy at these terminals varies from 3 to 17 days. It is worth noting that at Ulaanbaatar Port, the proximity of cargo handling buildings and facilities is relatively close. However, the container area’s surface is relatively thin, the railway’s single axle load capacity is limited, the internal terminal roads are narrow, and the movement of containers by bridge cranes on the railway is subject to weather conditions and wind speed. As a result, the stacking of empty and loaded containers to the desired extent becomes a challenge. While the terminals boast an average capacity of handling 70–160 TEU containers daily, the reach stacker can lift 20 containers per hour, equating to 40 containers daily, 1,200 containers monthly, and 14,000 containers annually.

230. The Ulaanbaatar Port terminals exhibit varying capacities, with aging and deteriorating equipment. The process of cargo allocation, transfer, and distribution also incurs disparities in terms of time and cost. Several essential items of equipment are notably absent at these terminals, and their overall capacity falls short of meeting international standards for a dry port. Furthermore, these terminals, which are jointly owned by both the government and the private sector, lack a unified management and organization structure. Their primary focus revolves around self-interest, rather than the public good, resulting in a state of technical and technological backwardness. Additionally, there is limited space and opportunity to expand the terminals’ capacity within Ulaanbaatar.

231. Ulaanbaatar Port lacks an internationally standardized terminal, and the currently active terminal zones, with the exception of ABTEMA, are privately owned. They operate in a disjointed, self-driven manner, and exhibit limited progress in terms of operations and the use of modern
technology. Ulaanbaatar Port needs to be upgraded in line with international standards. Several key initiatives are needed so that the Ulaanbaatar Port can evolve into a dry port that adheres to international standards, fostering improved efficiency and trade facilitation:

- **Expansion of infrastructure**: The existing buildings, facilities, and available area must undergo expansion to accommodate the increased demand.

- **Rail and road enhancements**: To bolster the port’s efficiency, the number and length of railways and roads should be augmented.

- **Container and refrigerator repair shop**: The installation of a repair shop for containers and refrigerators is essential to ensure equipment maintenance.

- **Management and information center**: Establishing a management and information center that seamlessly connects with the seaport is critical.

- **Integrated system and X-ray equipment**: A new integrated system and X-ray equipment for customs inspection are needed.

- **Customs pre-clearance**: Implementing an electronic customs pre-clearance system at the customs organization level can expedite customs processes. This should be complemented by the electronic receipt of customs clearance documents as cargo departs from the seaport to Mongolia.

- **Electronic control system**: Enhancing the electronic control system for tracking container locations in foreign countries and introducing a direct control system from within Mongolia will further streamline operations.

232. Ulaanbaatar Port enjoys strategic and geographical advantages, situated within the capital city and benefiting from a relatively well-developed network of railways, roads, highways, air transportation, and logistics infrastructure. Additionally, it is surrounded by cultural, industrial, and service centers, and serves a market with strong financial capacity. However, challenges persist in this location, including the high population density within Ulaanbaatar, traffic congestion in the city, limited road space, noise pollution from trains traversing the capital, and the proliferation of railway crossings. These factors result in additional costs for transportation and logistics, as well as an increase in air pollution and greenhouse gas emissions which impact on transportation pricing. Furthermore, Ulaanbaatar Port grapples with issues like the accumulation of empty containers, protracted processes for their return and clearance, lengthy and costly train transfers between railway stations and terminals, high operating expenses, and inadequacies in basic infrastructure and bridge cranes at the terminals.

233. To address the current transportation and logistics challenges, it is imperative to prioritize the establishment and utilization of a Ulaanbaatar freight transportation and logistics center, driven by private sector enterprises. Failure to do so may result in ongoing complications, such as container rental delays and fines, affecting numerous logistics companies and carriers. Simultaneously, the government has expressed concern that the excessive involvement of foreign
investors in the construction of the Ulaanbaatar dry port could intensify competition within Mongolia’s transportation and logistics market, potentially leading to increased dependence on large foreign corporations by the state and government.

234. Comprehensive feasibility studies⁶³ have been conducted and integrated into Mongolia’s long-term development policy and planning framework, specifically pertaining to the establishment of a transport and logistics hub near the Khoshgi Valley Free Zone, under the auspices of the government. When the Bogdkhan Railway Bypass, work on which is currently suspended while new project contracts are finalized, comes to fruition, transit cargo will bypass the heart of Ulaanbaatar. This transformative development will redirect transit cargo flow, allowing imported goods to be received exclusively at the eastern and western logistics centers within the city.

235. The area known as New Zuunmod (formerly Aero City), situated to the south of Mount Bogd and approximately 50 kilometers from the center of Ulaanbaatar City (refer to Figure 15), spans roughly 12,000 hectares and has been earmarked as a special economic zone designed to take advantage of proximity to the new Chingis Khaan International Airport. The region will also serve as a logistics hub, effectively operating as an inland port that encircles the international airport. A total of 2,400 hectares in the southern section of this area is under the direct oversight of MRTD and dedicated to transportation-related infrastructure, including the airport. The remaining 9,600 hectares falls under the jurisdiction of the Ministry of Construction and Urban Development (MCUD).

236. Mongolia’s fundamental policy, as articulated in its Long-term Vision 2050, is geared towards creating a vibrant landscape for tourism, cultural services, and industries. The overarching goal is to establish Mongolia as a pivotal transportation, logistics, and international hub within Northeast Asia. This policy envisions a dispersion of factories, enterprises, and education institutions that currently impact on the environment adversely. It aims to transform Ulaanbaatar City into a pivotal passenger and cargo transportation hub for Northeast Asia, facilitated by the international airport.

237. To realize Vision 2050, the plan requires the commencement of construction of New Zuunmod in 2024, followed by the development of infrastructure and utility facilities, along with housing, throughout the decade leading up to 2030. The vision seeks to create an appealing living environment that offers access to medical and education services. It emphasizes sustainable urban development that respects the natural environment and promotes industrial and urban progress through cutting-edge technologies. Additionally, it calls for the establishment of high-speed public transportation linking Ulaanbaatar to the broader logistics region, encompassing the Bogdkhan mountain environs.

238. There are a number of additional plans for the further development of transport and logistics hubs in the Ulaanbaatar area in the coming years, although work on them has not yet commenced.

Vision 2050 and Ulaanbaatar City Master Plan (UBMP) 2040 contain plans to establish logistics centers at key locations, specifically New Zuunmod, Nalaikh, and Argalant-Emeelt. Additionally, large multi-purpose warehouses are slated for construction in Argalant-Emeelt, Bagakhangai, and Nalaikh. Furthermore, there are proposals to create delivery centers at nine distinct locations within Ulaanbaatar City. The Public Investment Program 2021–2025 encompasses initiatives aimed at establishing distribution centers in both the western and eastern parts of the city. These endeavors are currently in need of funding and comprehensive design planning to move forward effectively. Notably, one of Mongolia’s prominent transportation companies, Tuushin, has developed plans for a significant 130-hectare development project in Nalaikh (Figure 15), although its financing has yet to be arranged.

Figure 15: Location Map of New Airport City (Aero City/New Zuunmod) and its Surrounding Areas

239. Earlier plans for the logistics center in Aero City were rejected, and the Urban Planning Research Institute put forth five alternative locations as viable options.
Figure 16: Candidate Locations for the Logistics Center

Source: The Urban Planning Research Institute

240. Option #5 (as presented in Table 18), denoted by a star on Figure 16, has been chosen for several compelling reasons. This option encompasses approximately 3,000 hectares to the south and offers the following advantages:

- Proximity to the railway
- Location within 100 kilometers of the cargo demand
- Ample space for logistics processing
- Proximity to labor and residential areas, reachable within 20–30 minutes by bus from the Aimag or Soum centers
- Accessibility to civil infrastructure
- Low susceptibility to extreme weather events
- Proximity to, or integration with, the road network
- Area available to construct cost-effective, large-scale warehouses that facilitate long-term storage
Table 18: Candidate Locations for Logistics Center

<table>
<thead>
<tr>
<th>Location</th>
<th>Size (ha)</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>West-North of New Zuunmod</td>
<td>400</td>
<td>Close to Ulaanbaatar City, AH-3 bypass, residential area</td>
<td>Area is too small to expand; falls in the landing zone; land expropriation cost: moderate</td>
</tr>
<tr>
<td>South of Aero City</td>
<td>400</td>
<td>Within the premises defined by the UBMP; no eminent domain costs</td>
<td>Straddles railway line; wetland; away from AH-3 bypass</td>
</tr>
<tr>
<td>Southeast of Aero City</td>
<td>400</td>
<td>Within the premises defined by the UBMP; no eminent domain costs</td>
<td>Overlaps with the UBMP’s High Tech and Biotech zones; straddles the railway line</td>
</tr>
<tr>
<td>Between New Zuunmod and Sergelen Soum</td>
<td>400</td>
<td>Locate in the middle of Towns</td>
<td>In the landing zone; land expropriation costs are the highest</td>
</tr>
<tr>
<td>South and Southeast of New Zuunmod and South of the railway</td>
<td>3,000</td>
<td>Close to AH-3 bypass and Bogdkhan railway; large area of land available for construction of warehouses</td>
<td>Requires some expropriation costs; outside the UBMP-defined site; preparatory works required due to slope</td>
</tr>
</tbody>
</table>

Source: The Urban Planning Research Institute

241. The Bogdkhan Railway Bypass project has been under careful deliberation for an extended period, with the primary objective of mitigating traffic congestion within Ulaanbaatar City. This initiative, which is aligned with the city’s ambition of establishing a logistics hub and a new railway station, gained substantial momentum with the signing of a loan agreement with the Japanese government for the construction of a new airport in 2008. As noted earlier, contracts signed in 2021 for the construction of the bypass have been cancelled and the project is on hold for the moment.

242. All of these plans for investment in upscaled transport and logistics facilities in the Ulaanbaatar area must be aligned with the existing logistics centers and forthcoming development plans. This alignment is crucial for determining whether operations should be centralized or functions divided. These factors and development plans include:

- The improvement of the logistics chain connecting China, Ulaanbaatar, and Russia, particularly the advancement of the Bogdkhan railway through a bypass route
- The conceptualization of a dry port and distribution hub in the New Zuunmod logistics area, endorsed by MRTD
- The establishment of transshipment facilities and distribution centers at border points like Zamiin Uud and Altanbulag, with a focus on ensuring ample capacity
• The logistics bases in New Zuunmod, Nalaikh, Emeelt, Bagakhangai, and Baganuur, as outlined in Ulaanbaatar City Master Plan 2040: This encompasses the relocation of existing logistics facilities, the development of railway and truck terminals, and the establishment of air cargo distribution centers in New Zuunmod.

• The concept of a unified logistics center that combines railway terminals and truck terminals, as proposed by Ulaanbaatar Logistics Center (UBLC) in Nalaikh: Preparations are underway for operations to commence in the next decade, in line with the plan reflected in UBMP 2040.

243. Of all the proposals that are on the table, the most progress has been made regarding development of the New Zuunmod and Khushig Valley Free Zone, with a logistics center and new infrastructure links, with the next detailed plans now being developed by the government, with technical assistance from JICA. Parliament approved this plan in 2022 and in August, 2023 further agreements were reached with JICA\(^64\). The stated intention of all parties is to ensure that there will be active private sector participation in this project. Timely implementation of this project will be an excellent opportunity for the government to utilize the revenue generated by rapidly growing mineral exports to build the foundation for a sustainable and diverse economy.

**Sainshand**

244. Sainshand, is the capital of Mongolia’s Dornogovi Province. Its main role as a port is the transloading of mineral products onto the Central Rail Corridor, which is reflected in the data in Table 19. In 2022, 2.8 million tons of coal and 19.6 thousand tons of zinc concentrate produced at Tömörtiliin Ovoo mine in Sukhbaatar province were loaded onto the central rail line there. Sainshand was an important economic center during the planned economy years, due to the presence of what was then Mongolia’s only oil field in the Zuunbayan area of Sainshand. Over the years, there have been significant discussions regarding restoring the city’s economic role and expanding the infrastructure of Sainshand Port. Most of these discussions have not led to concrete outcomes, however, the situation is now changing due to the ongoing construction by an Indian firm of Mongolia’s first oil refinery in Sainshand\(^65\), processing oil that will be piped in from fields in eastern Mongolia. Projected to be completed in 2025, this refinery will provide a boost to the local economy.

### Table 19: Sainshand Export and Import Indicators, as % of Total for Four CMREC Nodes

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Exports(^a)</th>
<th>Sainshand</th>
<th>% of Total</th>
<th>Imports(^b)</th>
<th>Sainshand</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of declarations</td>
<td>2,993</td>
<td>741</td>
<td>24.76</td>
<td>6,1651</td>
<td>529</td>
<td>0.86</td>
</tr>
<tr>
<td>Volume (thousand tons)</td>
<td>4,926.1</td>
<td>4,209.3</td>
<td>85.45</td>
<td>4,182</td>
<td>214.4</td>
<td>5.13</td>
</tr>
</tbody>
</table>


245. The Sainshand Port encompasses a customs control zone equipped with enclosures, barriers, and facilities for customs inspections. It also boasts customs bonded warehouses and cargo handling areas featuring platforms for loading and unloading goods from flat wagons. Situated 1 kilometer from Sainshand city, the port’s operations are subject to considerations related to wind speed and weather conditions. Empty containers are stacked in two layers, while loaded containers are efficiently arranged in three layers, with a generous 15-meter gap between the stacked blocks.

246. Within the port premises, the Customs Authority maintains a dedicated office and employs the CAIS for conducting inspections within the expansive 40,000 square meter customs control and inspection zone. Furthermore, the port area offers a range of amenities, including banks, insurance services, dining options, rest areas, and repair facilities for containers and refrigeration equipment. Despite these advantages, the port faces certain limitations. Notably, it lacks essential infrastructure such as weighing scales for vehicle and rail cargo, well-paved parking areas, and X-ray equipment for customs inspections. Additionally, there are no railway-installed bridge cranes or vital equipment necessary for efficient operations. The cargo management process at the port is not integrated into a comprehensive electronic information and control system. Similarly, it lacks the information and technological electronic systems required to determine the location of cargo and containers, restricting the handling of containers that do not employ international transport documentation. Additionally, the road width in the vicinity is inadequate.

247. Sainshand’s strategic location in the heart of Mongolia, in proximity to the Zamiin Uud Port, and serving as a vital railway and road junction with numerous spurs and branching roads, including those previously used for military purposes before the 1990s, presents an appealing prospect. However, the stations, crossings, and fundamental railway infrastructure in this area have aged and deteriorated over time, necessitating substantial capital investment for essential upgrades.

\[
\begin{array}{|c|c|c|c|c|c|c|}
\hline
\text{Indicator} & \text{Exports}^a & \text{Sainshand} & \% \text{ of Total} & \text{Imports}^b & \text{Sainshand} & \% \text{ of Total} \\
\hline
\text{Value (US$ million)} & 1,413.4 & 647.5 & 45.81 & 5,149.3 & 147.1 & 2.86 \\
\hline
\text{Number of declarations} & 2,178 & 693 & 31.82 & 55,331 & 163 & 0.29 \\
\hline
\text{2020 Volume (thousand tons)} & 5,108.6 & 4,470.5 & 87.51 & 4,308.9 & 229.6 & 5.33 \\
\text{Value (US$ million)} & 1,155.9 & 654.6 & 56.63 & 4,502.9 & 163.7 & 3.64 \\
\hline
\text{Number of declarations} & 2,396 & 851 & 35.52 & 58,945 & 355 & 0.60 \\
\hline
\text{2021 Volume (thousand tons)} & 6,297.5 & 5,707.6 & 90.63 & 4,296.8 & 218.6 & 5.09 \\
\text{Value (US$ million)} & 2,000.9 & 1,222.8 & 61.11 & 5,265.6 & 191.4 & 3.38 \\
\hline
\end{array}
\]

\textit{Note:} \(^a\)Total imports for CMREC; \(^b\)Total imports for CMREC

\textit{Source:} General customs statistics data from the General Department of Customs, 2021 (see [www.custom.mn](http://www.custom.mn)).
Zamiin Uud

248. Zamiin Uud, located in the southeastern region of Mongolia, is a district within Dornogovi Province. In 2008, it was home to a population of 11,527. This district is of notable significance, as it houses the Zamiin Uud border railway and road port, established on January 1, 1956. It shares a direct border with China's Erenhot Port. Functioning as an international-grade port, it operates continuously, in adherence with the agreement between the Mongolian and Chinese governments. Zamiin Uud’s role is pivotal in advancing Mongolia’s transportation and logistics sector. About half of the vehicles and people who pass through a Mongolian border port pass through Zamiin Uud Port, which is one of the largest ports. During the pandemic, the border and customs of both countries were closed, which significantly reduced the number of vehicles and passengers passing through Zamiin Uud Port.

249. The impact of the pandemic on the operations of Zamiin Uud BCP has been significantly challenging. In 2019, the number of passengers traveling through Zamiin Uud border crossing stood at 2.27 million (see Table 20). However, in 2021, this figure dramatically decreased to just 105,400 passengers. The decline in the volume of vehicles using the Zamiin Uud border crossing was similarly substantial. In 2019, 1.18 million vehicles, encompassing both entries and exits, passed through the Zamiin Uud border crossing. By 2021, this number had fallen to 789,900, reflecting a reduction of 395.0 thousand vehicles, which accounts for a significant 41.4% decline.

Table 20: Number of Vehicles and Passengers Passing through the Zamiin Uud Border Crossing (Thousand)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of vehicles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>781.9</td>
<td>868.2</td>
<td>1,095.5</td>
<td>1,176.0</td>
<td>1,185.0</td>
<td>1,061.9</td>
<td>789.9</td>
</tr>
<tr>
<td>Entry</td>
<td>392.3</td>
<td>435.8</td>
<td>547.53</td>
<td>588.1</td>
<td>594.2</td>
<td>531.0</td>
<td>399.9</td>
</tr>
<tr>
<td>Exit</td>
<td>389.6</td>
<td>432.3</td>
<td>547.9</td>
<td>587.9</td>
<td>590.7</td>
<td>528.9</td>
<td>389.9</td>
</tr>
<tr>
<td><strong>Number of passengers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,816.5</td>
<td>1,912.5</td>
<td>2,257.5</td>
<td>2,406.8</td>
<td>2,279.8</td>
<td>299.2</td>
<td>105.4</td>
</tr>
<tr>
<td>Entry</td>
<td>903.9</td>
<td>959.2</td>
<td>1,128.6</td>
<td>1,203.1</td>
<td>1,141.1</td>
<td>154.8</td>
<td>53.0</td>
</tr>
<tr>
<td>Exit</td>
<td>912.5</td>
<td>953.2</td>
<td>1,128.8</td>
<td>1,203.7</td>
<td>1,138.7</td>
<td>144.4</td>
<td>52.4</td>
</tr>
</tbody>
</table>

Source: Statistical database of the National Statistics Committee of Mongolia, www.1212.mn

250. In 2019, a total of 651 enterprises submitted customs declarations for export cargo, with a combined weight of 426.4 thousand tons and a total value of US$192.0 million at Zamiin Uud Port. In contrast, the statistics for 2021 revealed a noteworthy shift, with 234 enterprises involved in the export of cargo. The cargo weight was 162.2 thousand tons, and the total worth amounted to US$31.8 million. When comparing these figures to the data from 2019, it is evident that 2020 witnessed a significant decline in the value of export cargo, which decreased by a factor of six. The cargo weight experienced a reduction of 2.6 times, and the number of enterprises participating in customs declarations also dropped by half (Table 21).
Table 21: Zamiin Uud Export and Import Indicators, as % of Total for Four CMREC Nodes

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Export(^a)</th>
<th>ZU</th>
<th>% of Total</th>
<th>Import(^b)</th>
<th>ZU</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of declarations</td>
<td>2,993</td>
<td>651</td>
<td>21.75</td>
<td>61,651</td>
<td>15,048</td>
<td>24.41</td>
</tr>
<tr>
<td>2019 Volume (thousand tons)</td>
<td>4,926.1</td>
<td>426.4</td>
<td>8.66</td>
<td>4,182</td>
<td>1,238.9</td>
<td>29.62</td>
</tr>
<tr>
<td>Value (US$ million)</td>
<td>1,413.4</td>
<td>192.0</td>
<td>13.58</td>
<td>5,149.3</td>
<td>1,259.6</td>
<td>24.46</td>
</tr>
<tr>
<td>Number of declarations</td>
<td>2,178</td>
<td>285</td>
<td>13.09</td>
<td>55,331</td>
<td>11,213</td>
<td>20.27</td>
</tr>
<tr>
<td>2020 Volume (thousand tons)</td>
<td>5,108.6</td>
<td>221.8</td>
<td>4.34</td>
<td>4,308.9</td>
<td>1,355.6</td>
<td>31.46</td>
</tr>
<tr>
<td>Value (US$ million)</td>
<td>1,155.9</td>
<td>46.1</td>
<td>3.99</td>
<td>4,502.9</td>
<td>1,005.4</td>
<td>22.33</td>
</tr>
<tr>
<td>Number of declarations</td>
<td>2,396</td>
<td>234</td>
<td>9.77</td>
<td>58,945</td>
<td>13,516</td>
<td>22.93</td>
</tr>
<tr>
<td>2021 Volume (thousand tons)</td>
<td>6,297.5</td>
<td>162.2</td>
<td>2.58</td>
<td>4,296.8</td>
<td>1,227.4</td>
<td>28.57</td>
</tr>
<tr>
<td>Value (US$ million)</td>
<td>2,000.9</td>
<td>31.8</td>
<td>1.59</td>
<td>5,265.6</td>
<td>1,306.6</td>
<td>23.06</td>
</tr>
</tbody>
</table>

*Note: \(^a\)Total exports for CMREC; \(^b\)Total imports for CMREC

Source: General customs statistics data from the General Department of Customs, 2021 (see [www.custom.mn](http://www.custom.mn)).

251. In 2019, a total of 15,048 enterprises were engaged in customs declarations for the import of 1.2 million tons of cargo at the Zamiin Uud Port, with a combined value of US$1.25 billion. Fast forward to 2021, the same number of companies, 15,048 in total, submitted customs declarations for 1.2 million tons of imported cargo, which now amounted to US$1.3 billion in value. Notably, the decline in import figures was significantly less pronounced compared to exports. This can be attributed to the port’s role in importing ready-made food products, goods, vehicles, and equipment from China. As the primary border point between Mongolia and China, Zamiin Uud Port serves as the crucial southern gateway for facilitating import operations.

252. The Zamiin Uud Regional Logistics Center was allocated a sprawling 400-hectare land parcel. This extensive facility boasts approximately 14 kilometers of wide and standard gauge railways, featuring a robust 19-meter-long reinforced concrete bridge structure that intersects with the railway, providing access to and from the logistics center on two levels. Additionally, there are 1.6 kilometers of roads on the premises. MTZ, the owner of the center, entered into an agreement with UBTZ on July 23, 2019, securing the lease of this valuable property for Mongolian tugrik (MNT) 3.5 billion annually. The physical infrastructure of the Regional Logistics Center, covering a total area of 128 hectares, comprises various essential components. These include a heavy-duty container yard, a storage area, a machinery repair center, a central heat supply building, a customs building, staff and administrative facilities, a freshwater reservoir, a wastewater treatment facility, equipment for alarm communication, an electrical network, and pipeline connections.

253. The Zamiin Uud Regional Logistics Center specializes in the efficient transshipment of containers, seamlessly moving them from standard gauge (1,435 mm track) wagons originating in China to Russian gauge (1,520 mm track) wagons. Typically, a standard train comprises 50 wagons,
each with the capacity to transport either 100 20-foot containers or 50 40-foot containers. This comprehensive center includes a total of four terminals. Customs inspections for loaded containers are carried out within the customs area, with the aid of wagons and auto-loading equipment, although X-ray inspection equipment is not available. The center also boasts a three-story office building and is outfitted with two bridge cranes positioned along the railway. These four terminals, working collectively, have the capability to process 902 wagons on a daily basis.

254. However, it is important to note that the railway infrastructure is significantly inadequate. The two Chinese-built bridge cranes, each with a capacity of 40.5 tons, encounter challenges due to limited technical support. Furthermore, these cranes are susceptible to the region’s prevailing strong winds, which consistently exceed 10 meters per second throughout the year. Consequently, the cranes frequently experience substantial idle periods, particularly given the demanding conditions in the Gobi Desert. One suggested solution involves relocating two standard and two wide railway tracks in parallel under the bridge cranes, creating additional space for container processing. This would help alleviate the pressure on tires and extend the lifespan of the reach stacker’s tires, as the current thin slab surface places considerable strain on heavy-loaded reach stackers as they traverse the area.

255. The Zamiin Uud railway station, designed to accommodate 7.6 pairs of trains daily, is currently operating beyond its intended capacity, handling 7–8 pairs of trains a day. Consequently, there is a pressing need to double the track capacity for the Erenhot-Zamiin Uud route. The processing capacity at the Zamiin Uud station is rated at 426 railway cars daily, equivalent to 8.2 trains. This aligns with the requirement to receive 7.6 pairs of trains, involving the shunting of wagons from the plateau, considering the distinctions in railway gauge width. To address this demand, plans involve doubling the number of spare locomotives at the station to two and increasing the railcar count to 12. This strategic expansion will enhance the station’s processing capacity, enabling it to manage 10–12 pairs of trains daily, encompassing standard to Russian gauge trains. As part of this initiative, the implementation of a 3-track crossing at the border, connected to the central station and equipped with automation, will create the potential to facilitate the exchange of 18–20 pairs of trains each day. The railway link between Erenhot and Zamiin Uud comprises one standard-gauge track and two wide-gauge tracks. The wide-gauge railway has the inherent capacity to accommodate the exchange of 12 pairs of trains, underlining its significance in bolstering transport capabilities.

256. Insufficient storage space poses a challenge for the reception, dispatch, and transfer of cargo, including the conversion from standard gauge to Russian gauge at the terminals of Zamiin Uud Port. Despite this limitation, the port benefits from a well-developed railway network, seamless integration with the road network, and the execution of customs inspections and checks within the designated customs control area. However, there are notable omissions in the port’s infrastructure, such as the absence of customs bonded warehouses, dedicated port authorities, customs and inspection offices, specialized X-ray equipment for customs inspections, food and rest facilities, container and refrigerator repair workshops, and electronic information technology systems for
locating containers or other cargo transitioning from seaports to the port. Furthermore, the management of port operations does not currently use an electronic information system.

257. Currently, there is a substantial number of loaded containers accumulation at the terminal within the regional logistics center. Frequently, the backlog includes over 800 containers waiting for processing, while only around 250 containers can be dispatched to Ulaanbaatar per day. In light of this considerable backlog, there is a pressing need to expand the Zamiin Uud Regional Logistics Center. MTZ is taking the initiative and actively implementing a program aimed at further developing the center, which includes the creation of an additional 400-hectare area. The strategic plan involves establishing a multimodal transportation terminal, facilitating the seamless movement of cargo across different modes of transportation spanning road-to-road, road-to-rail, and rail-to-road transfers. To advance this endeavor, a memorandum of understanding has been inked with COSCO Shipping Baotou Steel Logistics, a state-owned Chinese company hailing from Inner Mongolia. This partnership aims to conduct a feasibility study for the project within the framework of a public-private partnership. It is not yet possible to identify opportunities for Mongolian private sector participation in the implementation of this plan, which may be limited based on requirements of the Chinese side.

258. Through this expansion, the Zamiin Uud Regional Logistics Center will be poised to receive mining cargo, specifically slag, transported by both road and rail from various provinces along the Tavantolgoi-Zunbayan railway and the primary railway main line. Employing an intelligent rail and road multimodal transportation system, along with container transport, the volume of mining product exports is expected to experience a significant boost, achieved through efficient transshipment and container-based shipping via China’s Erenhot Port. This expansion will not only facilitate a new avenue for the export of mining products, but also promote environmentally responsible transportation practices. It will enable the economic activation of mineral deposits in the eastern and southern regions, leading to the creation of new employment opportunities and significantly contributing to regional development.

259. Zamiin Uud Border Port stands as one of Mongolia’s largest ports, marked by a substantial influx of passengers and transit vehicles. The development of Zamiin Uud Port is a focal point for Mongolia, garnering attention from the government, donor countries, and international financial institutions. There is a promising opportunity to enhance border port capacity, foster export growth, drive economic expansion, and establish a more eco-friendly, highly efficient port by embracing cutting-edge technology at a cost-effective rate. Notably, Zamiin Uud Border Port enjoys a strategically advantageous location, being the nearest point to China’s Tianjin sea port. To leverage this potential fully, it is imperative to formulate and endorse long-term policy planning documents encompassing technical, technological, human resources, and financial aspects, complemented by the development and execution of comprehensive action plans.
Summary

260. The key characteristics of the above five corridor nodes are summarized in Table 22.

Table 22: Summary of Key Features

<table>
<thead>
<tr>
<th>Location</th>
<th>Main function</th>
<th>Issues</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altanbulag</td>
<td>BCP</td>
<td>Capacity limitations</td>
<td>Significant investment required</td>
</tr>
<tr>
<td></td>
<td>Imports by road</td>
<td>No rail</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Customs clearance for vehicles</td>
<td>No enclosed customs control zone</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Free trade area</td>
<td>No warehousing</td>
<td></td>
</tr>
<tr>
<td>Sukhbaatar</td>
<td>BCP for rail</td>
<td>No customs facilities (customs clearance at UB)</td>
<td>No facilities required for current functions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No intermodal transfer</td>
<td></td>
</tr>
<tr>
<td>Ulaanbaatar</td>
<td>Logistics terminals</td>
<td>Fragmented and inadequate terminal facilities</td>
<td>Improved terminal facilities</td>
</tr>
<tr>
<td></td>
<td>Customs clearance</td>
<td>High costs</td>
<td>Container repair</td>
</tr>
<tr>
<td></td>
<td>Road and rail infrastructure</td>
<td>Limited capacity</td>
<td>Improved customs processing</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>including Xray, electronic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>information etc.</td>
</tr>
<tr>
<td>Sainshand</td>
<td>Transloading minerals for export</td>
<td>Full range of functions and amenities</td>
<td>Essential infrastructure such as</td>
</tr>
<tr>
<td></td>
<td>Customs clearance of imports</td>
<td></td>
<td>weighbridge, Xray, integrated</td>
</tr>
<tr>
<td></td>
<td>Bonded warehouses</td>
<td></td>
<td>cargo handling e-information</td>
</tr>
<tr>
<td>Zamiin Uud</td>
<td>BCP for rail and road</td>
<td>Infrastructure is inadequate, capacity constraint for rail</td>
<td>Needs capacity expansion</td>
</tr>
<tr>
<td></td>
<td>Customs clearance for road only</td>
<td>transshipment</td>
<td>Storage space</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Integrated cargo handling e-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>information</td>
</tr>
</tbody>
</table>

6.4 Comparison of Key Corridor Nodes

261. Although Zamiin Uud is the location of a relatively small percentage of Mongolia’s mineral exports, those mineral products are still the dominant factor in exports that pass through this port.

Table 23: Zamiin Uud Exports – First 10 Months of 2023

<table>
<thead>
<tr>
<th>Type of Export</th>
<th>Tons</th>
<th>% of Total</th>
<th>Value (US$ 000)</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral</td>
<td>9,576,540</td>
<td>97.3%</td>
<td>2,232,015</td>
<td>71.4%</td>
</tr>
<tr>
<td>Non-mineral</td>
<td>263,096</td>
<td>2.7%</td>
<td>894,863</td>
<td>28.6%</td>
</tr>
<tr>
<td>Total</td>
<td>9,839,636</td>
<td>3,126,878</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Based on Mongolian Customs Authority data; this time period is used to capture post-COVID-19 trends.
262. These numbers would reveal even heavier dominance of mineral exports in ZU if transit trade from Russia to China were subtracted from the non-mineral totals. However, at this time the Mongolian Customs Authority data do not distinguish between Mongolia-origin exports and Russian transit trade.

263. What distinguishes Zamiin Uud from other BCPs is the large volume of non-mineral imports that enters Mongolia there.

Table 24: Exports and Imports of Leading BCPs – First 10 Months of 2023

<table>
<thead>
<tr>
<th></th>
<th>Exports (million US$)</th>
<th>Exports (000 tons)</th>
<th>Imports (million US$)</th>
<th>Imports (000 tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zamiin Uud</td>
<td>3,126.88</td>
<td>9,839.63586</td>
<td>4,163.09143</td>
<td>2,452.924</td>
</tr>
<tr>
<td>Gashuunsukhait</td>
<td>6,270.963651</td>
<td>33,753.7952</td>
<td>541.074807</td>
<td>443.4911</td>
</tr>
<tr>
<td>Shiveekhuren</td>
<td>17,254.59692</td>
<td>16,536.4352</td>
<td>114.303703</td>
<td>57.30323</td>
</tr>
<tr>
<td>Bulgan</td>
<td>433.4661443</td>
<td>2,558.25999</td>
<td>23.5244205</td>
<td>23.60894</td>
</tr>
<tr>
<td>Khangi</td>
<td>641.595777</td>
<td>4,596.89853</td>
<td>45.1567314</td>
<td>75.51413</td>
</tr>
</tbody>
</table>

Source: Based on Mongolian Customs Authority data; this time period is used to capture post-COVID-19 trends.

264. We see that the other four BCPs all have a massive surplus of exports over imports in value, and even more in weight. They are not entry ports for any meaningful quantity of products, because they are not linked to key internal markets in the northern urban centers. Zamiin Uud’s unique role as a source of imports from China and from other countries, other than Russia, is reflected in the surplus of imports over exports in terms of value, and the 1:4 ratio of imports to exports in weight, which reflects large amounts of smaller imported goods. However, the fact that imports in ZU are vastly higher than the sum of the others reflects how central a role ZU plays in non-mineral trade.

265. The only other Mongolian BCP that has a similar pattern is where the Central Corridor reaches Russia. Mongolian Customs data combine the road BCP of Altanbulag and the rail BCP of Sukhbaatar.
Table 25: Exports and Imports of Sukhbaatar/Altanbulag – First 10 Months of 2023

<table>
<thead>
<tr>
<th></th>
<th>Exports (million US$)</th>
<th>Exports (000 tons)</th>
<th>Imports (million US$)</th>
<th>Imports (000 tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sukhbaatar-Altanbulag</td>
<td>188.72</td>
<td>175.92</td>
<td>2,653.23</td>
<td>2,643.62</td>
</tr>
<tr>
<td>Excluding petroleum products</td>
<td></td>
<td></td>
<td>1,244.25</td>
<td>830.38</td>
</tr>
</tbody>
</table>

Source: Based on Mongolian Customs Authority data; this time period is used to capture post-COVID-19 trends.

266. It should be noted that imports of Russian petroleum products are recorded at these BCPs and have a large impact on this data. The development of the new oil refinery at Sainshand could lead to a reduction in this trade. However, even when they are excluded we see that imports dominate the trade at the main Russian border ports, even more than at Zamiin Uud. There is an important difference between these two key import entry points in terms of the composition of the imports. Imports at the Russian border are largely still low-tech legacy products from the socialist era\(^{66}\). Imports at Zamiin Uud comprise many key modern products for Mongolia’s new economy.

267. That difference aside, the Sukhbaatar/Altanbulag and Zamiin Uud data all highlight the overriding importance of the Central Corridor in Mongolian imports.

268. Summing up, there is still considerable uncertainty about how exactly the three key components of Mongolian trade through Zamiin Uud will develop: i.e., Mongolia’s non-mineral exports, imports, and transit trade. However, given that mineral exports to China will expand steadily, strong growth is quite certain in the first two of those components. Transit trade, particularly Chinese exports to Russia, seems quite likely to also continue to grow in the coming years, as the importance of those products to the Russian economy will further deepen under almost any scenario in Russian relations with the West. More efficient infrastructure and logistics at Zamiin Uud are urgently needed to smooth the path forward. New and efficient infrastructure and systems for managing transit trade at the border will be needed, to complement the completion of the Bogdkhan Railway Bypass in Ulaanbaatar. Rail gauge change will need to be handled as efficiently as possible, and careful consideration has to be given to the eventual construction of a standard gauge rail line between Zamiin Uud and Ulaanbaatar. As noted earlier, all of these and other improvements in logistics will require overcoming some internal resistance and the creation of more transparent governance in the Central Corridor.

269. The tables above presenting main export and import indicators for the four major trade nodes establish a clear picture of the current distribution of key trade functions along the major nodes of the Central Corridor. They are summed up in Table 26, in which 2019 data is used,

\(^{66}\) The same products that the author saw in Mongolia when he first visited in 1991.
because the benefits of eliminating the impact of COVID-19 restrictions outweigh the disadvantages of eliminating the impact of any other changes during the three years 2019–2021.

Table 26: Central Corridor Customs Data 2019, with % Share of Each Node

<table>
<thead>
<tr>
<th></th>
<th>Imports</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Zamiin Uud %</td>
<td>Sainshand %</td>
<td>Ulaanbaatar %</td>
<td>Altanbulag %</td>
</tr>
<tr>
<td># of Declarations</td>
<td>61,651</td>
<td>24.41%</td>
<td>0.86%</td>
<td>68.14%</td>
<td>6.60%</td>
</tr>
<tr>
<td>Volume (000 tons)</td>
<td>4,182</td>
<td>29.62%</td>
<td>5.13%</td>
<td>63.16%</td>
<td>2.09%</td>
</tr>
<tr>
<td>Value (million US$)</td>
<td>5,149.3</td>
<td>24.46%</td>
<td>2.86%</td>
<td>68.60%</td>
<td>4.08%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Exports</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Zamiin Uud %</td>
<td>Sainshand %</td>
<td>Ulaanbaatar %</td>
<td>Altanbulag %</td>
</tr>
<tr>
<td># of Declarations</td>
<td>2,993</td>
<td>21.75%</td>
<td>24.76%</td>
<td>45.71%</td>
<td>7.78%</td>
</tr>
<tr>
<td>Volume (000 tons)</td>
<td>4,926.1</td>
<td>8.66%</td>
<td>85.45%</td>
<td>5.85%</td>
<td>0.04%</td>
</tr>
<tr>
<td>Value (million US$)</td>
<td>1,413.4</td>
<td>13.58%</td>
<td>45.81%</td>
<td>40.33%</td>
<td>0.28%</td>
</tr>
</tbody>
</table>

Source: Based on Mongolian Customs Authority data

270. Several salient points stand out in Table 25. First is the dominant role of Ulaanbaatar in trade along the Central Corridor. This is particularly evident in import data, although quite removed from the border, the share of imports declared in Ulaanbaatar is 2–3 times greater than in Zamiin Uud, and more than 12–80 times greater than Altanbulag, depending on your choice of indicator. This reflects the division of labor between the border ports, which process only road imports, and Ulaanbaatar, where all rail imports clear customs. Exports cleared by customs in Ulaanbaatar are nearly as large a share in value terms as the mining products shipped through Sainshand, although in volume terms they are predictably a much smaller share of the total. Ulaanbaatar exports are triple those of Zamiin Uud’s in value terms.

271. On the export side, Sainshand has played a significant role as the port where a portion of Mongolia’s mineral exports are transferred to UBTZ’s Central Rail Corridor. Tavantolgoi coal and Omortei Ovoo zinc have been shipped by truck to Sainshand for loading onto rail wagons. While these comprised 85.45% of total corridor exports by weight, this was still a small fraction, roughly one tenth, of the total mineral exports to China in 2019, the great bulk of which were transported by rail to Gashuunsukhait, Shiveekhuren and Hangi. Secondly, the construction of new rail lines from
Tavangolgoi to those three BCPs (in the case of Hangi, via Zuunbayan) is certain to further diminish Sainshand’s role, and that of the Central Corridor overall, in this trade.

272. The nature of the exports that are declared in Altanbulag is reflected in the much higher share of total customs declarations that are filed there (7.78% of the corridor total) compared to their share of total corridor volume and value, both under 0.3%. Altanbulag is the route by which small traders operate, one vehicle at a time. On the import side, Altanbulag’s role is more prominent. While still dwarfed by Ulaanbaatar and Zamiin Uud, Altanbulag is the BCP where nearly 5% of Mongolian imports enter from Russia.

273. Considering its longstanding role as the main BCP for trade with and through China, Zamiin Uud’s role in processing imports and exports is rather small. On the import side this reflects the predominance of rail imports vis-à-vis road, with only the latter being cleared in Zamiin Uud. On the export side the numbers are artificially boosted by the fact that copper concentrate exports from Erdenet, that enter the Central Corridor in Salhit, north of Ulaanbaatar, are declared in Zamiin Uud. Zamiin Uud’s distance from the producers of exports leaves it a rather minor role in handling them. The most critical roles of Zamiin Uud processes in Mongolian trade are in:

- Handling transit trade, which is not captured here because Mongolian Customs Authority data does not include transit freight
- Making the rail gauge change as speedy and cost-efficient as possible
- Improving the handling of the road freight, for which Zamiin Uud’s processing role is central

274. The government’s plans for the development of the Zamiin Uud Free Economic Zone could potentially enhance Zamiin Uud’s role in processing imports and exports, if a substantial number of manufacturing enterprises locate factories there. At a time when Chinese exports to the United States face tariffs and other restrictions, some Chinese manufacturers, particularly in more labor-intensive industries, have been looking to shift their manufacturing to other countries where wage rates are lower, to avoid the 'Made in China' label. Zamiin Uud Free Economic Zone could potentially attract this sort of investment and become an enclave for Chinese firms importing inputs and exporting finished goods. This could also lead to opportunities for Mongolian private sector firms in providing services to the zone, especially if the government is able to agree with the Chinese side on local labor and local product requirements for Chinese firms that operate there. This is still highly speculative, but developments in the zone will need to be tracked.

275. For the foreseeable future, this distribution of work among these four nodes is overall clear and reasonable and provides the key points of the investments needed in each under this corridor development strategy. As outlined above in the node-by-node discussions, in each of these ports the competitiveness of Mongolian exports and imports is being undermined by logistical challenges.

276. Inadequate policy and institutional capacities are underpinned by incoherent, inconsistent, and incentive-incompatible policies, along with suboptimal result management. These deficiencies
also encompass shortcomings in project planning, preparation, and financing capabilities within the government and other crucial corridor operators. Ineffective cooperation and coordination across borders further impede efforts towards effective problem solving.

**Figure 17: Problem Tree: Development of Mongolia Portion of the China-Mongolia-Russia Economic Corridor**

![Diagram of problem tree]

277. An objectives tree is commonly developed in conjunction with the problem tree to delineate the desired outcomes and goals of an intervention or solution, ensuring that these solutions are in harmony with the intended objectives. The essential components of an objectives tree encompass the overarching goal or ultimate outcome, intermediate objectives or interim achievements that act as milestones toward attaining the overall goal. These intermediate achievements are reliant on specific activities for their realization. Furthermore, the objectives tree necessitates the inclusion of specific, measurable indicators, facilitating the process of monitoring and evaluation. Crucially, the objectives tree must maintain alignment with the problem tree. The outcomes, interim achievements, and activities outlined in the objectives tree should correspond to the causes and sub-causes identified in the problem tree. This alignment serves to confirm that the objectives effectively address the root causes of the problem at hand. Often the objective tree analysis is accompanied by the risk and assumptions analysis, which is a critical component that involves identifying and assessing the risks and uncertainties associated with achieving the objectives, and which helps in planning for contingencies and mitigation strategies.

278. Figure 18 presents the objectives tree for CMREC development and its implications for Mongolia’s economic advancement. The central objective, the realization of expectations regarding transport efficiency and broader economic benefits from CMREC for Mongolia, is contingent on addressing infrastructure bottlenecks, improving logistics service efficiencies, and fortifying policy and institutional capacity. Successful achievement of these objectives would result in CMREC operating at its maximum capacity, playing a pivotal role in Mongolia’s economic development and
serving as a critical passage for the Euro-Asia Continental Bridge. This realization would unlock opportunities to reshape Mongolia’s economy by leveraging the conducive factors introduced by CMREC and related regional mechanisms. Additionally, the corridor would facilitate Mongolia’s economic diversification, positioning it as a significant hub for economy, innovation, and culture.

279. The outcomes outlined in Figure 18 necessitate support from the following activities. To address infrastructure bottlenecks, the focus should be on improving railway and road infrastructure throughout various segments of the corridor. This includes optimizing gauge change operations and ensuring the construction of high-quality roads with robust axle load capacities. In the pursuit of enhancing logistics service efficiencies, efforts should be channeled towards consolidating and upgrading the scale of logistics services. This entails streamlining procedural and informational aspects related to transport and trade facilitation, and balancing supply chain operations to ensure a seamless flow of traffic.

280. Simultaneously, initiatives aimed at strengthening policy and institutional capacity should aim for the development of coherent, consistent, and incentive-compatible policies, along with effective result management. Furthermore, there should be a concerted push for improved capabilities in project planning, preparation, and financing, fostering collaboration between the government and various stakeholders. The promotion of effective cooperation and coordination across borders is essential to facilitate problem-solving initiatives.

**Figure 18: Objective Tree: Development of Mongolia Portion of the China-Mongolia-Russia Economic Corridor**
6.5 Potential Dry Ports in Central Corridor – Preliminary Assessment

281. This project undertook a preliminary assessment of the potential benefits of establishing dry ports in the Government of Mongolia’s four designated locations along the Central Corridor: Altanbulag, Ulaanbaatar, Sainshand, and Zamiin Uud. This assessment focused on four primary dry port functions, frequently featured in global models, that could improve trade and logistics efficiency along the Central Corridor: (i) customs processing; (ii) scaled up intermodal freight handling to facilitate movement of exports and imports in Mongolia’s large and low population density territory; (iii) efficient consolidation of exports from different providers in a location as near to the providers as feasible; and (iv) facilitating transit trade for countries in which such trade is a significant portion of total freight entering the country.

282. The key findings of the assessment are as follows:

- Altanbulag is a BCP for road traffic only and has little local economic activity. The Altanbulag Free Trade Zone has not led to the growth of local manufacturing since its creation in 2002 and launch of operations in 2014. Altanbulag is not linked directly or indirectly to any maritime port in another country. For these reasons our assessment is that the first priority in the development of the Altanbulag BCP is improving both its hardware and software to enhance the efficiency of standard border trade functions, including customs, SPS measures, border control, and so forth. Designation as a dry port is certainly possible, but it is not clear that it offers any particular benefits at this time. The KOTRA feasibility study\(^{67}\) for an Altanbulag Transport and Logistics Center offers many useful guidelines for possible investments and system enhancements to strengthen Altanbulag’s role in foreign trade in the growing Mongolian economy.

- Sainshand’s role in Mongolian trade is evolving due to the rapid development of direct rail links from the large mines of southern Mongolia to China. Most importantly, the new rail lines from Tavantolgoi to Zuunbayan and from Zuunbayan to Hangi BCP will sharply reduce the need to ship mineral products from the southern region out of the country through Sainshand and the Central Corridor, as was previously done. Zinc concentrate exports, which in 2022 had a volume of 79.6 thousand metric tons, continue to be loaded onto the central rail line in Sainshand. The Sainshand Industrial Complex, for which ambitious plans were prepared in the early 2010’s, never got off the ground, and seems to have been dropped\(^{68}\). A recent assessment of the existing rail and freight handling infrastructure at

\(^{67}\) KOTRA. 2023, *op. cit.*

Sainshand concluded that “Sainshand Port railway station and basic infrastructure are old and worn due to low utilization.” The new oil refinery that is being constructed outside Sainshand is expected to provide a boost to the local economy, but at present there is no plan to export any of its products. For all these reasons, the establishment of a dry port at Sainshand is a low priority at this time.

- Ulaanbaatar, because it is home to half of Mongolia’s population and is linked by road and rail to the other major urban centers of Darkhan and Erdenet, already serves as the primary site for customs clearance for Mongolian imports, including those that come along the rail corridor from China in the south and Russia in the north. The majority of non-mineral exports are shipped from Ulaanbaatar as well, because of the central role of the city in the national manufacturing economy, and because of the transport links to northern producers of main non-mineral exports, including animal products such as cashmere and meat. Ulaanbaatar has rail, road, and air links to export producers and destinations and to import sources. As described earlier in this paper, there is an urgent need for the consolidation of the many small privately owned freight terminals and improvement of efficiency in trade logistics in Ulaanbaatar. For all these reasons there is a strong case for the establishment of a dry port in Ulaanbaatar, in principle. Our main caveat is that such a step will only achieve the hoped for results if it is part of a package of actions, including: construction of the Bogdkhan Railway Bypass for transit and other freight with origin and destination elsewhere, reaching legal and financial agreements with the logistics operators who currently own their own separate terminals, agreement on and implementation of development plans for the Khushigt Valley and Zuun Muud regions, and progress on an overall Ulaanbaatar urban development agenda that rationalizes the location of key facilities, reduces congestion, and increases transport and logistical efficiency. Direct information exchange between Ulaanbaatar and Tianjin Port in China is also essential for efficient dry port operations in customs clearance and freight consolidation/unbundling.

- Compared to Ulaanbaatar, Zamiin Uud has a narrower, but still strong, case for a dry port. Zamiin Uud primarily serves as a classic border port, with relatively little local economic activity and virtually all freight that passes through the port originates in or is destined for locations further inland. At present, customs clearance only takes place for road traffic; almost all rail freight undergoes clearance in Ulaanbaatar. Road freight customs processing can and should be streamlined, with the improvement of systems and information exchange with Chinese authorities in Erenhot and Tianjin. More importantly, Zamiin Uud has two critical areas where logistical improvement is needed: the processing of transit trade with minimal disruption of other inbound traffic and the change in railway gauge, which at present is still causing undesirable delays. Along with the expansion and improvement of existing facilities in the Zamiin Uud Regional Logistical Center to handle the expected increase in traffic in the coming years, which would be needed whether or not a dry port is created, these two critical

---

areas should be the focus of dry port related investment. Our caveat for Zamiin Uud dry port establishment is that while it is in Mongolia’s interest to handle road freight inspections, clearance, and unloading/transfer in Zamiin Uud, rather than on the Chinese side of the border, there is a strong need to coordinate plans closely with the Chinese side.

6.6 Pre-feasibility Study of a Dry Port at Zamiin Uud

283. As noted previously, from a legal viewpoint, there is no particular requirement for Zamiin Uud to become a dry port. There are a number of actions that are desirable and these are included in the strategy outlined in subsection 6.2 of this chapter. These actions should generate significant time savings for port users and are, thus, likely to be economically justified, even if not attractive financially.

284. Facilities at the road border crossing are new and new equipment and facilities have already been provided. However, there are notable omissions within the Zamiin Uud Regional Logistics Center’s infrastructure, such as the absence of customs bonded warehouses, customs and inspection offices, specialized X-ray equipment for customs inspections, food and rest facilities, container and refrigerator repair workshops, and electronic information technology systems for locating containers or other cargo transitioning from seaports to the port.

285. Based on the above, a preliminary estimate of needs is presented in Table 27, with the most expensive item being the X-ray scanner (the price of which could be higher, depending on the government’s choice).

Table 27: Preliminary Estimate of Investment Needed at Zamiin Uud to Make it an Efficient Dry Port

<table>
<thead>
<tr>
<th>Buildings and Equipment</th>
<th>Unit Cost (in US$)</th>
<th>Units</th>
<th>Total Cost (in US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated checkpoints</td>
<td>100,000</td>
<td>4</td>
<td>400,000</td>
</tr>
<tr>
<td>Pond and firefighting equipment.</td>
<td>200,000</td>
<td>1</td>
<td>200,000</td>
</tr>
<tr>
<td>Customs administration building</td>
<td>1,000,000</td>
<td>1</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Multi-agency services building (one-stop-shop)</td>
<td>1,500,000</td>
<td>1</td>
<td>1,500,000</td>
</tr>
<tr>
<td>Customs testing laboratory</td>
<td>100,000</td>
<td>1</td>
<td>100,000</td>
</tr>
<tr>
<td>Transshipment dock</td>
<td>1,000,000</td>
<td>2</td>
<td>2,000,000</td>
</tr>
<tr>
<td>Mongolian truck parking</td>
<td>600,000</td>
<td>1</td>
<td>600,000</td>
</tr>
<tr>
<td>Chinese truck parking</td>
<td>600,000</td>
<td>1</td>
<td>600,000</td>
</tr>
<tr>
<td>Customs bonded warehouse</td>
<td>200,000</td>
<td>1</td>
<td>200,000</td>
</tr>
<tr>
<td>Commercial warehouses</td>
<td>200,000</td>
<td>Private</td>
<td></td>
</tr>
<tr>
<td>X-ray scanning facility</td>
<td>4,000,000</td>
<td>1</td>
<td>4,000,000</td>
</tr>
<tr>
<td>Seizures warehouse</td>
<td>200,000</td>
<td>1</td>
<td>200,000</td>
</tr>
<tr>
<td>Description</td>
<td>Cost (M)</td>
<td>Units</td>
<td>Total (M)</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------</td>
<td>---------</td>
<td>-------</td>
<td>-----------</td>
</tr>
<tr>
<td>Customs building (with passenger handling facilities)</td>
<td>250,000</td>
<td>1</td>
<td>250,000</td>
</tr>
<tr>
<td>Staff accommodation</td>
<td>1,800,000</td>
<td>1</td>
<td>1,800,000</td>
</tr>
<tr>
<td>Police barracks building</td>
<td>500,000</td>
<td>1</td>
<td>500,000</td>
</tr>
<tr>
<td>100% physical truck examination facility</td>
<td>800,000</td>
<td>1</td>
<td>800,000</td>
</tr>
<tr>
<td>Drivers restroom, canteen</td>
<td>200,000</td>
<td>2</td>
<td>400,000</td>
</tr>
<tr>
<td>Waste management facility</td>
<td>100,000</td>
<td>1</td>
<td>100,000</td>
</tr>
<tr>
<td>Powerhouse</td>
<td>50,000</td>
<td>1</td>
<td>50,000</td>
</tr>
<tr>
<td>Lighting, landscaping, rainwater catchment, trees</td>
<td>200,000</td>
<td>1</td>
<td>200,000</td>
</tr>
<tr>
<td>ICT room and equipment</td>
<td>100,000</td>
<td>1</td>
<td>100,000</td>
</tr>
<tr>
<td>Equipment for inspection/detection</td>
<td>200,000</td>
<td>1</td>
<td>200,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15,200,000</strong></td>
<td><strong>1</strong></td>
<td><strong>15,200,000</strong></td>
</tr>
</tbody>
</table>

286. On January 10, 2024, the Mongolian Government adopted Resolution 11, which stated as follows:

> According to the 2nd article of Dry port intergovernmental agreement, and 1.4 of the New recovery policy, the Government of Mongolia decides following:

1. To establish international standard dry port in Zamiin Uud based on the “Zamiin Uud Soum’s Regional Logistic Center”
   
   1.1. To assign S. Byambatsogt, Minister of Roads and Transport Development of Mongolia to prepare and finish developing the feasibility study of the dry port within the second quarter of the year 2024 (before June election).
   
   1.2. To assign Minister of Economy and Development, Ch. Khurelbaatar to resolve issues related to the financing of the feasibility study development.

2. To authorize Minister of Roads and Transport S. Byambatsogt, B. Batsetseg, Minister of Foreign Affairs, Ch. Khurelbaatar, Minister of Economy and Development to negotiate and conduct agreement with the local, foreign entities interested in investing and jointly use the dry port.

3. To authorize Minister of Roads and Transport S. Byambatsogt to conduct following tasks:
   
   3.1. To provide integrated management on the dry port activities.
   
   3.2. To get a LOCODE on Zamiin Uud dry port.

287. It is apparent from Resolution 11, that the government feasibility study is primarily related to the provision of facilities at the Regional Logistics Centre in Zamiin Uud, rather than for its designation as a Dry Port per se. Although Zamiin Uud and other locations have been declared as potential dry ports, a feasibility study needs to be conducted to determine whether or not it is technically and financially feasible to establish dry port facilities in that location. So, although there is no legal requirements, a feasibility study is required.

288. Establishment of a multimodal logistics center served by both Mongolian and Chinese railways and enabling consolidation from truck to rail in either direction, as well as ancillary activities
such as container stuffing, de-stuffing and storage, and warehousing, etc., is a concept worth exploring. It would actively support the corridor strategy outlined in this paper.

289. While there may be a case for expanding the role of ZU as a logistics hub, the potential for the establishment of a free trade area is less apparent. Free trade areas depend for their success on there being a tariff differential that can be exploited to the advantage of those industries located within the zone. If the tariff differential is small, locating the industries within the logistics hub or locating a logistic hub near to existing industries may enable much of the benefit of a free trade area to be realized without the complication of establishing and maintaining a separate secure area at the border. Previous attempts at establishing free trade areas at the borders, such as the Altanbulag Free Trade Zone, have not been particularly successful.

290. A logistics hub/dry port south of Ulaanbaatar has been discussed for a long time. A pre-feasibility study was undertaken for a new intermodal freight terminal south of Ulaanbaatar in 2006. Options for development of a facility are shown in Table 18 above. The pre-feasibility study needs to be updated, the benefits of this are expected to have increased significantly. The Bogdkhan Railway Bypass project, although quite advanced in preparation with technical support including a detailed feasibility study financed by the ADB, is currently on hold, pending agreement on new construction contracts to replace the cancelled ones. Its completion will change the pattern of freight shipment and handling in the Ulaanbaatar area, as all transit and other freight not originating in or destined for Ulaanbaatar will bypass the city, reducing congestion and increasing the speed of all freight. This will generate both economic and environmental benefits.

291. In addition, JICA is supporting a detailed development plan for the New Zuunmod and Khushig Valley area south of Ulaanbaatar, in the vicinity of the new Chingis Khaan International Airport, which will also include freight handling and logistical facilities. An integrated plan is now needed for the creation of one or several modern intermodal terminals to serve the Ulaanbaatar market and the other major northern center, Darkhan.

292. Improvement of the performance of the Central Rail Corridor can also be seen as an alternative to investment at ZU. The corridor strategy includes undertaking a feasibility study for the purchase of gauge-change bogies for international services between Tianjin and Ulaanbaatar. These are believed to be about 30% more expensive to purchase and maintain than conventional wagons. The benefits would include cost savings each time the wagons cross the border and a reduction in the total trip time. The purchase of new wagons would release existing wagons for use elsewhere. As these are in short supply, only the incremental costs of the wagons may need to be taken into account.
6.7 Proposed Corridor Strategy

Issues Identified

293. The Mongolian economy is well positioned to experience rapid growth in exports and in GDP. Exports are dominated by mining products, the vast majority of which go to China. New rail routes have been built, resulting in rail’s share of this market increasing dramatically. The resulting increase in per capita GDP, together with the need for inputs and equipment for a diversifying export sector, are expected to significantly increase the quantity of imports. This will put considerable strain on the Central Railway Corridor, which currently carries 80% of all imports and virtually all transit traffic. Even at current traffic levels there are numerous logistical challenges at every stage of the import process. Imports experience delays and congestion at Tianjin Port, Zamiin Uud, and Ulaanbaatar, including delays due to a shortage of wagons and a reduction in the number of train services per week between Tianjin and Erenhot. A major contributor to these delays is the need to change rail gauge at the border at Zamiin Uud northbound and Erenhot southbound.

294. Improving border operations is important for the efficient operation of the corridor. Mongolia is a small and open economy and has one of the most liberal trade regimes among transition economies. It has been a World Trade Organization member since 1997 and is a signatory of the Trade Facilitation Agreement. Close to 80% of trade facilitating measures prescribed by the TFA were implemented as of 2022. Nevertheless, a recent World Bank InfraSAP\(^7\) report highlighted several challenges in diversifying Mongolian exports, and that inefficiencies in cross-border trade at Zamiin Uud are one obstacle to such diversification. Improvements at Zamiin Uud are required to improve risk management and reduce the physical inspection ratio, to implement a one-stop multi-agency inspection/single window, and to expand the application of cross-border cooperation initiatives, such as joint uniform cargo manifest and pre-arrival declaration.

295. Approximately 50% of cross-border freight arrives from China by truck and is then sent to its final destination in Mongolia via rail. Therefore, creating efficient road-to-rail transshipments is crucial for smooth logistics operations.

296. Railways play a dominant role in Mongolian imports and exports, as well as in transit traffic between China and Russia. Ulaanbaatar Railway, the Mongolian-Russian joint venture established in 1949, owns and operates the Central Railway Corridor, which carries the bulk of the import and transit traffic. The capacity of Mongolia’s rail system is insufficient to meet the ever-growing demand, due to poor design and the condition and capacity of the infrastructure, as well as the age of the rolling stock. This has become a central obstacle to the expansion of Mongolia’s foreign trade. Since passage of the Law on Railway Transportation in 2007, the length of railway in Mongolia has increased significantly, with three additional rail operators (two state owned). The new lines are focused on the export of minerals to China. Options for increasing the corridor capacity and

\(^7\) World Bank. 2020, op. cit.
reducing delays due to the change in rail gauge between Mongolia are critical for Mongolia’s continuing development. Policy and tariff reform are also required.

297. The designation of one or more locations on the logistics chain as dry ports has been proposed as a means of improving the flow of Mongolian imports and exports. Mongolia ratified the Intergovernmental Agreement on Dry Ports of the United Nations Development Cooperation Treaty Organization (IADP) in 2016 and declared Altanbulag, Ulaanbaatar, Sainshand, and Zamiin Uud as dry ports. The definition of a dry port in the treaty does not set dry ports apart from other border crossing points. The issues and procedures arising from membership of WTO and ratification of the TFA apply equally to dry ports and other border crossing points. Designation of a location as a dry port, thus, does not require any additional or different legislation, regulations, facilities, or services, but may be of assistance in negotiating arrangements with foreign dry ports and, in particular, assisting in the flow of information that will enable the port to operate efficiently.

298. Internationally the private sector is frequently involved in the operation and management of dry ports. The Mongolian PPP Law clearly covers dry port development and operation. The forms of PPP allowed under the PPP Law are very broad. However, much remains to be done for Mongolia to be able to attract the significant private investment that it needs. Recent scandals caused by the opacity of contracts granted by ETT for the construction of new rail lines highlight the importance of transparency and open competition in soliciting and awarding PPP contracts, on which there is considerable relevant international experience.

**Gender Issues**

299. There are no significant gender issues with respect to dry ports or the corridor strategy. Increasing the role of the private sector could arguably provide more opportunities for women to participate. If that participation was through contracts, it would be possible to specify gender balance as a condition of such contracts.

300. The International Institute for Sustainable Development (IISD) (2023) global report on *Women and the Mine of the Future*, estimates that 85% of all employees in large-scale mining are men, and concludes that “Large-scale mining is indeed one of the most masculinized economic sectors.”\(^{71}\) Steps recommended by this report to facilitate imports that will support non-mineral sectors and boost non-mineral exports in order to diversify Mongolia’s economy and reduce dependency on large-scale mining should have a positive gender empowerment impact.

301. Pedestrians crossing international borders tend to be more women than men. Hence, improvements to the operation of the border that facilitate the passage of pedestrians and public transport vehicles will have a positive impact for women and children.

---

Corridor Strategy

302. With corridor capacity and congested facilities an issue, it is tempting to consider options for the corridor that would prioritize Mongolian imports and exports over the use of the corridor for transit traffic. This would be a mistake. We propose that the strategy recognizes the importance of transit trade on the Central Corridor for contributing to the cost of providing and maintaining rail services on the line. This corridor is in competition with other routes for transit business, so effort needs to be made to enhance the route’s attractiveness. This should include minimizing delays involved in changing gauge and transferring freight at Zamiin Uud and the construction of the Ulaanbaatar bypass line.

303. While a gauge change is unavoidable for rail traffic between China and Russia, there are options for addressing this issue for rail traffic between Mongolia and China. These include adding a standard gauge track in the rail corridor between Zamiin Uud and Ulaanbaatar (a dual gauge track is not possible due to the closeness of the rail gauges). Another option that has been proposed is a heavy haul road corridor between Erenhot and Sainshand. The proposed strategy is to investigate and, if feasible, implement auto-gauge change (Talgo) bogie wagons for container shuttle services between the port of Tianjin and Ulaanbaatar. These bogies can only be used with axle weights of under 17 tons, but are suitable for wagons carrying containers, because the maximum permitted weight for containers is within the system limits. We envisage unit container trains operating between Tianjin and Ulaanbaatar by-passing completely the gauge-change facilities at Zamiin Uud. This would enable the travel time between Tianjin and Ulaanbaatar to be substantially reduced. It would also free up capacity for transit trains and conventional rail wagon traffic.

304. Investing in a new wagon fleet will be a large financial commitment. These wagons would operate on both Chinese and Mongolian track. This raises the question as to who should purchase the wagons. One option would be the American railroad model, in which private individuals and companies invest in wagons, which are then hired to the railway companies. The proposed strategy is to investigate and, if feasible, set up a private company to own and lease the container wagons to the railway operator using the US wagon hire model or similar.

305. The need to invest in a new wagon fleet may precipitate the need to address governance issues for the central railway, as the current 50:50 shareholding is not always working in Mongolia’s interests and is believed to be a contributing factor to the lack of investment in infrastructure and rolling stock. There is a need to plan and program the gradual upgrade of the Central Railway Corridor to enable the railway to handle the anticipated increase in demand. This should commence with the section between Zamiin Uud and Sainshand. In the short term, capacity can be increased by adding or extending crossing loops. However, to cater for the expected traffic, a second track will be required. There are two options for this: double track in Russian gauge or dual track with the second track in standard gauge.
306. Private investment is also needed to construct a new intermodal terminal at Ulaanbaatar. This would be the terminal point for the unit trains from Tianjin, as well as a receiving point for other rail and road services. Private sector logistics companies would be able to construct offices. Warehouses and other facilities at the site. It would be the main customs inspection point for imports by rail. International practice usually sees such terminals as public-private ventures with both rail and road connectivity. Based on the international experience, the involvement of Municipality of Ulaanbaatar in any plan to expand/improve UB freight handling facilities is recommended.

307. This project undertook a preliminary assessment of the potential benefits of establishing dry ports in the Government of Mongolia’s four designated locations along the Central Corridor: Altanbulag, Ulaanbaatar, Sainshand and Zamiin Uud. The definition of ‘dry port’ is fluid: dry ports perform a diverse range of functions around the world, some situated within a relatively short distance of a maritime port in their own countries and aimed primarily at reducing congestion in maritime ports, some serving landlocked countries as the key link to maritime ports in other countries. The proposed strategy is to designate a regional logistics center at Zamiin Uud as a dry port for road based imports and exports. Zamiin Uud would continue to function as an interchange station for conventional rail traffic. The dry port designation should be implemented at the same time as initiatives to introduce modern border management processes including electronic information transfer and management and a single window. In the future, consideration should be given to designating Altanbulag as a dry port for road traffic to and from Russia and Europe.

308. Facilities at the Zamiin Uud Regional Logistics Center are inadequate. There is a need for customs bonded warehouses, dedicated port authorities, customs and inspection offices, specialized X-ray equipment, food and rest facilities, container and refrigerator repair workshops, and electronic information technology systems for locating containers or other cargo transitioning from the seaports. The X-ray equipment is likely to be the largest cost item.

309. Internationally, the private sector is frequently involved in the operation and management of dry ports. The Mongolian PPP Law clearly covers dry port development and operation. The forms of PPP allowed under the new PPP Law are very broad. Mongolia has had little success to date in genuine PPP in infrastructure, with one high profile failure. The proposed Ulaanbaatar terminal should be more in the form of a cooperative venture with investment risk spread over a number of private and public agencies. The involvement of external advisors is recommended to ensure transparency and fair competition in establishing such a venture.

310. A roadmap for developing the Central Corridor is set out below.

---

Roadmap for Developing the Central Corridor

The roadmap for developing the Central Corridor considers two timeframes: short to medium term (S/MT), and medium to long term (M/LT).

Policy Reforms

Recommendation 1 (S/MT): Strengthen the railway’s operational and regulatory framework. This recommendation includes guaranteeing fair competition, in particular between state-owned enterprises and the private actors, as well as open access. Tariffs must also be sustainable for operators and better reflect actual costs. Several commodities, as well as passenger transport, are still being subsidized. Tariffs were updated in late 2022, but a more thorough review is needed. In parallel, measures should be adopted to improve UBTZ’s financial and operational performance (such as better planned financial contributions and linking subsidies to key performance indicators).

Recommendation 2 (S/MT): Operationalize the PPP Law through regulatory reforms and address constraints on PSP. Reform in this respect goes beyond the development of the Central Corridor. The new PPP Law should be made implementable through the adoption of the necessary regulations. This requires capacity building within public institutions to identify, assess, structure, procure, and implement PPPs. The impact of rules restricting foreign investors’ access to land over the financing of infrastructure projects should also be measured. Those crosscutting reforms call for close cooperation between the Ministry of Road Transport Development, Ministry of Economic Development, and other key stakeholders.

Node Improvements

Recommendation 3 (S/MT): Improve border processes, internally (within Mongolia) and externally (with China and Russia). This should include developing a single window to coordinate all Mongolia agencies involved in the clearance of goods and improving communication and digitalization with Russia and China Customs for advance trade information.

Recommendation 4 (S/MT and M/LT): Develop multimodal transport and logistics facilities to address physical constraints faced by ZU and UB and involve the private sector. Investment is needed in both locations. In the short to medium term, ZU needs better equipment and facilities (cranes, transshipment and storage capacity, creation of a special economic zone and dry port authority to coordinate internal logistics). In UB, a multitude of privately-owned terminals operate within the city center, which is impractical, uneconomical, and un-ecological. Discussions on creating a new logistics facility outside the city in the medium to long term should be pursued, keeping in mind that it should minimize the additional railway track required. In both cases, the Government of Mongolia should seek to attract private investment – and take advantage of best practices drawn from successful international precedents in railway track expansion.

Recommendation 5 (S/MT): Double the track at certain nodes. A double line may not be a realistic option in the short term. However, doubling of the track on selected segments of the line would unlock additional capacity. This would include the creation of crossing loops to enable the
crossing of trains at selected points and could include doubling the ZU – Sainshand section. Another critical section is the finalization of the UB bypass or a similar endeavor.

**Recommendation 6 (M/LT): Consider doubling the track at least between ZU and UB.** For this, it is critical to involve the private sector in investments and operations. As mineral traffic on the Central Corridor is relatively marginal, mining revenue is unlikely to represent a reliable – or sufficient – source of financing. It also raises the issue of the investment climate for large infrastructure projects – and for PPPs, as the investments needed are likely to be massive. Hence, the importance of the reform component. The main question technically is the gauge of the second track: using the Mongolia gauge or adopting the Chinese standard gauge? Options with respect to doubling the track will need to undergo a detailed feasibility analysis, from a technical, financial, and legal standpoint. A detailed feasibility analysis will be necessary, including to assess the private sector’s readiness to participate.

**Rolling Stock**

**Recommendation 7 (S/MT): Unlock short-term efficiency gains through better management and planning.** Improving the exchange of information through fleet management systems (existing or to be developed) would enable rationalizing the use and availability of wagons and locomotives. Another short- to medium-term solution to address delays due to the gauge change would be to purchase multi-gauge wagons for block trains between Tianjin and UB. Organizing block trains directly from Tianjin to UB would also maximize the use of existing assets, but would require coordination with China Railways. Last, establishing a private company to own and lease the container wagons, based on the US wagon hire model or similar, could be explored.

**Railway Operations**

**Recommendation 8: Consider options to improve the performance of railway operations,** including concessions for the operations, based on international best practices, such as operations and maintenance by the private sector. This also includes such issues as tariff setting and guaranteeing effective open access and fair competition. Specific initiatives with PSP could also be explored (e.g., for rolling stock, setting-up of private company to own and lease the container wagons to the railway operator). In the long run, structural reforms pertaining to the ownership and operation of the line could be explored (e.g., concessions for the operations).

**Recommendation 9: Explore synergies between the development of new value chains** needed for the purpose of economic diversification (as per the recommendation of the InfraSAP report of 2020, which identified agriculture and meat among the potential sectors for diversification, even though quite marginal in the short term), and the development of the railway along the corridor.
References


CAREC. 2021. Railway Sector Assessment for Mongolia. Ulaanbaatar: CAREC.


Huawu, He. 2022. Thoughts on Changing the Transshipment of Bulk Train into a Through Transport at Railway Border Station. Chinese Academy of Engineering.


