



RAILWAY SECTOR ASSESSMENT FOR KYRGYZ REPUBLIC

MARCH 2021

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Note:

In this publication, “\$” refers to United States dollars.

Cover design by Edith Creus.

Photo credits on the cover, from left to right: Kyrgyz Temir Jolu (Kyrgyz Railways) tanker train. Kyrgyz Temir Jolu (Kyrgyz Railways) intermodal terminal near Balykchy. Kyrgyz Temir Jolu (Kyrgyz Railways) passenger train (photo by TA consultants).

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ABBREVIATIONS

ADB	-	Asian Development Bank
CAREC	-	Central Asia Regional Economic Cooperation
EBRD	-	European Bank for Reconstruction and Development
EEU	-	Eurasian Economic Union
FSU	-	former Soviet Union
ICT	-	information and communication technology
ITF	-	International Transport Forum
KTJ	-	Kyrgyz Temir Jolu (Kyrgyz Railways)
KTZ	-	Kazakhstan Temir Zholy (Kazakh Railways)
MC	-	Member Country
MTR	-	Ministry of Transport and Roads
PRC	-	People's Republic of China
SOE	-	state-owned enterprise
TA	-	technical assistance
TITR	-	Trans-Caspian International Transport Route
UIC	-	International Union of Railways
UTY	-	O'zbekiston Temir Yo'llari (Uzbekistan Railways)

CURRENCY EQUIVALENTS

(as of 22 May 2020)

Currency unit – som (som)

Som1.00 = \$0.014

\$1.00 = Som73.65

INTRODUCTION AND BACKGROUND

A. Introduction

1. In 2017, the eleven Member Countries (MCs) of the Central Asia Regional Economic Cooperation (CAREC) program approved the CAREC Railway Strategy with a view to expanding the role of railway transport in the region.¹ The strategy aims to accelerate the identification, preparation and financing of feasible railway investment projects and, at the same time, advance the commercialization and reform of railways to improve their performance (ADB 2017).

2. In 2018, the Asian Development Bank (ADB) approved a \$2 million regional technical assistance (TA) project for CAREC Railway Sector Development to assist MCs in implementation of the CAREC Railway Strategy (ADB 2018).² The TA is intended to accelerate the sound development of the railway sector in CAREC countries by providing support for railway transport market research, project identification and preparation, knowledge sharing and preparation of practical actions for commercialization and reform in MCs.

3. During the first part of TA implementation, the TA consultants conducted assessments of the railway sector in each MC. The purpose of these assessments was to examine the setting,

characteristics, performance and prospects of railways, and identify promising investment opportunities, and commercialization and reform actions, that could be considered for support through the TA. This short report summarizes the findings of the railway sector assessment for Kyrgyz Republic, based on a country visit on 17–22 June 2019.

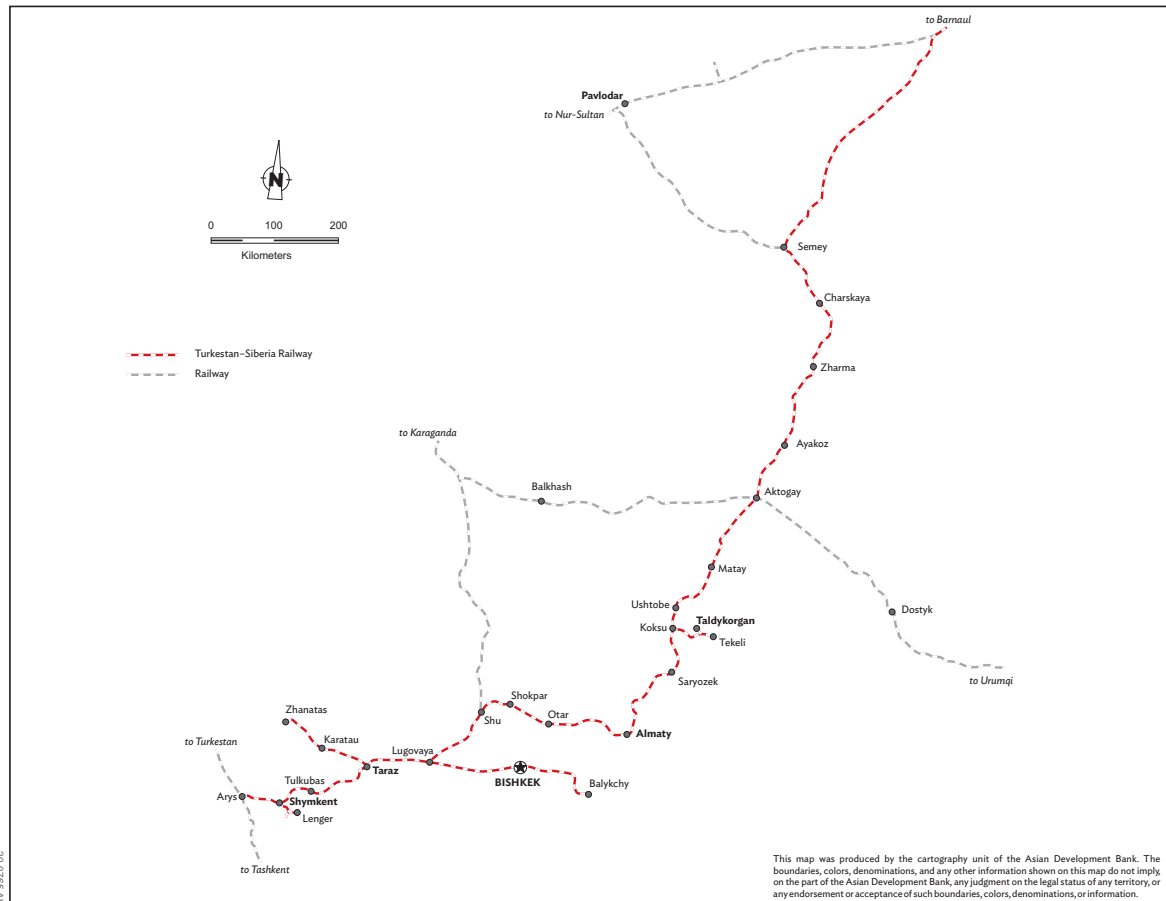
B. The railway network

4. Kyrgyz Republic is a landlocked, mountainous, lower-middle income country with a population of 6.3 million in 2018 (ADB 2019). It has borders with Kazakhstan, Uzbekistan, Tajikistan and the People's Republic of China (PRC). A mountain range separates the northern and southern parts of the country and bifurcates the economy.

5. The Kyrgyz railway network was developed in the 1920s and 1930s as an integral part of the railway network of the former Soviet Union (FSU). It has two parts, both consisting of single, unelectrified broad gauge tracks (1,520 mm). In the north, the 323 km section between Lugovaya (Kazakhstan), Kara-Balta, Bishkek and Balykchy was the most southerly branch line of the FSU's Turkestan–Siberia Railway that connected Central Asia with Siberia via present-day Kazakhstan. It was

¹ The eleven CAREC member countries are Afghanistan, Azerbaijan, People's Republic of China (specifically the Xinjiang Uygur Autonomous Region and the Inner Mongolia Autonomous Region), Georgia, Kazakhstan, Kyrgyz Republic, Mongolia, Pakistan, Tajikistan, Turkmenistan and Uzbekistan.

² The TA is cofinanced by the People's Republic of China (PRC) Poverty Reduction and Regional Cooperation Fund and the United Kingdom Fund for Asia Regional Trade and Connectivity (under the Regional Cooperation and Integration Financing Partnership Facility).

Figure 1.1: Turkestan-Siberia Railway with Lugovaya-Balykchy branch, 1931

Note: Turkestan-Siberia Railway is shown in red.

Source: ADB, TA consultants.

administered from Almaty (Kazakhstan). This is shown in Figure 1.1. In the south, 101 km of track was provided for four short spurs at Osh, Jalal-Abad, Kyzyl-Kiya and Tash-Komur. These fed into the FSU's Trans-Aral Railway from Tashkent to Orenburg (Russia) that connected Central Asia with European Russia, and also met the Turkestan-Siberia Railway at Arys in Kazakhstan. The spurs were administered from Tashkent (Uzbekistan).³

6. When the FSU collapsed in 1991, Kyrgyz Republic inherited the railway together with 2,500 freight cars, 450 passenger cars and 50 locomotives. A new state-owned railway organization, Kyrgyz Temir Jolu (KTJ), was formed to take over railway operation and management from the Soviet railway centers in Almaty and Tashkent.⁴ Trains now had to cross international borders to connect with the main lines in

³ A narrow gauge line from Isfana to Tajikistan was previously used for coal transportation under the Ministry of Mines but ceased operations in the early 1990s.

⁴ At several border locations, short sections of Kyrgyz railway are operated by the railway of the neighboring country. For example, in the north, a 17 km double-track section in Talas region is run by the Kazakh railway, Kazakhstan Temir Zholy. In the south, a 1 km section near Uch-Kurgan is run by the Uzbek railway, O'zbekiston Temir Yo'llari.

Kazakhstan and Uzbekistan.⁵ Any traffic between the Kyrgyz northern and southern sections now had to transit through the railway networks of Uzbekistan and Kazakhstan.

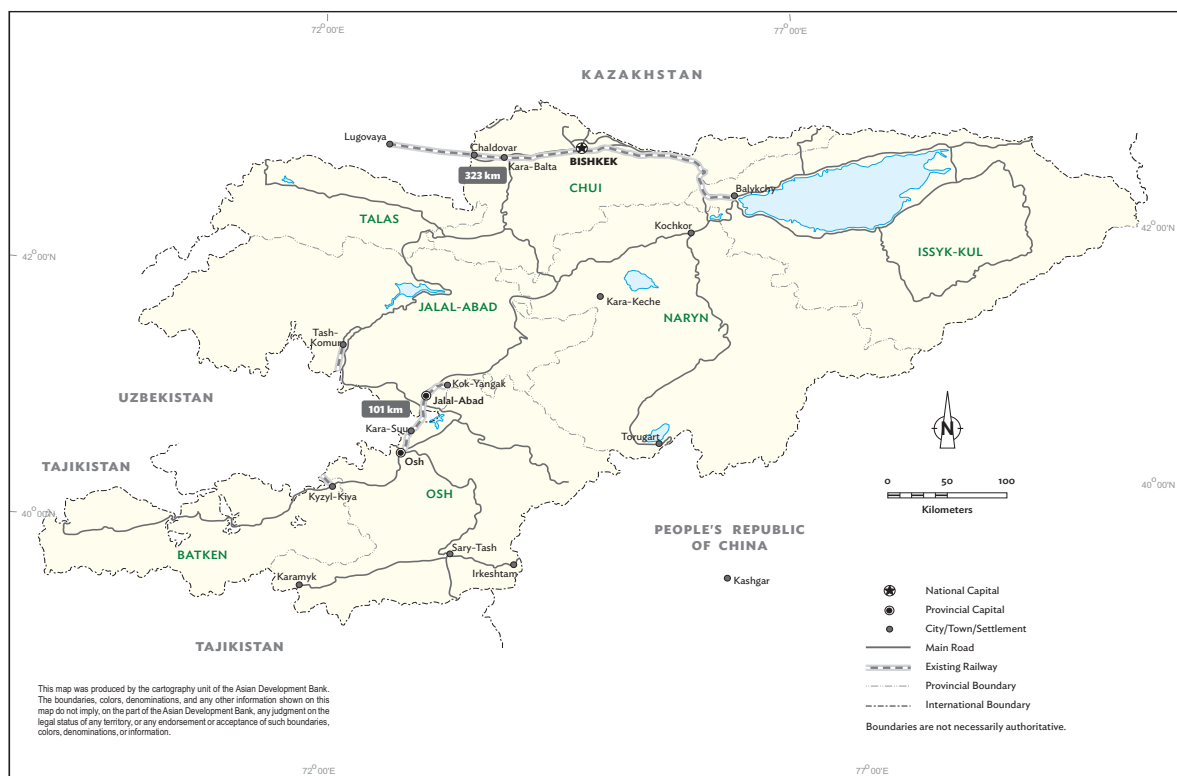
7. While some traffic was retained, traffic levels fell sharply compared with the Soviet era. Many of the centrally planned industries located in Tashkent, Almaty and in Russian Federation cities were unable to survive the transition to a market economy. Kyrgyz producers that supplied inputs to these industries also collapsed. Today, most of the railway sidings to industry premises in Bishkek and Balykchy have fallen into disuse.

8. There have been no significant changes in the railway network since the Soviet era (Figure 1.2).

It remains an unelectrified, single-track railway with passing loops. Manual block signaling is used, except for the section from Lugovoya to Bishkek 1 Station which uses automatic block signaling.

9. The northern section from Lugovoya to Balykchy continues to account for the majority of freight traffic carried by KTJ, and also provides limited passenger services. It has 17 passenger stations, two main stations in Bishkek, and two main freight terminals, including the Alamedin multimodal container terminal in Bishkek. On average, there are 4–5 freight train pairs and one international and four intercity passenger train pairs each day. The southern spur lines carry small quantities of minerals and other freight for onward connections through the Uzbek railway network. On average, these serve a total of 10 freight train pairs per week.

Figure 1.2: Kyrgyz Republic Railway Network, 2019



Source: TA consultants.

⁵ On the southern spur lines, train passage through Uzbekistan has been subject to lengthy customs and border controls, often taking a day or more to clear. Due to a border dispute, the Kyzyl-Kiya spur was closed in 2010 but reopened in 2018.

10. KTJ's station at Lugovoya is located in Kazakhstan. Trains running between Bishkek and Lugovoya complete Kyrgyz border formalities at the border crossing. Wagons and containers are interchanged at Lugovoya Station where Kazakh Railways (KTZ) delivers wagons to KTJ in blocks. After receipt of a block, it typically takes KTJ about three hours to organize a train eastbound.

11. KTJ's existing track needs to be renewed. Consequently, much of the Lugovoya-Bishkek-Balykchy line is subject to speed restrictions of between 25 and 60 km per hour. A key problem is that many of the wooden sleepers are worn out. KTJ has been implementing a track renewal program to replace the old sleepers using reinforced concrete and wooden sleepers. On average it is renewing about 25 km of track annually.⁶ Other issues are that 17% of rails on operating tracks (168 km) have exceeded their tonnage capacity and need to be replaced, and

some bridges are also nearing the end of their lifespan (Guenet 2019).

12. Most of KTJ's rolling stock also needs to be replaced. KTJ estimates that 80% of freight cars and nearly 60% of passenger cars are no longer usable, and all locomotives need to be replaced except for six recently-purchased diesel locomotives. KTJ's existing repair facilities are equipped for maintaining its aged rolling stock but are not sufficient to service the types of modern rolling stock that will be needed in future, especially locomotives.

13. The Alamedin container terminal in Bishkek (Figure 1.3) is a small facility located in a congested urban area. It currently handles just a few short container trains a day. The facility is adequate for current traffic and can accommodate growth for the foreseeable future.

Figure 1.3: Alamedin Multimodal Container Terminal, Bishkek



Source: TA consultants.

⁶ Since 2011, KTJ has laid 326,300 reinforced concrete sleepers on 199.3 km of track (KTJ 2019).

14. The government has long been interested in connecting the northern and southern parts of the railway to form an integrated national network. This would require construction of new rail sections in the central part of the country which is mountainous and sparsely populated, so construction costs would be high.

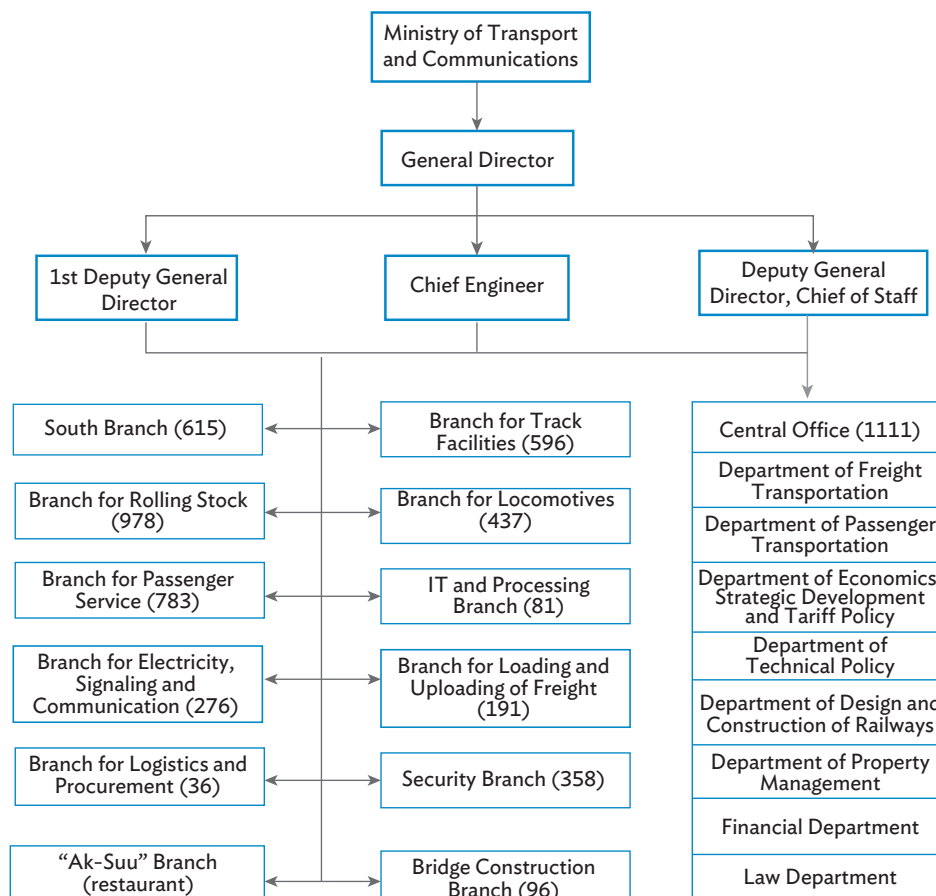
C. Institutional responsibilities for railways

15. The Ministry of Transport and Roads (MTR) is responsible for policy and oversight for railways, roads and other modes of transport. KTJ is responsible for railway operations. It is a vertically integrated

railway that owns and maintains the railway infrastructure and rolling stock, and operates the trains. In 2018, its average employment was 4,817 persons. The administrative structure of KTJ is shown in Figure 1.4.

16. The government expects KTJ to operate on a self-financing basis, without capital or operating subsidies. In common with other state-owned enterprises (SOEs), KTJ is also required to pay government 50% of net profit as a contribution to the state budget. This has contributed to a situation where KTJ lacks the financial resources needed to undertake major investments and instead focuses on small interventions to maintain its aging railway assets in order to ensure continuation of railway services (CTI Engineering 2012).

Figure 1.4: Administrative Structure of Kyrgyz Temir Jolu



Source: CTI Engineering 2012.

17. MTR is responsible for approving tariffs based on the recommendation of KTJ. For the past seven years, the tariff has been unchanged. As a result of joining the Eurasian Economic Union (EEU) in 2015, Kyrgyz Republic has agreed to separate the infrastructure and other elements of its railway freight tariffs to enable other operators to use the railway infrastructure from 2025 onwards.⁷

D. Cross-border and transit traffic routes

18. The potential for railways to carry cross-border freight depends on the country's present and future patterns of trade, the competitiveness of railway compared with other transport modes, and the possibility of introducing new railway transit routes attractive to other countries in the region.

19. Currently, Kyrgyz Republic's main trade partners are the PRC, Russian Federation and Kazakhstan, and Turkey. In 2017, 45% of imports (by value) were from the PRC, 23% from Russian Federation, and 9% from Kazakhstan. Among the leading imports were petroleum, clothing, shoes, and wheat food products. About 37% of exports were gold and precious metals, sold mainly to countries in Europe. The other main exports were metal ores, refined petroleum, dried legumes and vegetables, agricultural goods and assorted manufactured goods. The main market for these exports were Kazakhstan (20% of total exports), Russian Federation (14%), and Turkey (8%) (Observatory for Economic Complexity 2020). Following recent reforms in Uzbekistan, including adoption of policies to encourage trade with neighboring countries, it is likely that Uzbekistan will become a more important a trading partner in future.

20. As discussed in Chapters 2 and 3, KTJ's existing cross-border freight traffic is mainly confined to bulk commodities. If KTJ can improve its commercial orientation and expand the use of rail containerization, it could potentially also attract a larger share of non-bulk imports and exports.

21. Based on the existing patterns of trade the most important cross-border railway routes for Kyrgyz Republic are the Trans-Caspian International Transport route (TITR)⁸ and the Northern Trans-Asian Railways (JSC Samruk-Kazyna 2017) (Figure 1.5). KTJ's northern section meets the TITR at Lugovaya. From there, the TITR offers connections eastwards to the PRC and westwards to Kazakstan, the Caucasus and Europe. One of the advantages of the TITR is that the journey between the PRC border and the Caspian Sea remains within a single country, Kazakhstan. The TITR also connects northwards with the Northern Trans-Asian Railway and the Trans-Siberian Railway for onward transport through Kazakhstan to the Russian Federation, other EEU countries and northern Europe.

22. In future, as Uzbekistan's economy grows and trade expands, subregional links with Uzbekistan are likely to become more important. Currently, railway traffic between KTJ's northern section and Uzbekistan takes the TITR between Lugovaya and Arys (Kazakhstan) where it connects southwards with Tashkent and other parts of Uzbekistan. This route is also used by railway transit traffic between the PRC and Uzbekistan. Traffic from KTJ's southern section proceeds directly into Uzbekistan. As discussed in Chapter 5, there could be potential to build a new railway from Kashgar (PRC) through Kyrgyz Republic to Uzbekistan's Fergana Valley. This would serve transit traffic between the PRC and Uzbekistan, Afghanistan and Iran, and provide a higher quality

⁷ The members of the EEU are Armenia, Belarus, Kazakhstan, Kyrgyz Republic and the Russian Federation.

⁸ The existing members of the TITR comprise Azerbaijan Caspian Shipping, ADY, Aktau Port, Baku Port, GR, Kazakh Railways, Turkish Railways and Ukraine Railways. Associate members include the Polish Broad-Gauge Railway, Batumi Port, Kaskor-Transservice (Kazakhstan), Port Kuryk (Kazakhstan), Anaklia Development Consortium, Lianyungang Port Holdings Group (PRC), Grampet Group (Romania), Astyk Trans (Kazakhstan), Kazakh National Maritime Shipping Company, and Eastcomtrans (Kazakhstan).

Figure 1.5: Regional Rail Links and Ports Serving Cross-border and Transit Traffic

Notes: (1) within the PRC the map covers principal railway trunk routes used for trade between the PRC and CAREC member countries and regional railway links relevant for Inner Mongolia and Xinjiang, the two PRC regions that participate in CAREC; (2) the boundaries, colors, denominations, and any other information shown on this map do not imply, on the part of ADB, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries, colors, denominations, or information.

Source: TA consultants.

rail link between Osh and Jalal Abad in the Kyrgyz Republic and both the PRC and Uzbekistan.

23. Depending on how the Kyrgyz economy and trade develop in future, subregional rail routes to access ocean shipping via Persian Gulf ports in Iran and Pakistan could also become more important in future. Routes through Uzbekistan and Turkmenistan to the Iranian ports of Bandar Abbas and Chabahar Port in Iran already exist or are under development. Afghanistan and Pakistan also have plans to develop rail connections to the ports of Karachi and Gwadar in Pakistan. However, at present many of the rail links through Afghanistan and Pakistan have yet to be built, so it would be many years before such routes could become available.

E. Relevant CAREC corridors

24. The CAREC corridors that are most relevant for railway development in Kyrgyz Republic are Corridors 1 and 2.

25. **CAREC Corridor 1: Europe–East Asia—Subcorridor 102.** This corridor is similar to the TITR from the PRC to Shalkar. The northern Kyrgyz rail section from Lugovoya to Balykchy feeds into the Almaty–Shymkent section of Corridor 1 (Subcorridor 102) that was previously part of the FSU’s Turkestan–Siberia Railway. No gauge change is needed.

Figure 1.6: Sections of CAREC Corridor 1 Relevant for Kyrgyz Republic



Source: CAREC Secretariat.

A good quality highway runs parallel to the northern rail section providing competition from road transport.⁹

26. Substantial numbers of PRC trucks carrying goods destined for markets in Kazakhstan and Russian Federation enter Kyrgyz Republic at Torugart border and proceed north via Kochkor to meet Subcorridor 102 at Balykchy.¹⁰ Some of this traffic would divert from road to rail if a terminal offering efficient road-to-rail transfers was available at Balykchy.

27. **CAREC Corridor 1: Europe–East Asia—Subcorridor 101 and 103.** These subcorridors are similar to the Northern Corridor (Figure 1.6) that links the TITR to northern Kazakhstan and the Russian Federation. No gauge change is needed.

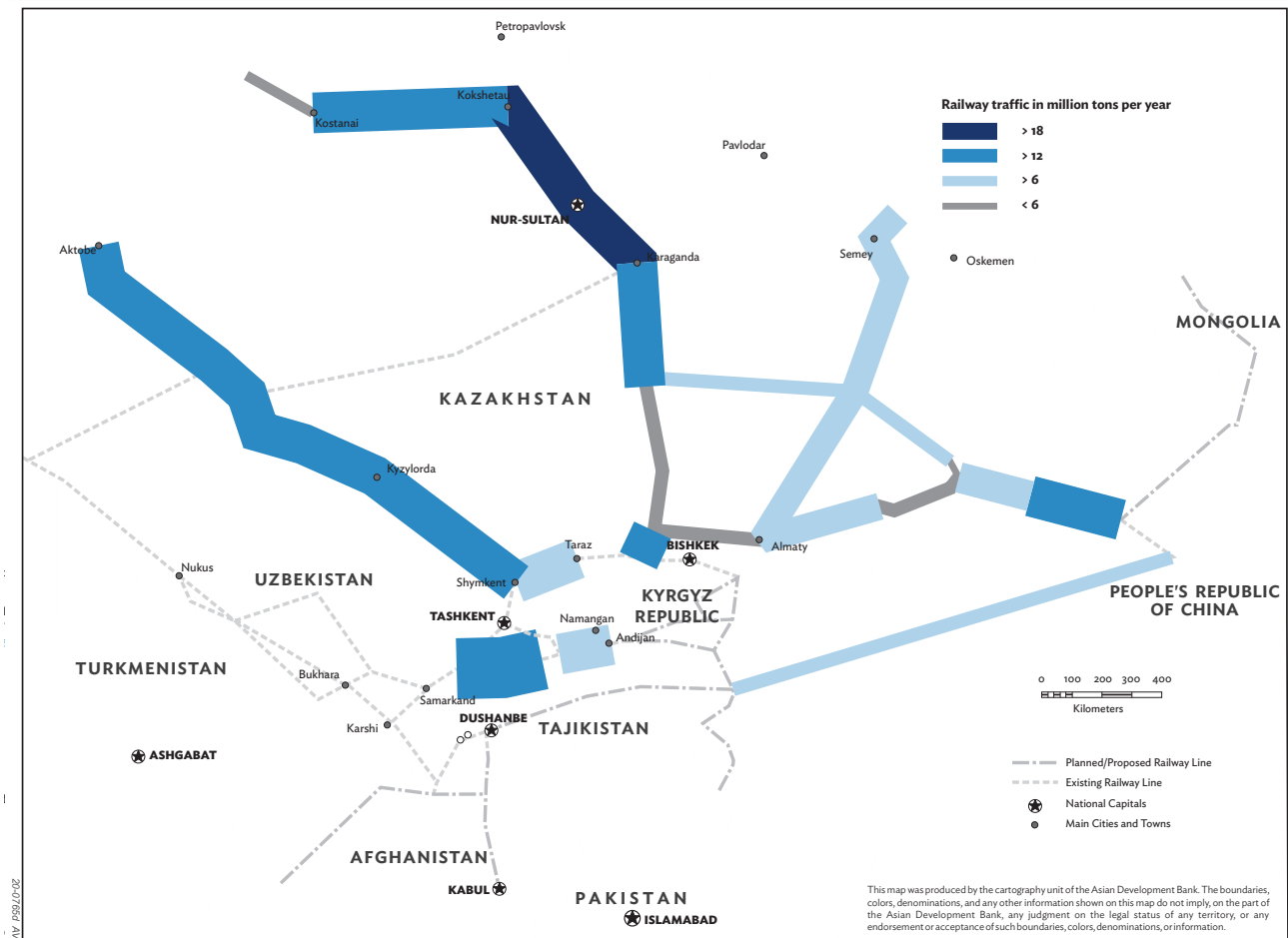
28. CAREC Corridor 1 was a busy freight route during the Soviet era and continues to be important, with capacity to run block train (Figure 1.7). A study by the International Transport Forum (ITF) shows that railway freight volumes on this route are among the highest in Central Asia (ITF 2019).

29. **CAREC Corridor 2: Mediterranean–East Asia—Subcorridor 202 (Figure 1.8).** For east-west traffic, this subcorridor offers a more southerly alternative to the TITR, via Kashgar (PRC), Kyrgyz Republic and Uzbekistan, and then joins the TITR at Beyneu (Kazakhstan). It offers connections eastwards to the PRC and westwards to the Caspian Sea, the Caucasus and Turkey. The Kashgar–Torugart–Savai section from the PRC to Uzbekistan via Kyrgyz Republic is a missing link (para. 22).

⁹ The road between Bishkek and Balykchy was recently upgraded with ADB support.

¹⁰ A 2012 survey found that 195 trucks crossed the Torugart border each day, mainly to serve destinations in Kazakhstan and northern Kyrgyz Republic (CTI Engineering 2012).

Figure 1.7: Traffic on CAREC Rail Corridors, 2015



Source: ITF 2019.

30. The development of the proposed Kashgar–Torugart–Savai section of Subcorridor 202 has attracted significant interest from the PRC, Uzbekistan and Kyrgyz Republic but the three governments have not yet been able to agree on a basis to proceed. In Kyrgyz Republic, the project is referred to as the East–West Railway; it is also known as the PRC–Kyrgyz Republic–Uzbekistan Railway. For some traffic between the PRC and the Middle East and Southern Europe, this would reduce journey distance and delivery time, so it could have potential

to attract significant volumes transit traffic.¹¹ It would also serve traffic between the PRC and both Uzbekistan’s Fergana Valley and the Osh area of Kyrgyz Republic.

31. KTJ’s existing southern rail spurs in the vicinity of Osh and Jalal-Abad are also part of Subcorridor 202. Since the area has significant mining and agricultural production, there could be potential to further expand rail traffic by providing improved multimodal terminal facilities.

¹¹ According to some reports, this project would reduce journey distance by 900 km and delivery time by 7–8 days (CTI Engineering 2012).

TRENDS IN RAILWAY TRAFFIC

A. Introduction

34. The collapse of the FSU's centrally planned economy led to a significant decline in traffic levels on the Kyrgyz railway. Currently, railway traffic is mainly confined to bulk commodities that are difficult to transport by road.

B. Analysis of traffic

35. Between 2014 and 2018 there was no overall growth trend in railway traffic. Freight turnover reduced from 1,010 to 949 million ton-km. Freight tonnage declined from 7.4 million tons in 2014 to 6 million tons in 2016 before recovering to 7.5 million tons in 2018. Annual passenger turnover remained between 40.8 and 43.4 million passenger-km during 2014–2017 but fell to 35 million passenger-km in 2018. Passenger numbers reduced from 318,000 in 2014 to 284,000 in 2016 but recovered to 326,000 in 2018. This is shown in Table 2.1.

36. Total rail freight turnover measured in ton-km is small. This is because (i) rail is not competitive with road for many commodity types, and (ii) existing rail freight only travels a short distance (only about 130 km on average) within Kyrgyz Republic because the length of the existing network is short.

37. Since the railway network was originally developed as a branch line and short spurs of larger regional railways, it does not currently offer a route that can attract railway transit traffic and depends solely on imports, exports and domestic traffic. New types of rail-served export production have been slow to emerge since the collapse of the FSU.

38. The volume of passenger traffic is very small as most passengers prefer road transport. Railway passenger services are confined to KTJ's northern section, mostly serving passengers to and from Bishkek from Kara Balta and Tokmok. A summer service is operated between Bishkek and Balykchy

Table 2.1: Kyrgyz Temir Jolu Cargo and Passenger Traffic, 2014–2018

Indicators	Unit of measurement	2014	2015	2016	2017	2018
Rail freight turnover	Ton-km million	1,010	918	807	935	949
Freight transported	Ton '000	7,384	6,616	6,031	7,157	7,526
Average freight haul	km	137	139	134	131	126
Freight handling	Ton '000	1,494	1,279	1,670	1,936	2,258
Freight re-handling	Ton '000	6,600	6,030	5,363	6,373	6,422
Passenger turnover	Passenger-km million	43	41	41	43	35
Passengers transported	Person '000	318	287	284	314	326

Source: KTJ.

to shuttle visitors to Lake Issyk Kul.¹² The number of passengers carried has changed little over the past five years, but total passenger-km dropped by nearly 20% as a higher proportion of passengers were taking shorter routes (mainly to and from Bishkek).

39. In 2017 and 2018, cross-border traffic provided 83% of total freight volume and domestic

traffic provided 17%. Analysis of cross-border traffic by commodity type (Table 2.2) shows that coal and oil products accounted for 55% of cross-border traffic in 2018. The remaining cross-border commodities are mainly other types of bulk imports.

40. Analysis of domestic freight traffic by commodity type in Table 2.3 shows that coal, oil

Table 2.2: Cross-Border Traffic Volume, 2014-2018
(ton '000)

Commodity types	2014	2015	2016	2017	2018
Coal	1,435	1,688	1,195	1,405	1,627
Oil products	1,561	1,487	1,429	1,753	1,847
Ferrous metals	329	310	298	346	361
Building material	226	144	112	110	134
Cement	114	61	150	289	310
Sugar	251	172	160	101	87
Raw material (for industrial applications)	152	133	117	185	160
Wood product	366	285	53	198	226
Grain, flour, cereal	538	449	340	291	207
Sugar beet	14	5	49	71	98
Food products	272	214	129	153	150
Other	1,309	963	924	1,069	1,072
TOTAL	6,566	5,872	4,954	5,970	6,280

Source: KTJ

Table 2.3: Domestic Freight Traffic
(ton '000)

Commodity type	2014	2015	2016	2017	2018
Coal	341	339	565	367	538
Oil products	141	139	155	217	223
Cement ^a	122	96	34	2	0
Sugar beet	101	110	260	505	430
Other	113	60	64	97	57
TOTAL	818	744	1,077	1,188	1,247

^a Domestic cement traffic declined over the period because imported cement from Kazakhstan became more competitive following depreciation of the Kazakh Tenge.

Source: KTJ

¹² There is also a 20-hour train from Tashkent to Balykchy for Uzbek tourists visiting Lake Issyk Kul.

products and sugar beet are the leading commodities, together accounting for 95% of domestic freight tonnages in 2018. One encouraging development has been recent growth in sugar beet traffic. This serves producers located in the Chuy and Talas regions, near to KTJ's northern rail line, who send sugar beet to the refinery near Bishkek.

C. Containerization

41. The level of containerization of railway freight is low. Most commodities that use rail are shipped in railway wagons. This includes coal, crude oil, fertilizers, construction materials, grain, sugar beet and scrap metal. Containers are used for imports of consumer goods, equipment and automotive products.

42. In 2018, there were 6,662 inbound and 290 outbound containers. Due to the imbalance

between inbound and outbound containers, this led to the need to transport large numbers of empty containers.

43. The number of containers has fallen more than two-thirds since 2014 when there were 22,637 inbound and 1,770 outbound containers. The sharp decline was due to changes in import regulations after Kyrgyz Republic joined the EEU, in particular increased import duties on second-hand motor vehicles which accounted for a large proportion of containerized imports. This is shown in Table 2.4.

D. Traffic growth scenario

44. KTJ's forecast traffic for 2019–2030 is presented below as the base case traffic scenario. This envisages little change in traffic over the period. Rail freight turnover and tonnage, and passenger turnover, would increase by an average of 0.7% per annum over the period.

Table 2.4: Trends in Rail Container Traffic, 2008–2018

Item	2010	2014	2015	2016	2017	2018
Loaded containers—inbound	13,584	22,637	6,350	5,817	6,764	6,662
Loaded containers—outbound	3,484	1,779	560	322	331	290
TOTAL	17,068	24,416	6,910	6,139	7,095	6,952
Of which: northern section	15,218	23,512	6,632	6,092	7,017	6,783
Of which: southern section	1,850	904	278	47	78	169

Source: KTJ

Table 2.5: Base Case Traffic Scenario, 2019–2020

Indicators	Unit of Measurement	2018	2019	2020	2025	2030
Rail freight turnover	Ton-km million	949	960	966	1,001	1,037
Passenger turnover	Passenger-km million	35	35	35	37	38
Freight transported	Ton '000	7,526	7,575	7,628	7,899	8,179
Freight handling	Ton '000	2,258	2,280	2,296	2,378	2,417
Freight re-handling	Ton '000	6,422	6,460	6,505	6,736	6,975
Passengers transported	Person '000	326	336	338	350	362

km = kilometer.

Source: KTJ

MARKET COMPETITIVENESS

A. Introduction

45. The freight transport market in which KTJ operates is highly competitive. In the last two decades, Kyrgyz Republic and neighboring countries have made large investments to improve road infrastructure but spent much less on railway infrastructure. This has lowered the costs of road transport relative to rail. Compared with other Central Asian countries, Kyrgyz Republic has a relatively large number of truck operators, many of whom are experienced in operating on long-distance international routes. Competition among truck

companies has led to pressure to reduce rates and improve service quality, making it more difficult for rail to be competitive.

B. Market feedback

46. Interviews were conducted with 15 shippers/receivers, freight intermediaries, truck companies and trade associations to understand market perceptions and requirements for using railway. The findings are summarized in Table 3.1.

Table 3.1: Market Feedback on Rail Competitiveness for Different Traffic Types

If competitive	Traffic type	Examples	Explanation of rail competitiveness
Rail is competitive	Coal—domestic	From Balykchy area to Bishkek power station	For large-scale bulk operations rail has advantages for efficiency, cost, safety and environmental protection as long as the necessary rolling stock types, terminals and handling equipment are available
	Coal—export	From Osh area to Uzbekistan, Belarus, Russian Federation, Ukraine	Using coal producers' own fleet of open-top wagons, rail offers advantages similar to those for domestic coal transportation
	Diesel fuel—imports	For large mining operation	Rail has advantages for safety and security which are prime considerations
	Crude oil	Imports to Kara-Balta refinery	
	Chemicals	Cyanide, caustic soda and ammonium nitrate for mine	
		Beans, legumes, chick peas	Imports unprocessed, exports processed to Middle East, Caucasus
Rail is not competitive	General goods/consumer products	Small and medium sized shipments e.g. less than 60 tons	Road is generally less costly, faster and simpler to organize and provides door-to-door service. To avoid empty backloads, road carriers offer large discounts on some routes
			Road is especially price competitive for shorter trips (e.g. 100–300 km) and for origins and destinations not on the railway line

continued on next page

Table 3.1 continued

If competitive	Traffic type	Examples	Explanation of rail competitiveness
	Goods to and from non-EEU countries	Most types of goods traded	Road is more reliable and adaptable on long distance routes that cross multiple customs areas. The higher EEU tariff for transit traffic further reduces rail competitiveness
	Perishables	Export of PRC apples to EU, chicken to Russian Federation (via Torugart)	Road is faster, more reliable (including real time tracking and tracing) and adaptable. Rail has a shortage of reefer wagons
	Producers located near southern section	Building materials, cotton exporters	Railway is not competitive with road due to KTJ's lack of customer orientation, shortage of open-top and covered wagons, and use of obsolete locomotives and gantry cranes

EEU=Eurasian Economic Union, EU=European Union, PRC=People's Republic of China.

Source: TA consultants.

47. Based on this market feedback, railway is currently competitive for bulk cargo that is difficult to carry by truck and has a niche market for transport of dangerous cargo. It has advantages for consignment safety and security, and customs checks on railway traffic are often faster and simpler than for road transport,¹³ so it could be attractive for some other types of traffic if adequate wagons, terminals, handling facilities and sidings were provided. However, for most other types of cargo, road is

preferred. It is faster, often less costly, and road carriers take more responsibility for managing risks and solving problems that arise on route.

48. This market feedback is consistent with past ratings of logistics service quality by local logistics professionals (Table 3.2). The ITF reports that the logistics service quality of railways is rated well below that of road transport, and much lower than in Kazakhstan and Uzbekistan.

Table 3.2: Rating of Logistics Service Quality by Local Logistics Professionals (%)

Country	Road transport	Railway	Warehousing	Freight forwarding	Customs broking	Trade advice
Kazakhstan	57	48	14	38	10	30
Kyrgyz Republic	20	5	7	20	15	14
Tajikistan	0	0	3	5	5	5
Uzbekistan	24	21	14	15	7	12
Lower middle income countries	21	4	23	47	19	13
Upper middle income countries	20	5	21	38	21	11
High income countries	55	26	62	70	52	43

Note: ITF computations based on aggregated annual data from Logistic Performance Index, 2010–2018.

Source: ITF 2019.

¹³ Border clearance procedures are sometimes changed at short notice. Recently the Kazakh Revenue Committee introduced time-consuming cargo examination procedures that can delay transit time by a week or more.

C. Problems affecting rail competitiveness

49. Feedback was also obtained on some of the main problems that limit the competitiveness of railway transport. These are discussed below.

50. **Road transport is dynamic and highly competitive.** Trucks are abundant, cheap, fast and flexible. Shippers can use trucks to serve a much larger range of origins and destinations. Empty movements are less of a problem for trucks, as road carriers respond quickly to seasonal and other changes in demand, are flexible about pricing, and can triangulate to achieve loaded, profitable round-trips e.g. Bishkek to Moscow, Moscow to Istanbul, and Istanbul to Bishkek.

51. **It is difficult for small and medium sized customers to do business with KTJ.** The process of obtaining a price quotation and securing a wagon for loading takes much longer for KTJ compared with using a road carrier. KTJ is inflexible about credit terms, the condition of railway rolling stock and equipment condition is often poor, tracking and tracing is weak, and there are sometimes additional delays or charges before securing a wagon.

52. **Wagon shortages are a recurring problem.** KTJ's wagon fleet is old, many wagons are inoperable, and the mix of different wagon types does not match market needs. There are seasonal shortages of wagons (e.g. more wagons used for coal traffic in winter) and shortages of certain wagon types, such as Gondola cars.

53. **KTJ does not adjust prices to expand its business.** Whereas road carriers adjust their prices depending on market conditions, KTJ follows its published railway tariff. This prevents it from making higher returns on some consignments that could be charged more than the tariff. and in other cases leads to KTJ being undercut by road carriers.

54. **KTJ has only limited control over price for long distance traffic.** Since the Kyrgyz railway sections are relatively short, most cross-border railway freight is transported longer distances on other countries' railways. The rail tariffs of other countries therefore play an important role in determining KTJ's price competitiveness. Within the EEU, there is a unified tariff for rail movements, but a higher transit tariff is generally charged for traffic transiting the EEU. There have been problems with implementation of the transit tariff and it needs to be reconsidered in future.¹⁴

55. **KTJ does not have a sales and marketing function.** Instead of reaching out to shippers/receivers to understand their needs and identify ways to enhance its business, KTJ acts as a passive order taker. Without a sales and marketing department to canvas the market, KTJ cannot adapt to market conditions and needs, spot trends, target remunerative market segments, and develop railway service products tailored to the needs of shippers.

56. Shippers, freight forwarders and road carriers expressed the view that it will be difficult for KTJ to succeed in attracting new sources of traffic until it implements far-reaching reforms in order to operate on a commercial basis.

¹⁴ According to reports, Kazakhstan continued to apply the transit tariff to some Kyrgyz traffic after it became an EEU member. When the transit premium was eventually removed, this apparently led to increased KTJ traffic volumes.

RAILWAY OPERATING AND FINANCIAL PERFORMANCE

A. Introduction

57. This chapter provides a short assessment of KTJ's commercial orientation and its operating and financial performance.

B. Commercial orientation

58. After the collapse of the FSU, KTJ played a historic role taking over the railway and ensuring the continuation of railway services. However, its commercial orientation and customer service have been weak. The methods of management and operation were inherited from the Soviet era and are outmoded, focusing more on following bureaucratic rules than on producing business results. KTJ's organizational structure does not include separate teams or profit centers to drive each of the main lines of business. Its accounting system does not support tracking of the performance of the main business lines. Its existing management information system does not seem to focus on the types of commercial metrics used by high performance railways (e.g. terminal dwell time, asset turn velocity, train speed, service reliability). To be capable of competing for additional traffic in future, KTJ should first be reformed and restructured with the aim of becoming a modern customer-oriented railway. This will be very challenging but other CAREC Member Countries, such as Kazakhstan and Georgia, have already made progress in this regard.

59. KTJ recognizes that reforms will be needed if it is to attract the investment financing needed for asset renewal and business expansion. Its draft Railway Concept Development Conceptual Paper proposes that it should be corporatized in the form of a joint stock company, operated according to commercial principles, and adopt a new management model with a view to improving efficiency and profitability, and expanding the business. It also sees a need to quickly establish an improved commercial orientation in order to be prepared for competition among railway service providers once the EEU lifts existing transport market restrictions in 2025 (KTJ 2019).

C. Financial performance

60. KTJ was unable to provide detailed financial information to the TA consultants but was able to provide a high-level overview of 2018 financial performance. According to this overview, KTJ's financial performance in 2018 was stable and profitable. It earned annual operating revenues of Som5,241 million, leading to a net profit of Som572 million after deduction of expenses. In 2017, revenues were Som4,108 million and net profit was Som650 million.

61. KTJ reports that most of its net profit is absorbed by contributions to staff pensions and the state budget. The employer contribution to pensions is paid to the Social Fund based on 17.25%

of salaries.¹⁵ KTJ is also required to pay government 50% of net profit after Social Fund contributions as a contribution to the state budget.¹⁶ As shown in Table 4.1, after payment of these additional charges, KTJ has little or no remaining surplus available to use for reinvestment.

62. Since KTJ does not follow international accounting standards, it is difficult to interpret its reported financial performance. An important issue is depreciation. In accounting for operating expenses, KTJ does not charge depreciation on a replacement cost basis so its operating expenses are likely to be significantly understated. For the 424 km railway network, assuming a replacement cost of \$7 million per km inclusive of rolling stock and terminals, the total asset value (excluding real estate) would be \$2,968 million. Applying straight line depreciation over a 40-year asset life, the annual depreciation would be \$74 million. Yet, at the prevailing exchange rate (\$1 = Som73.65), this depreciation charge would absorb the entire operating revenue before deduction of expenses (\$71.17 million) and is nine times the 2018 net profit of only \$7.7 million equivalent (before pension and state budget deductions).

63. From a business development and financial management perspective, KJT's existing operations seem to be financially unsustainable. Many of its railway assets have reached the end of their economic lives but it has not accumulated reserves to finance asset replacement and upgrading. Without significant reforms to operate according to commercial principles and attract significantly higher traffic levels and revenues, there is little prospect of it becoming sufficiently profitable to service new loans to meet the costs of asset replacements.

64. A thorough assessment of KTJ's accounts should be prepared in order to obtain a reliable understanding of its financial performance. This will be needed for assessing the financial feasibility of any new investment proposals and as an input toward designing a commercialization and reform program to turn around the business. As part of preparatory work for a possible financing operation, the European Bank for Reconstruction and Development (EBRD) has commissioned consultants to conduct a detailed audit of KTJ's accounts and prepare financial statements based on international accounting standards.

Table 4.1: Reported KTJ Operating Revenue and Expenses
(Som million)

Item	2018	2017
Operating revenue	5,241.4	4,757.8
less operating expenses	4,669.3	4,107.7
Net profit	572.1	650.1
less Social Fund contribution	374.2	318.3
less State Budget contribution	350.0	205.4
Balance	(152.1)	126.4

Source: KTJ 2020; TA consultants.

¹⁵ The employee contribution is 10% of salary and is deducted at source.

¹⁶ In October 2018, the government adopted Decree No. 379-r on the issue of reducing the payment of net profit "from 50% to 25% following the results of work in 2019." (KTJ 2020)

D. Operational benchmarking

65. Drawing upon railway operational data obtained from the International Union of Railways (UIC 2019),¹⁷ aspects of the operational performance of KTJ have been benchmarked in relation to other CAREC railways (except Afghanistan)¹⁸ and leading railways from other regions (Germany, India, Russian Federation and North America).¹⁹ In most cases the data refers to operational activities in 2017. In other cases, it refers to the most recent year for which data is available.

66. In terms of size of railway network and number of employees, KTJ is the smallest railway in the CAREC region and very small compared with leading railways in other regions. Kyrgyz Republic has a relatively small land area, its railway only covers small parts of the north and south, and the role of the railway has not changed greatly from the Soviet era when it represented a

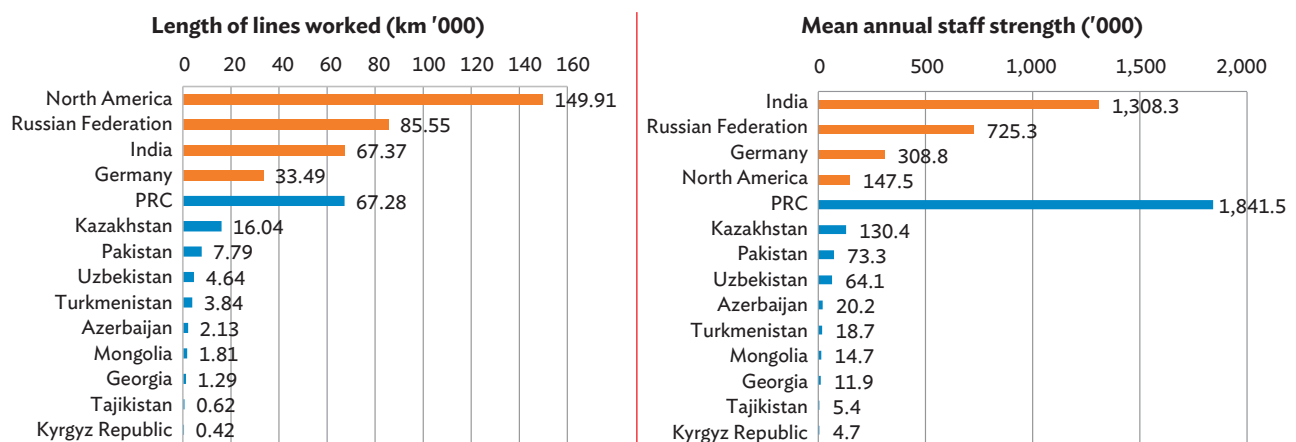
branch line and several short spurs run from Almaty and Tashkent. This is shown in Figure 4.1.

67. Among the comparator countries, KTJ has the fewest owned wagons and second-fewest diesel locomotives. This is generally consistent with the small size of the railway. However, since much of KTJ's rolling stock consists of obsolete items from the Soviet era, its available rolling stock fleet is substantially smaller. This is shown in Figure 4.2.

68. Similarly, KTJ has the second lowest annual freight and passenger turnover among the comparator countries. In the case of freight, which is the main source of revenues, the annual traffic level is much smaller than the other CAREC Member Countries except Tajikistan. This is shown in Figure 4.3.

69. Track density measures the intensity of track utilization in terms of traffic turnover per km of rail. KTJ's track density is the second lowest of all of the

Figure 4.1: Comparison of Railway Length and Staff Size in Kyrgyz Republic, other CAREC Member Countries and other Leading Railway Countries



CAREC = Central Asia Regional Economic Cooperation, km = kilometer, PRC= People's Republic of China.

Note: CAREC Member Countries shown in blue, comparators from other regions shown in orange.

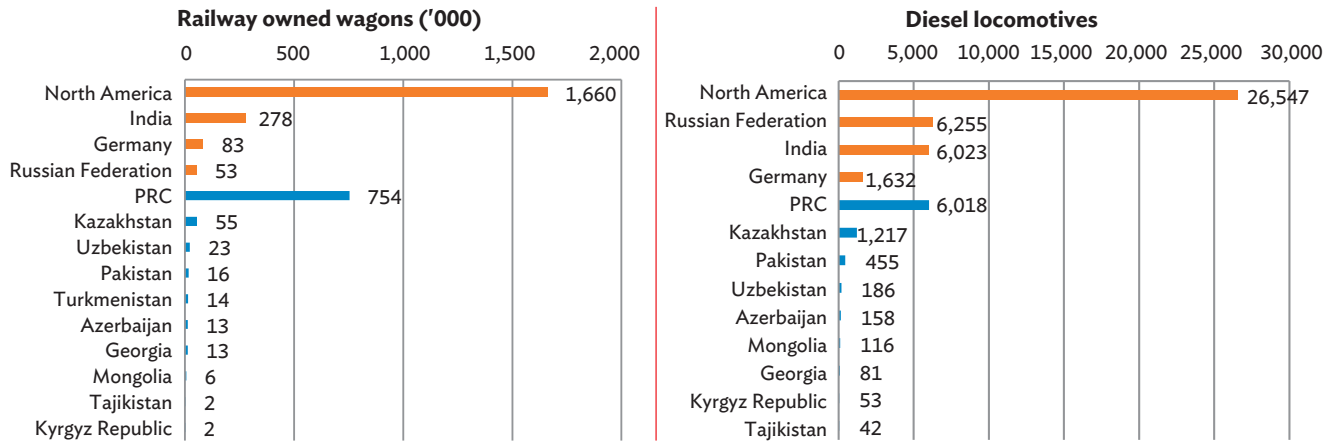
Source: UIC 2019.

¹⁷ The UIC database consists of data self-reported by individual railway organizations.

¹⁸ The UIC database does not yet include data for Afghanistan so it is not included in the benchmarking analysis.

¹⁹ In addition to the national railways of CAREC Member Countries, the sample includes Indian Railways (India), Deutsche Bahn AG (Germany), RDZ (Russian Federation) and the Association of American Railroads (North America) which represents the major freight railways of Canada, Mexico and USA.

Figure 4.2: Comparison of Railway Rolling Stock Fleet in Kyrgyz Republic, other CAREC Member Countries and other Leading Railway Countries

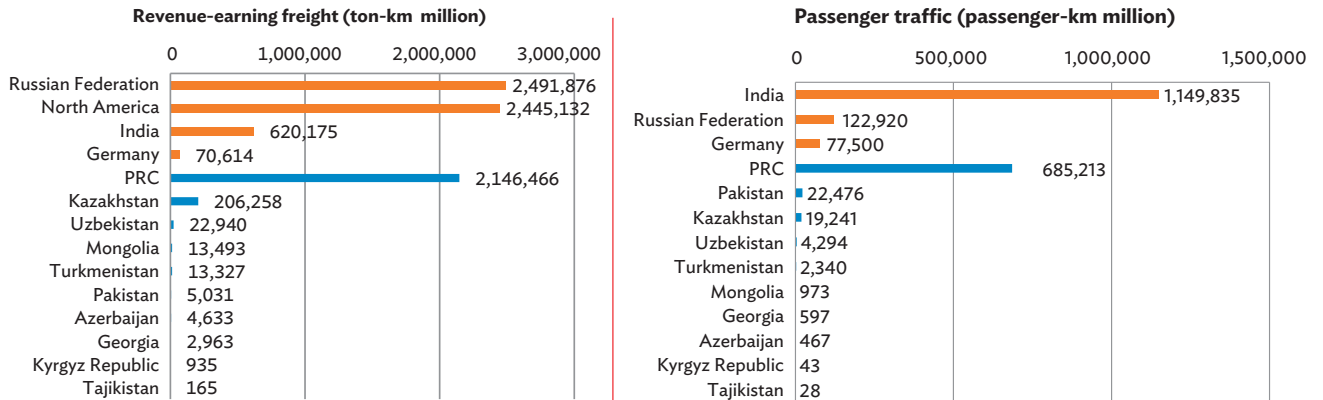


CAREC = Central Asia Regional Economic Cooperation, PRC = People’s Republic of China.

Note: CAREC Member Countries shown in blue, comparators from other regions shown in orange.

Source: UIC 2019.

Figure 4.3: Comparison of Annual Railway Freight and Passenger Traffic Levels in Kyrgyz Republic, other CAREC Member Countries and other Leading Railway Countries



CAREC = Central Asia Regional Economic Cooperation, km = kilometer, PRC = People’s Republic of China.

Note: CAREC Member Countries shown in blue, comparators from other regions shown in orange.

Source: UIC 2019.

comparator countries. This provides an indication that KTJ’s current traffic levels are too. Similarly, staff productivity can be measured as traffic turnover per staff member. KTJ’s staff productivity is the second lowest among the comparator countries, and only a quarter to an eighth of the productivity level in the four higher productivity CAREC MCs. This

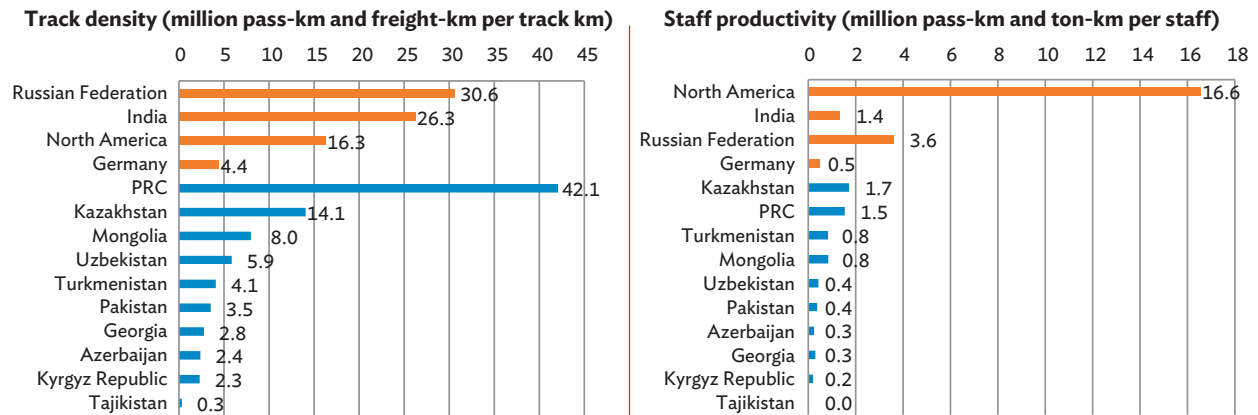
provides a further indication that KTJ is overstaffed for its present level of operations. This is shown in Figure 4.4.

70. A further set of productivity measures concern rolling stock asset utilization. Locomotive productivity measures annual traffic turnover per

locomotive. KTJ's locomotive productivity is one of the lowest among the CAREC MCs. Wagon productivity measures annual traffic turnover per owned wagon. KTJ's wagon productivity is again quite

low among the CAREC MCs. For both locomotive and wagon productivity, the common underlying issue is the low level of traffic. This is shown in Figure 4.5.

Figure 4.4: Comparison of Railway Track and Staff Productivity in Kyrgyz Republic, other CAREC Member Countries and other Leading Railway Countries

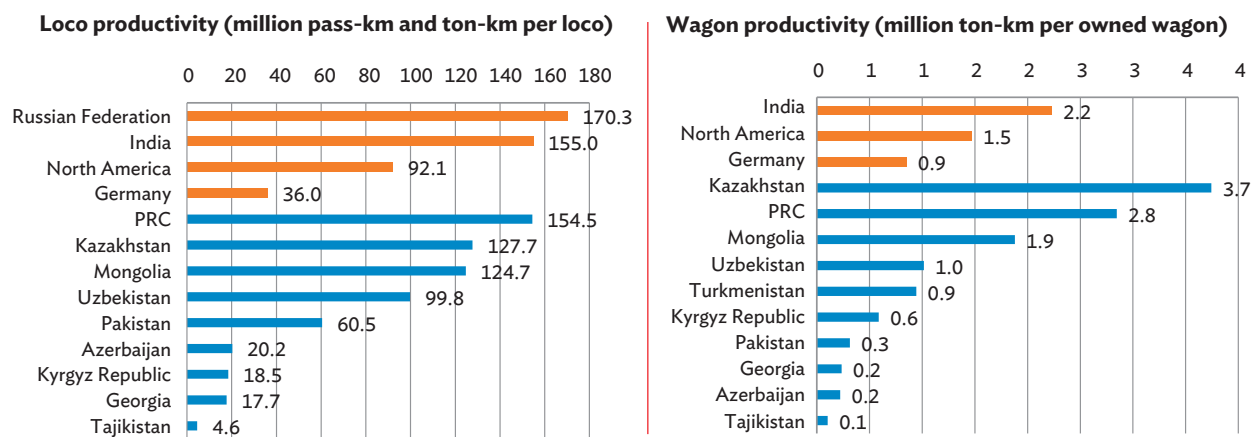


CAREC = Central Asia Regional Economic Cooperation, km = kilometer, PRC = People's Republic of China.

Note: CAREC Member Countries shown in blue, comparators from other regions shown in orange.

Source: UIC 2019.

Figure 4.5: Comparison of Locomotive and Wagon Productivity in Kyrgyz Republic, other CAREC Member Countries and other Leading Railway Countries



CAREC = Central Asia Regional Economic Cooperation, km = kilometer, PRC= People's Republic of China.

Notes: (i) CAREC Member Countries shown in blue, comparators from other regions shown in orange; (ii) productivity calculations are less accurate for countries with higher use of leased locomotives or wagons, such as Kazakhstan.

Source: UIC 2019.

PROPOSALS FOR INVESTMENT, COMMERCIALIZATION AND REFORM

A. Introduction

71. Drawing on the preceding chapters, this final chapter discusses opportunities for railway sector development in Kyrgyz Republic, drawing upon recent KTJ proposals on railway investment, commercialization and reform. It concludes by identifying some promising opportunities to obtain prefeasibility study support, capacity development and knowledge-related assistance through the present CAREC Railway Sector Development TA.

B. Policy setting

72. The government would like railways to play a catalytic role in enabling national economic growth and is interested to consider new railway investment projects if their feasibility can be demonstrated and a suitable allocation of financing responsibilities and risks can be determined. It also appreciates that any new development of railways would need to correct the problems that have led to declining market share, including lack of commercial orientation and low service quality and efficiency. Until now, it has looked to KTJ to address these issues without providing financial support or requiring institutional reform.²⁰ While aware that reform may be needed, it has not yet formulated a reform plan or required KTJ to do so. Since KTJ is one of the country's largest employers,

a reform plan involving staff reduction is likely to be politically sensitive.

73. Several factors may encourage the government to become more receptive to commercialization and reform in future. First, unless addressed, the problem of worn-out assets will worsen (particularly for rolling stock) which is likely to result in further deterioration in service quality and traffic levels. Second, the government has already triggered the beginnings of railway reform by committing to open the railway transport market for competition within the EEC by 2025. Third, having discussed various railway investment proposals with multilateral banks and other external financiers, it is aware that financiers are unlikely to consider significant railway investments until KTJ has been reformed. Present indications are that the government is interested to consider proposals for turning around the railway and investing in railway development but has yet to receive convincing proposals.

C. Commercialization and reform

74. Against this background, it may be difficult to consider investing in major railway development projects until prospects for success

²⁰ Due to overall budget and debt constraints, the government has required KTJ to continue to contribute to government revenues through the tax on net profits and to finance any investments and other needs without government support.

have been improved by implementing measures to commercialize and reform KJT. This general proposition is evident in KTJ's recent draft Conceptual Paper (para. 59).

75. There is no single best practice model for commercialization and reform but a good starting point could be provided by finalizing the existing Conceptual Paper to (i) corporatize KTJ in the form of a joint-stock company; (ii) reorganize its functions, management and accounting system in accordance with its main lines of business; (iii) prepare and implement a market-based turnaround strategy, including a business plan, a revised tariff, and a program of small investments to address critical bottlenecks, with a view to quickly expanding the railway business and improve its financial performance; and (iv) prepare a longer term investment masterplan of projects expected to be economically and financially feasible.

76. Within this approach, key elements of commercialization would include setting up a sales and marketing function, developing an improved understanding of the cost of services offered, introducing a more flexible approach to pricing with a view to attracting more traffic and optimizing revenues, and working with interline railways and customs authorities to offer more reliable and competitive cross-border railway services.²¹ It would also be necessary to address overstaffing and staff skills development. Such an approach could be called the Railway Modernization and Growth Program. Since KTJ has little experience of implementing a major change and modernization program, it would require strong direction from the government and substantial technical assistance support.

77. It would also be useful to introduce a capacity management ICT tool to optimize use of scarce rolling stock and infrastructure. This would generate timetables, asset and staff planning information, and monitor key performance indicators on asset utilization. It would also help toward justifying future investments in infrastructure and rolling stock.

78. An initial set of small accompanying investments that could be considered for addressing critical bottlenecks might include (i) track rehabilitation, (ii) wagon types subject to critical shortages, (iii) multimodal terminals and railway sidings where traffic growth opportunities are identified (paras. 20 and 22), and (iv) ICT and railway accounting systems.

79. EBRD is currently preparing a small project financing proposal to support initial commercialization and reform actions, and finance track rehabilitation investment. To support due diligence, it has engaged international consulting firms to conduct an audit of KTJ's accounts and prepare business plan proposals.

80. There could be potential for ADB, in partnership with EBRD, to provide a small expenditure financing facility (SEFF) to help prepare and implement further aspects of commercialization and reform, and finance small investments to attract additional traffic and revenues. This could be followed by a larger investment project once turnaround has been achieved and a pattern of rising traffic and net revenues established.

²¹ Early priority should also be given to attracting more customers to be served directly through rail sidings. KTJ could consider forming an Industrial Development Unit to work with the Ministry of Economy and local government to attract more enterprises to rail served premises. This is a common practice among North American railways and is effective in growing freight traffic as well as capturing the value of railway-owned real estate.

D. Investment proposals

1. New rail links

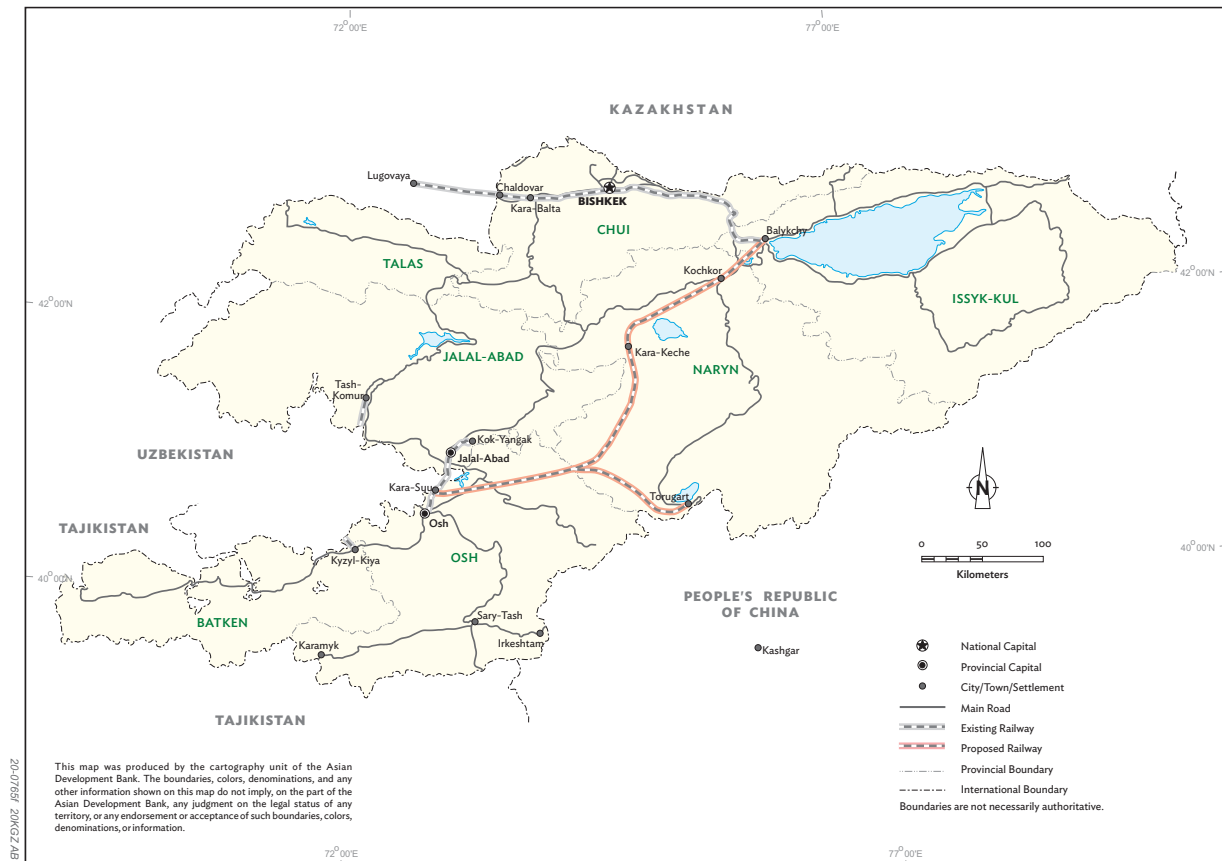
81. The government's highest priorities for railway investment focus on two very large investment projects that would create a much larger, integrated national railway network and make it possible for Kyrgyz Republic to attract railway transit traffic from CAREC MCs. These are shown in Figure 5.1. Although preliminary studies were prepared in the past, the feasibility of these projects has yet to be demonstrated, and their scope and alignment remain to be finalized.

82. **North-South Railway.** This project would extend the existing northern railway section southwards from Balykchy to Jalal-Abad via Kochkor and Kara-Keche. The new railway would integrate

the Jalal-Abad and Osh regions, that have good potential in agriculture and mining, with the country's economic centers in the north. It would also connect the southern railway section with Kazakhstan (CAREC Subcorridor 102) and provide the northern part of the country with direct rail connectivity with Uzbekistan's Fergana Valley which is an important region for agriculture and manufacturing. No alignment has yet to be finalized but one study estimated that the new railway would be 357 km in length. Construction costs would be high due to the mountainous terrain (CTI Engineering 2012).

83. One of the approaches that has been considered by the government and KTJ is to build the North-South Railway in stages, beginning with the 63 km link from Balykchy to Kochkor (utilizing some sections of embankment built previously) and then

Figure 5.1: Proposed New Rail Links



Source: TA consultants.

the 124 km link from Kochkor to Kara Keche where there is a coal mine.

84. East-West Railway. As discussed in Chapter 1, this project would form part of CAREC Subcorridor 202, providing a direct rail connection between the PRC border at Torugart and the Uzbekistan border near Osh. Due to distance shortening and time savings for some traffic types, the route may be able to attract substantial transit traffic, especially from the PRC to Uzbekistan, the Middle East and Southern Europe, and from Uzbekistan's Fergana Valley to the PRC. It would also provide domestic agricultural, agro-processing and mining producers in the Osh and Jalal-Abad areas with much improved access to the PRC market. Since the railway would mainly serve transit traffic it would be necessary to ensure that transit traffic tariffs are sufficient to provide a satisfactory return on investment. Construction would be challenging and costly due to the mountainous terrain. A previous study by the PRC reportedly estimated that the length of the new railway would be 268 km including 48 tunnels and 95 bridges (Levina 2018), but Kyrgyz Republic has proposed a northerly alignment that would be 433 km in length (KTJ 2019). The two countries, together with Uzbekistan, are still considering how to proceed.

85. At present, the PRC railway terminates at Kashgar, more than 165 km from Torugart. The PRC has not announced any plans to construct this line, but it is possible it would consider doing so if agreement was reached to develop the East-West Railway.

86. If both the North-South and East-West railways were built, they would together have the added benefit of providing direct rail connections between the northern and central parts of the country and the PRC via Torugart, with potential to attract transit traffic between the PRC, Kazakhstan and beyond.

87. Both the North-South and East-West Railway projects would be very costly (e.g., \$5-10 billion each) and challenging to implement. They would therefore need to be pursued in sequence. While the North-South Railway would play an important role integrating the Kyrgyz economy, which is important politically, it seems unlikely that it would attract enough traffic to justify investment. Due to the potential distance and time savings, the East-West Railway may have better traffic potential and may be the more realistic project to begin with.

88. In view of the government's limited external borrowing capacity and in order to manage the construction, traffic and other project risks, it would be better to implement the new link projects using a public-private partnership approach (build-operate-transfer).

2. Other possible investments

89. Electrification of Lugovaya-Balykchy. KTJ has proposed electrification of the 323 km northern section. This would make it possible to increase train speeds on track sections that have been rehabilitated, and to reduce train operating costs since there is abundant hydroelectric power and electricity tariffs are low. Electric traction is also cleaner than diesel. A preliminary study by an ADB-financed consultant estimated the cost at \$300 million (Guenet 2019).

90. This proposal seems premature. Until KTJ attracts a significant increase in traffic on the northern section (i) there is enough capacity and therefore no need for electrification, and (ii) KTJ would be not be able to generate sufficient additional revenues to service the investment loan.

91. Multimodal terminal. An immediate opportunity to grow rail container traffic may be for KTJ to invest in rehabilitation and upgrading of its multimodal terminal at Balykchy. This was a busy facility

Figure 5.2: Balykchy Multimodal Terminal

Source: TA consultants.

during the Soviet era but currently has little traffic and has fallen into disrepair. An efficient terminal could potentially attract long distance container traffic to divert from road to rail, in particular containers from the PRC that enter Kyrgyz Republic at Torugart on route to Kazakhstan. If containers could be easily transferred from road to rail at Balykchy, shippers could benefit from the cost advantages of railway over long distances, as well as simpler border clearance and better consignment security. Diversion of traffic from road to rail would also reduce damage to the recently upgraded Balykchy-Tokmok-Bishkek road caused by heavy trucks.

92. The existing multimodal terminal facility in Balykchy is usable and provides a good base for the handling of containers. The terminal is currently almost unused and its condition has deteriorated. It is equipped with two tracks of approximately 350m length and two cranes (Figure 5.2).²² Up to two block trains could

be operated at the terminal per day. If significant traffic was attracted, this would provide proof-of-concept for the idea of extending the railway southwards, initially to Kochkor and later to Kara-Keche.

93. In the southern section of the railway, there may also be potential for developing a modern multimodal terminal facility at Osh or Jalal-Abad to facilitate transfers of local products onto rail for onward transport to Uzbekistan and beyond.

94. **Track rehabilitation.** KTJ has been implementing track rehabilitation at a rate of 25 km per annum. It is interested to obtain additional financing to speed up the program. In addition to replacement of sleepers this would include replacement of expired rails which has been deferred until now due to high cost. Investment in track modernization would ensure continued availability

²² It would also be useful to dispose of the old Soviet 3-ton and 5-ton cargo containers currently blocking the Balykchy multimodal terminal. These can be sold as storage sheds, guard houses, toilets etc. Their disposal will free up room for cargo handling.

for service, improve safety, increase train speeds, and reduce track maintenance costs.

95. Essential track rehabilitation would be an appropriate investment output to finance alongside railway commercialization and reform. The approach and costs are already known.

96. **Wagon rehabilitation.** Since KTJ has large stocks of retired wagons but experiences shortages of various wagon types, it may be useful to rehabilitate some of the retired wagons that are in better condition (e.g. top 5%). For example, old box wagons could be cut off at the sides for conversion into platform wagons to carry containers. This could offer a low-cost way to reduce wagon bottlenecks and would generate a stream of wagon rental income. A study would be needed to confirm the availability of suitable retired wagons and assess the feasibility of rehabilitation.

97. **Modernization of workshops.**

The government provided ADB with a proposal to modernize outdated locomotive workshops, including procurement of workshop equipment and shunting locomotives. This may be a suitable investment to consider alongside commercialization and reforms.

E. Main opportunities for support under CAREC railway sector development TA

98. Based on the preceding chapters, the more promising opportunities for possible support under the present TA are summarized in Table 5.1.

Table 5.1: More Promising Opportunities for Kyrgyz Republic for Possible Support under CAREC Railway Sector Development TA

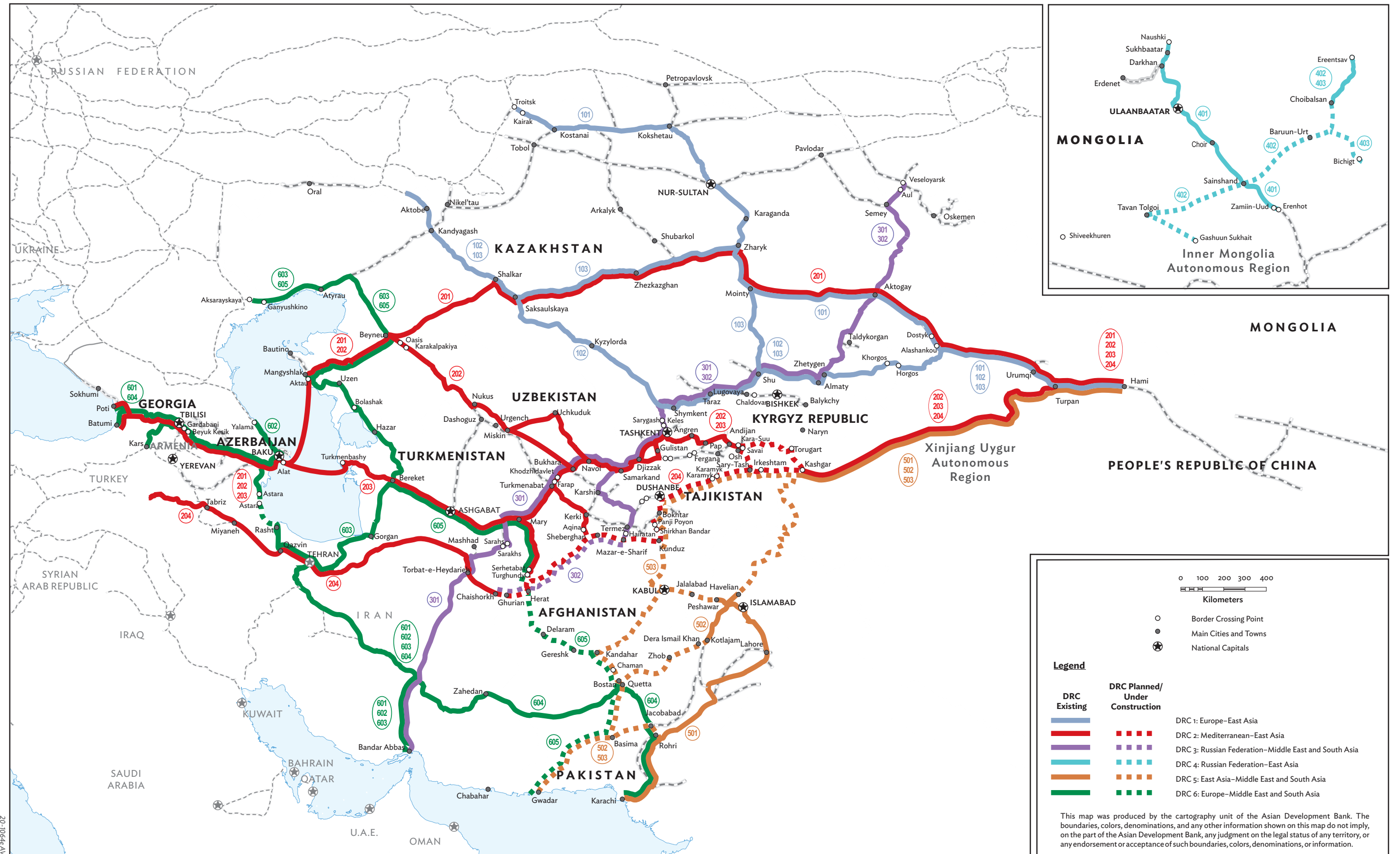
Type of support	Subject
Prefeasibility study	East-West Railway
	Preparation of commercialization and reform program
	Multimodal terminal in Balykchy; possibly also in Osh or Jalal-Abad to serve southern section of railway
	Wagon rehabilitation
Capacity development	Preparation and implementation of KTJ corporatisation
	Implementation of a capacity management tool
Knowledge products and events	Railway institutional reform
	Railway sales and marketing
	Approaches to separation of the railway tariff
	Modern railway accounting systems
	Modern railway enterprise computer systems

CAREC = Central Asia Regional Economic Cooperation, KTJ - Kyrgyz Temir Jolu.

Note: Selection of prefeasibility studies, capacity development support and knowledge products and events is based on established submission templates and selection criteria, and overseen by the Railway Working Group.

Source: TA consultants.

APPENDIX | CAREC DESIGNATED RAIL CORRIDORS



DRC = designated rail corridors.
Source: CAREC Secretariat.



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Railway Sector Assessment for Kyrgyz Republic

The report summarizes the findings of the railway sector assessment for Kyrgyz Republic, based on a country visit conducted on 17–22 June 2019. The purpose of this assessment is to examine the setting, characteristics, performance and prospects of railways, and identify promising investment opportunities, commercialization and reform actions that could be considered for support through the ADB technical assistance for Railway Sector Development in CAREC countries.

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The Central Asia Regional Economic Cooperation (CAREC) Program is a partnership of 11 member countries and development partners working together to promote development through cooperation, leading to accelerated economic growth and poverty reduction. It is guided by the overarching vision of “Good Neighbors, Good Partners, and Good Prospects.” CAREC countries include: Afghanistan, Azerbaijan, the People’s Republic of China, Georgia, Kazakhstan, the Kyrgyz Republic, Mongolia, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan.